

Central Oregon Community College

2019-2020 College Catalog



TABLE OF CONTENTS

Programs	6	Aviation-Technology and Management (OIT Transfer) Emphasis - Associate of Science (AS)	53
Anthropology	9	Unmanned Aerial Systems (UAS) Operations - Associate of Applied Science (AAS)	55
Anthropology - Associate of Arts Oregon Transfer (AAOT)	11	Biology	56
Art	12	Biological Sciences - Associate of Arts Oregon Transfer (AAOT)	57
Art - Associate of Arts Oregon Transfer (AAOT)	17	Dental Hygiene - Associate of Arts Oregon Transfer (AAOT)	59
Automotive Technology	19	Pre-Dentistry, Pre-Medicine, Pre-Veterinary - Associate of Arts Oregon Transfer (AAOT)	61
Automotive Basic Skills with Basic Engine Performance - Career Pathway Certificate of Completion (CPCC)	22	Business Administration	63
Automotive Basic Skills with Welding - Career Pathway Certificate of Completion (CPCC)	23	Accounting Clerk - One Year Certificate of Completion (CC1)	66
Automotive Controller Systems Technician Level 1 - Career Pathway Certificate of Completion (CPCC)	24	Business - Associate of Science Oregon Transfer (ASOT)	67
Automotive Controller Systems Technician Level 2 - Career Pathway Certificate of Completion (CPCC)	25	Business Administration - Associate of Applied Science (AAS)	69
Automotive Drive Train Technician - Career Pathway Certificate of Completion (CPCC)	26	Business Administration: Accounting - Associate of Applied Science Option (AASO)	70
Automotive Electrical Technician (Advanced) - Career Pathway Certificate of Completion (CPCC)	27	Business Administration: Management - Associate of Applied Science Option (AASO)	71
Automotive Electrical Technician (Basic) - Career Pathway Certificate of Completion (CPCC)	28	Business Administration: Small Business and Entrepreneurship - Associate of Applied Science Option (AASO)	73
Automotive Engine Performance Technician - Career Pathway Certificate of Completion (CPCC)	29	Entrepreneurship - One Year Certificate of Completion (CC1)	74
Automotive Engine Technician - Career Pathway Certificate of Completion (CPCC)	30	Marketing Communications - One Year Certificate of Completion (CC1)	75
Automotive Heating & Air Conditioning Technician - Career Pathway Certificate of Completion (CPCC)	30	Office Assistant - One Year Certificate of Completion (CC1)	76
Automotive Hybrid Electric Vehicles (HEV) Technician - Level 1 - Career Pathway Certificate of Completion (CPCC)	31	Retail Management - One Year Certificate of Completion (CC1)	77
Automotive Hybrid Electric Vehicles (HEV) Technician - Level 2 - Career Pathway Certificate of Completion (CPCC)	32	Cascade Culinary Institute	78
Automotive Management - Associate of Applied Science (AAS)	34	Baking and Pastry Arts - Associate of Applied Science (AAS)	83
Automotive Technology in Electronics and Diagnostics - Associate of Applied Science (AAS)	35	Baking and Pastry Arts - Two Year Certificate of Completion (CC2)	85
Clean Energy Diesel Technician (Advanced) - Career Pathway Certificate of Completion (CPCC)	37	Culinary Arts - Associate of Applied Science (AAS)	86
Master Automotive Technician - Two Year Certificate of Completion (CC2)	38	Culinary Arts - Two Year Certificate of Completion (CC2)	87
Undercar Technician - Career Pathway Certificate of Completion (CPCC)	40	Hospitality Management - Associate of Applied Science (AAS)	88
Aviation	41	Hospitality Management - Two Year Certificate of Completion (CC2)	90
Aviation - Professional Pilot Airplane - Associate of Applied Science (AAS)	46	Chemistry	91
Aviation - Professional Pilot Helicopter - Associate of Applied Science (AAS)	49	Chemistry - Associate of Arts Oregon Transfer (AAOT)	92
		Communication	93

Communication/Journalism - Associate of Arts Oregon Transfer (AAOT)	95	Engineering Emphasis - Associate of Science (AS)	144
Computer & Information Systems	97	Physics - Associate of Arts Oregon Transfer (AAOT)	145
Computer & Information Systems - Associate of Applied Science (AAS)	101	Exercise Science	147
Computer & Information Systems - One Year Certificate of Completion (CC1)	103	Exercise Science/Kinesiology - Associate of Arts Oregon Transfer (AAOT)	150
Computer & Information Systems: Computer Aided Drafting (CAD) - Associate of Applied Science Option (AASO)	104	Pre-Physical Therapy - Associate of Arts Oregon Transfer (AAOT)	152
Computer & Information Systems: Networking - Associate of Applied Science Option (AASO)	106	Forest Resources Technology/Forestry	154
Computer & Information Systems: Web Development - Associate of Applied Science Option (AASO)	107	Advanced Forest Concepts - Career Pathway Certificate of Completion (CPCC)	156
Computer Aided Drafting (CAD) - One Year Certificate of Completion (CC1)	109	Agricultural Sciences (OSU Transfer) Emphasis - Associate of Science (AS)	157
Computer Science - Associate of Science Oregon Transfer (ASOT)	110	Conservation of Natural Resources - Career Pathway Certificate of Completion (CPCC)	159
Cybersecurity - Career Pathway Certificate of Completion (CPCC)	112	Forest Ecology - Career Pathway Certificate of Completion (CPCC)	159
Criminal Justice	113	Forest Measurements - Career Pathway Certificate of Completion (CPCC)	160
Criminal Justice - Associate of Applied Science (AAS)	114	Forest Protection - Career Pathway Certificate of Completion (CPCC)	160
Criminal Justice - Associate of Arts Oregon Transfer (AAOT)	116	Forest Resources Technology - Associate of Applied Science (AAS)	161
Dental Assisting	117	Forestry (OSU Transfer) Emphasis - Associate of Science (AS)	163
Dental Assisting - One Year Certificate of Completion (CC1)	119	Mapping/Cartography - Career Pathway Certificate of Completion (CPCC)	164
Economics	121	Natural Resources (OSU Transfer) Emphasis - Associate of Science (AS)	165
Economics - Associate of Arts Oregon Transfer (AAOT)	122	General Transfer	167
Education	123	Associate of General Studies - (AGS)	167
Child, Family and Community Studies - Career Pathway Certificate of Completion (CPCC)	126	Exploratory - Associate of Arts Oregon Transfer (AAOT)	169
Developmentally Appropriate Learning Environments - Career Pathway Certificate of Completion (CPCC)	127	General Transfer-OSU - Associate of Science (AS)	171
Early Childhood Education - Associate of Applied Science (AAS)	127	Undeclared Transfer Major - Associate of Arts Oregon Transfer (AAOT)	173
Early Childhood Education - Associate of Arts Oregon Transfer (AAOT)	129	Geographic Information Systems	175
Education - Elementary - Associate of Arts Oregon Transfer (AAOT)	131	Geographic Information Systems - Associate of Applied Science (AAS)	175
Education - Secondary - Associate of Arts Oregon Transfer (AAOT)	133	Geographic Information Systems - One Year Certificate of Completion (CC1)	177
Equity in Education - One Year Certificate of Completion (CC1) - Pending Approval	135	Geography	178
Emergency Medical Services	136	Geography - Associate of Arts Oregon Transfer (AAOT)	179
Emergency Medical Technician - One Year Certificate of Completion (CC1) - Pending Approval	138	Geology	181
Paramedicine - Associate of Applied Science (AAS)	140	Geology - Associate of Arts Oregon Transfer (AAOT)	181
Engineering & Physics	142	Health Information Management	183
		Coding Competency - Two Year Certificate of Completion (CC2)	185

Health Information Management - Associate of Applied Science (AAS)	187	Mathematics	235
Medical Billing Specialist - Two Year Certificate of Completion (CC2)	188	Mathematics - Associate of Arts Oregon Transfer (AAOT)	238
Medical Office Specialist - One Year Certificate of Completion (CC1)	190	Medical Assistant	239
History	191	Medical Assistant - One Year Certificate of Completion (CC1)	241
History - Associate of Arts Oregon Transfer (AAOT)	193	Music	243
Human Services	195	Music - Associate of Arts Oregon Transfer (AAOT)	246
Addiction Studies and Human Services - Associate of Applied Science (AAS)	197	Nursing	248
Addiction Studies and Human Services - Two Year Certificate of Completion (CC2)	199	Nursing (RN) - Associate of Applied Science (AAS)	249
Human Services - Associate of Arts Oregon Transfer (AAOT)	200	Nursing - Associate of Arts Oregon Transfer (AAOT)	251
Humanities	202	Practical Nursing - Two Year Certificate of Completion (CC2)	253
English/Literature - Associate of Arts Oregon Transfer (AAOT)	206	Nursing Assistant	255
Humanities - Associate of Arts Oregon Transfer (AAOT)	208	Nursing Assistant - One Year Certificate of Completion (CC1)	255
Liberal Arts/Liberal Studies - Associate of Arts Oregon Transfer (AAOT)	210	Outdoor Leadership	256
Manufacturing Technology	211	Outdoor Leadership (OSU Transfer) Emphasis AS - Associate of Science (AS)	259
CNC Machining - Two Year Certificate of Completion (CC2)	215	Outdoor Leadership - Associate of Arts Oregon Transfer (AAOT)	261
Industrial Maintenance - Two Year Certificate of Completion (CC2)	217	Pharmacy Technician	263
Manual Machining - Two Year Certificate of Completion (CC2)	218	Pharmacy Technician - One Year Certificate of Completion (CC1)	264
Manufacturing Technician - Career Pathway Certificate of Completion (CPCC) - Pending Approval	219	Political Science	266
Manufacturing Technology - Associate of Applied Science (AAS)	220	Political Science - Associate of Arts Oregon Transfer (AAOT)	267
Manufacturing Technology I - One Year Certificate of Completion (CC1)	222	Psychology	269
Manufacturing Technology II - Two Year Certificate of Completion (CC2)	223	Psychology - Associate of Arts Oregon Transfer (AAOT)	270
Quality Assurance - Two Year Certificate of Completion (CC2)	224	Public Health	272
Welding - Associate of Applied Science (AAS) - Pending Approval	226	Public Health - Associate of Arts Oregon Transfer (AAOT)	274
Welding - One Year Certificate of Completion (CC1) - Pending Approval	228	Sociology	276
Welding Technician- Career Pathway Certificate of Completion (CPCC) - Pending Approval	229	Pre-Law - Associate of Arts Oregon Transfer (AAOT)	277
Massage Therapy	230	Sociology - Associate of Arts Oregon Transfer (AAOT)	279
Massage Therapy - Associate of Applied Science (AAS)	232	Structural Fire Science	281
Massage Therapy - Two Year Certificate of Completion (CC2)	234	Fire Service Administration (EOU Transfer) - Associate of Science (AS)	282
		Structural Fire Science - Associate of Applied Science (AAS)	285
		Veterinary Technician	288
		Veterinary Technician - Associate of Applied Science (AAS)	290
		Wildland Fire/Fuels Management	292
		Wildland Fire Suppression - One Year Certificate of Completion (CC1)	294

Wildland Fire/Fuels Management - Associate of Applied Science (AAS)	295	Health and Human Performance Activity (HHPA)	352
Wildland Firefighter Type II - Career Pathway Certificate of Completion (CPCC)	297	Health Information Management (HIM)	354
World Languages	298	History (HST)	356
World Languages - Associate of Arts Oregon Transfer (AAOT)	302	Hospitality Management (HM)	357
Courses A-Z	304	Human Development (HD)	358
Allied Health (AH)	305	Human Services/Addictions Stds (HS)	359
Anthropology (ANTH)	305	Humanities (HUM)	361
Apprenticeship (APR)	306	Italian (IT)	362
Art (ART)	308	Journalism (J)	363
Art History (ARH)	312	Kiksht (KIK)	363
Automotive (AUT)	312	Library & Information Skills (LIB)	363
Aviation (AV)	315	Manufacturing (MFG)	364
Baking and Pastry Arts (BAK)	320	Massage Therapy (LMT)	367
Biology (BI)	321	Mathematics (MTH)	369
Business (BA)	323	Medical Assistant (MA)	372
Chemistry (CH)	325	Military Science (MS)	373
Chinese (CHN)	326	Music (MUS)	373
Communication (COMM)	327	Music -Small Ensembles/Lessons (MUP)	375
Computer & Information Systems (CIS)	327	Nursing (NUR)	376
Computer Science (CS)	331	Outdoor Leadership (OL)	378
Criminal Justice (CJ)	332	Pharmacy Technician (PHM)	380
Culinary Arts (CUL)	333	Philosophy (PHL)	381
Dental Assisting (DA)	335	Physics (PH)	381
Economics (EC)	337	Political Science (PS)	382
Education (ED)	337	Psychology (PSY)	383
Emergency Medicine (EMT)	339	Reading (RD)	384
Engineering (ENGR)	341	Sociology (SOC)	384
Engineering-General (GE)	342	Spanish (SPAN)	385
English & Literature (ENG)	342	Structural Fire Science (SFS)	386
Ethnic Studies (ES)	343	Theater Arts (TA)	387
Film Arts (FA)	344	Veterinary Technician (VT)	387
Fish & Wildlife (FW)	344	Wildland Fire (WF)	389
Foods & Nutrition (FN)	344	Women's Studies (WS)	391
Forestry (FOR)	344	Writing (WR)	391
French (FR)	346	Degree and Certificate Overview	393
General Science (GS)	347	Transfer Preparation	393
Geography / Geog Info Systems (GEOG)	347	Career and Technical Education	394
Geology (G)	349	Individualized Study	396
German (GER)	349	Special Curriculum	396
Health & Human Performance (HHP)	349	General Education List	397
		CTE List	406
		Related Instruction List	406

OSU Bacc Core List	407
Areas of Study	410
Student Resources	411
Admissions	411
Payment & Financial Aid	412
Registration	418
Student Services	420
Academic Calendar	426
Policies	427
About COCC	436
Accreditation	436
Board of Directors	436
Faculty, Administration, and Staff	436
General Information	455
Learning Options	456
Mission and Vision	458
About the Catalog	459
Addendum	460
Archives	460
Index	461

PROGRAMS

Program Title	Award	Area of Study	Type
Accounting (p. 70)	Associate of Applied Science Option	Business Administration	CTE
Accounting Clerk (p. 66)	One Year Certificate of Completion	Business Administration	CTE
Addiction Studies-Human Svcs (p. 197)	Associate of Applied Science	Human Services	CTE
Addiction Studies-Human Svcs (p. 199)	Two Year Certificate of Completion	Human Services	CTE
Advanced Forest Concepts (p. 156)	Career Pathway Certificate of Completion	Forest Resources Tech/Forestry	CTE
Agricultural Sciences (p. 157)	Associate of Science	Forest Resources Tech/Forestry	Transfer
Anthropology (p. 11)	Associate of Arts Oregon Transfer	Anthropology	Transfer
Art (p. 17)	Associate of Arts Oregon Transfer	Art	Transfer
Associate of General Studies (p. 167)	Associate of General Studies	General	Transfer
Auto Electrical Tech - Basic (p. 28)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Auto Electrical Tech-Advanced (p. 27)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Auto Electronics & Diagnostics (p. 35)	Associate of Applied Science	Automotive Technology	CTE
Auto Engine Performance Tech (p. 29)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Automotive Basic with BasicEng (p. 22)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Automotive Basic with Welding (p. 23)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Automotive Clean Diesel Tech (p. 37)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Automotive Controller Tech I (p. 24)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Automotive Controller Tech II (p. 25)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Automotive Drive Train Tech (p. 26)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Automotive Engine Technician (p. 30)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Automotive Heating & AC Tech (p. 30)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Automotive Hybrid Elec Tech I (p. 31)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Automotive Hybrid Elec Tech II (p. 32)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Automotive Management (p. 34)	Associate of Applied Science	Automotive Technology	CTE
Aviation (p. 53)	Associate of Science	Aviation	Transfer
Aviation-Prof Pilot Airplane (p. 46)	Associate of Applied Science	Aviation	CTE
Aviation-Prof Pilot Helicopter (p. 49)	Associate of Applied Science	Aviation	CTE
Baking & Pastry Arts (p. 83)	Associate of Applied Science	Cascade Culinary Institute	CTE
Baking & Pastry Arts (p. 85)	Two Year Certificate of Completion	Cascade Culinary Institute	CTE
Biological Sciences (p. 57)	Associate of Arts Oregon Transfer	Biology	Transfer

Business (p. 67)	Associate of Science Oregon Transfer	Business Administration	Transfer
Business Administration (p. 69)	Associate of Applied Science	Business Administration	CTE
Chemistry (p. 92)	Associate of Arts Oregon Transfer	Chemistry	Transfer
Child, Family & Community (p. 126)	Career Pathway Certificate of Completion	Education	CTE
CNC Machining (p. 215)	Two Year Certificate of Completion	Manufacturing Technology	CTE
Coding Competency (p. 185)	Two Year Certificate of Completion	Health Information Management	CTE
Communication/Journalism (p. 95)	Associate of Arts Oregon Transfer	Communication	Transfer
Computer & Information Systems (p. 101)	Associate of Applied Science	Computer & Information Systems	CTE
Computer & Information Systems (p. 103)	One Year Certificate of Completion	Computer & Information Systems	CTE
Computer Aided Drafting (CAD) (p. 104)	Associate of Applied Science Option	Computer & Information Systems	CTE
Computer Aided Drafting (CAD) (p. 109)	One Year Certificate of Completion	Computer & Information Systems	CTE
Computer Science (p. 110)	Associate of Science Oregon Transfer	Computer & Information Systems	Transfer
Conserv of Natural Resources (p. 159)	Career Pathway Certificate of Completion	Forest Resources Tech/Forestry	CTE
Criminal Justice (p. 114)	Associate of Applied Science	Criminal Justice	CTE
Criminal Justice (p. 116)	Associate of Arts Oregon Transfer	Criminal Justice	Transfer
Culinary Arts (p. 86)	Associate of Applied Science	Cascade Culinary Institute	CTE
Culinary Arts (p. 87)	Two Year Certificate of Completion	Cascade Culinary Institute	CTE
Cybersecurity (p. 112)	Career Pathway Certificate of Completion	Computer & Information Systems	CTE
Dental Assisting (p. 119)	One Year Certificate of Completion	Dental Assisting	CTE
Dental Hygiene (p. 59)	Associate of Arts Oregon Transfer	Biology	Transfer
Dev App Learning Environments (p. 127)	Career Pathway Certificate of Completion	Education	CTE
Early Childhood Education (p. 127)	Associate of Applied Science	Education	CTE
Early Childhood Education (p. 129)	Associate of Arts Oregon Transfer	Education	Transfer
Economics (p. 122)	Associate of Arts Oregon Transfer	Economics	Transfer
Education - Elementary (p. 131)	Associate of Arts Oregon Transfer	Education	Transfer
Education - Secondary (p. 133)	Associate of Arts Oregon Transfer	Education	Transfer
Emergency Medical Technician (p. 138)	One Year Certificate of Completion	Emergency Medical Services	CTE
Engineering (p. 144)	Associate of Science	Engineering	Transfer
English/Literature (p. 206)	Associate of Arts Oregon Transfer	Humanities	Transfer
Entrepreneurship (p. 74)	One Year Certificate of Completion	Business Administration	CTE
Equity in Education (p. 135)	One Year Certificate of Completion	Education	CTE
Exercise Science-Kinesiology (p. 150)	Associate of Arts Oregon Transfer	Exercise Science	Transfer
Exploratory (p. 169)	Associate of Arts Oregon Transfer	General	Transfer
Fire Service Administration (p. 282)	Associate of Science	Structural Fire Science	Transfer
Forest Ecology (p. 159)	Career Pathway Certificate of Completion	Forest Resources Tech/Forestry	CTE
Forest Measurements (p. 160)	Career Pathway Certificate of Completion	Forest Resources Tech/Forestry	CTE
Forest Protection (p. 160)	Career Pathway Certificate of Completion	Forest Resources Tech/Forestry	CTE

Forest Resources Technology (p. 161)	Associate of Applied Science	Forest Resources Tech/Forestry	CTE
Forestry (p. 163)	Associate of Science	Forest Resources Tech/Forestry	Transfer
General OSU Transfer Emphasis (p. 171)	Associate of Science	General	Transfer
Geographic Information Systems (p. 175)	Associate of Applied Science	Geographic Information Systems	CTE
Geographic Information Systems (p. 177)	One Year Certificate of Completion	Geographic Information Systems	CTE
Geography (p. 179)	Associate of Arts Oregon Transfer	Geography	Transfer
Geology (p. 181)	Associate of Arts Oregon Transfer	Geology	Transfer
Health Information Management (p. 187)	Associate of Applied Science	Health Information Management	CTE
History (p. 193)	Associate of Arts Oregon Transfer	History	Transfer
Hospitality Management (p. 88)	Associate of Applied Science	Cascade Culinary Institute	CTE
Hospitality Management (p. 90)	Two Year Certificate of Completion	Cascade Culinary Institute	CTE
Human Services (p. 200)	Associate of Arts Oregon Transfer	Human Services	Transfer
Humanities (p. 208)	Associate of Arts Oregon Transfer	Humanities	Transfer
Industrial Maintenance (p. 217)	Two Year Certificate of Completion	Manufacturing Technology	CTE
Liberal Arts/Liberal Studies (p. 210)	Associate of Arts Oregon Transfer	Humanities	Transfer
Management (p. 71)	Associate of Applied Science Option	Business Administration	CTE
Manual Machining (p. 218)	Two Year Certificate of Completion	Manufacturing Technology	CTE
Manufacturing Technician (p. 219)	Career Pathway Certificate of Completion	Manufacturing Technology	CTE
Manufacturing Technology (p. 220)	Associate of Applied Science	Manufacturing Technology	CTE
Manufacturing Technology I (p. 222)	One Year Certificate of Completion	Manufacturing Technology	CTE
Manufacturing Technology II (p. 223)	Two Year Certificate of Completion	Manufacturing Technology	CTE
Mapping/Cartography (p. 164)	Career Pathway Certificate of Completion	Forest Resources Tech/Forestry	CTE
Marketing Communications (p. 75)	One Year Certificate of Completion	Business Administration	CTE
Massage Therapy (p. 232)	Associate of Applied Science	Massage Therapy	CTE
Massage Therapy (p. 234)	Two Year Certificate of Completion	Massage Therapy	CTE
Master Automotive Technician (p. 38)	Two Year Certificate of Completion	Automotive Technology	CTE
Mathematics (p. 238)	Associate of Arts Oregon Transfer	Mathematics	Transfer
Medical Assistant (p. 241)	One Year Certificate of Completion	Medical Assistant	CTE
Medical Billing Specialist (p. 188)	Two Year Certificate of Completion	Health Information Management	CTE
Medical Office Specialist (p. 190)	One Year Certificate of Completion	Health Information Management	CTE
Music (p. 246)	Associate of Arts Oregon Transfer	Music	Transfer
Natural Resources (p. 165)	Associate of Science	Forest Resources Tech/Forestry	Transfer
Networking (p. 106)	Associate of Applied Science Option	Computer & Information Systems	CTE
Nursing (p. 251)	Associate of Arts Oregon Transfer	Nursing	Transfer
Nursing (RN) (p. 249)	Associate of Applied Science	Nursing	CTE
Nursing Assistant (p. 255)	One Year Certificate of Completion	Nursing Assistant	CTE
Office Assistant (p. 76)	One Year Certificate of Completion	Business Administration	CTE
Outdoor Leadership (p. 261)	Associate of Arts Oregon Transfer	Outdoor Leadership	Transfer
Outdoor Leadership (p. 259)	Associate of Science	Outdoor Leadership	Transfer
Paramedicine (p. 140)	Associate of Applied Science	Emergency Medical Services	CTE
Pharmacy Technician (p. 264)	One Year Certificate of Completion	Pharmacy Technician	CTE

Physics (p. 145)	Associate of Arts Oregon Transfer	Engineering	Transfer
Political Science (p. 267)	Associate of Arts Oregon Transfer	Political Science	Transfer
Practical Nursing (p. 253)	Two Year Certificate of Completion	Nursing	CTE
Pre-Law (p. 277)	Associate of Arts Oregon Transfer	Sociology	Transfer
Pre-Med/Veterinary/Dentistry (p. 61)	Associate of Arts Oregon Transfer	Biology	Transfer
Pre-PhysTherapy (p. 152)	Associate of Arts Oregon Transfer	Exercise Science	Transfer
Psychology (p. 270)	Associate of Arts Oregon Transfer	Psychology	Transfer
Public Health (p. 274)	Associate of Arts Oregon Transfer	Public Health	Transfer
Quality Assurance (p. 224)	Two Year Certificate of Completion	Manufacturing Technology	CTE
Retail Management (p. 77)	One Year Certificate of Completion	Business Administration	CTE
Small Business/Entrepreneur (p. 73)	Associate of Applied Science Option	Business Administration	CTE
Sociology (p. 279)	Associate of Arts Oregon Transfer	Sociology	Transfer
Structural Fire Science (p. 285)	Associate of Applied Science	Structural Fire Science	CTE
Undeclared Transfer (p. 173)	Associate of Arts Oregon Transfer	General	Transfer
Under-Car Technician (p. 40)	Career Pathway Certificate of Completion	Automotive Technology	CTE
Unmanned Aerial Sys Operations (p. 55)	Associate of Applied Science	Aviation	CTE
Veterinary Technician (p. 290)	Associate of Applied Science	Veterinary Technician	CTE
Web Development (p. 107)	Associate of Applied Science Option	Computer & Information Systems	CTE
Welding (p. 226)	Associate of Applied Science	Manufacturing Technology	CTE
Welding (p. 228)	One Year Certificate of Completion	Manufacturing Technology	CTE
Welding Technician (p. 229)	Career Pathway Certificate of Completion	Manufacturing Technology	CTE
Wildland Fire Suppression (p. 294)	One Year Certificate of Completion	Wildland Fire/Fuels Management	CTE
Wildland Fire/Fuels Management (p. 295)	Associate of Applied Science	Wildland Fire/Fuels Management	CTE
Wildland Firefighter Type II (p. 297)	Career Pathway Certificate of Completion	Wildland Fire/Fuels Management	CTE
World Languages (p. 302)	Associate of Arts Oregon Transfer	World Languages	Transfer

Anthropology

Anthropology is the study of humankind through time and space. It is distinct from other social sciences in that it focuses on the entire span of human history and the full range of human societies and cultures, including those located in historically marginalized parts of the world. It is therefore especially attuned to questions of social, cultural, and biological diversity, as well as issues of power, identity, and inequality across societies. The discipline is broken up into four subfields; biological anthropology, archaeology, cultural anthropology, and linguistic anthropology.

Biological anthropology is a scientific approach to understanding the human condition through the frame of evolution. Courses in this subfield focus on genetics, natural and sexual selection, morphological and behavioral adaptations, other primates, and the human fossil record.

Archaeology focuses on understanding human societies across time and space by analyzing how we have modified our environments around us. Courses in this subfield focus on a survey of human world prehistory through the rise of great civilizations. Topics also include archaeological survey, excavation, dating techniques, and research methods.

Cultural anthropology focuses on understanding the lived experiences of people around the world. Courses in this subfield focus on exploring

cross-cultural similarities and differences in systems of values, family, race and ethnicity, religion, gender and sexuality, and social structures.

Linguistic anthropology focuses on an analysis of language and communicative systems in the context of our social lives. Courses in this subfield will expose students to the diversity of language use and other forms of communication in societies around the world and through time.

Education in anthropology provides excellent preparation for living in a multicultural and globally interconnected world and helps equip students for careers in international relations, health and human services, public service, ecological sustainability, and resource management. It is also useful for pre-legal and pre-medical students.

<https://www.cocc.edu/programs/anthropology> (<https://www.cocc.edu/programs/anthropology/default.aspx>)

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Department: World Languages and Cultures
Department Chair: Murray Godfrey

Programs

Transfer

- Anthropology - Associate of Arts Oregon Transfer (AAOT) (p. 11)

Courses

ANTH 102 Archaeology (4 Credits)

Provides an introduction to archaeological method and theory along with a survey of human world prehistory through the rise of great civilizations. In this course we will address questions relevant to the practice of archaeology: What is archaeology? Why do archaeologists dig holes? How do archaeologists know where to dig? What is material culture? How do archaeologists analyze and understand what they find? Topics include archaeological concepts, survey, excavation, analysis and interpretation of data, dating techniques, research methods and theories of cultural change.

ANTH 103 Cultural Anthropology (4 Credits)

Provides an introduction to the diversity of human beliefs and behaviors around the world. Explores cross-cultural similarities and differences in systems of values, family, religion, economics, politics, and social structure, including issues of race and ethnicity. The goals of this course are to foster an appreciation of cultural diversity, to use this appreciation to better understand the student's culture(s), and to learn to be active and aware participants of local and global communities.

ANTH 141 Film & Society: Race, Gender, and Class (2 Credits)

Examines the representation of race, social class and gender in film. Special attention is given to how particular representations reflect the broader historical context surrounding when the films were produced and culturally-based audience sentiments. Anthropological and sociological analyses of the films will be provided to give a multi-disciplinary account of how films reflect, create and support various ideological positions regarding race, class and gender. This course is also offered as SOC 141; students can not use credit from both courses.

ANTH 142 Film & Society: Global Cultures (2 Credits)

Examines global issues in both foreign and domestic films from sociological and anthropological perspectives. Selected films cover topics that are relevant to understanding global processes such as global economy and Islam in the contemporary world, as well as films that address the more regionally localized processes of community and family. The purpose of the course is to use film to expose students to diverse perspectives and to encourage the critical awareness of the global interconnections that influence and constrain our modern lives. Films will include documentaries, as well as feature films.

ANTH 143 Film & Society: Contemporary Issues (2 Credits)

Examines contemporary issues in film from sociological and anthropological perspectives. Selected films cover such topics as youth culture, nationalism, local culture and poverty, mental health or other social problems. The content of the films, as well as issues of film production, historical context and audience reception will be the major focus of analysis.

ANTH 188 Special Studies: Anthropology (1-4 Credits)

Explores topics of current interest in the discipline.

ANTH 199 Selected Topics: Anthropology (1-4 Credits)

This course is in development.

ANTH 202 Archaeology Of Oregon (4 Credits)

Recommended preparation: WR 121 and ANTH 102.

Investigates the diverse nature of Oregon archaeology. Prehistoric patterns of human occupation in five distinct regions will be analyzed: the Great Basin, Columbia Plateau, Lower Columbia and Coast, Willamette Valley and the Southwestern Mountains. Furthermore, the course will investigate how the diversity of eco-scapes within Oregon shaped the manner in which humans culturally, technologically, and spiritually adapted to their environments.

ANTH 234 Biological Anthropology (4 Credits)

An introduction to biological anthropology. The goal of this course is to achieve the basic scientific literacy necessary to understand and think critically about contemporary human variation, bio-cultural interactions, and five million years of human evolution. It examines the biological evidence for human evolution and population variation. Lecture topics include the mechanisms of evolution, cell biology and human genetics, primate behavior, the human fossil record, and modern human variation and adaptations.

ANTH 235 Evolution of Human Sexuality (4 Credits)

Recommended preparation: ANTH 234.

Examines the complex interplay between culture and biology in human sexual behavior with particular attention to anatomy and physiology as traits that have evolved from our primate and mammalian ancestors. Focus will be on theoretical issues in evolution and the implications of these theoretical models on human behavior. Topics include human mating systems across cultures, sexual selection, reproduction, physiological and hormonal processes, as well as the non-reproductive aspects of human sexuality and the physiological and hormonal processes of sexuality.

ANTH 237 Forensic Anthropology (4 Credits)

Recommended preparation: ANTH 234.

This course teaches the basic analysis of human remains for the medico-legal profession, and will cover the history of the discipline, the human skeleton, determining postmortem interval, trauma evaluation, and individual identification. It will also cover the investigation of crime scenes, the role of the forensic anthropologist, and case studies from a number of various situations.

ANTH 240 Language and Culture (4 Credits)

Recommended preparation: WR 121.

An introduction to the relationship between communication and culture. Designed to help students become familiar with and understand the mechanics of language from brain structure to how we make sounds; cross-cultural and historical variations between and within communicative systems; and language as a form of social interaction, specifically exploring the complex and diverse relationships between language, socio-cultural, politics and identity.

ANTH 250 Food and Culture (4 Credits)

Recommended preparation: WR 121.

Provides an introduction to the diversity of food ways and the cultural significance of food and eating around the world. Topics explored will include food rules and rituals, consumption and health, food movements, food scarcity and poverty, global movement of foods, as well as the gendered dimensions of food and eating, with particular focus on body and body image. By the end of the course, students will have gained a broad-ranging familiarity with the cultural, political and economic aspects of past and present human food systems and be able to recognize and analyze the social linkages and hierarchies embedded in food systems.

ANTH 254 Magic, Witchcraft, Religion (4 Credits)**Recommended preparation:** WR 121.

Introduces students to the subject of religion in the broad anthropological context, contributes to a deeper awareness of diverse expressions of religious faith in a multicultural world, and promotes openness to and tolerance of world views different from the student's own.

ANTH 283 Introduction to Medical Anthropology (4 Credits)**Recommended preparation:** WR 121.

Introduces the main theories, concepts, and methods of exploring health, illness, disease and health care systems from a medical anthropological perspective. Uses a cultural interpretive approach to explore health beliefs, healing practices, and healer's and patient's roles within the context of world health care systems. Includes an examination of the biomedical model of health care as a cultural construct created through Western belief systems. P/NP grading.

ANTH 295 Gender and Sexuality in an Anthropological Perspective (4 Credits)**Recommended preparation:** WR 121 and ANTH 103.

Examines the constructions of femininities, masculinities and sexualities from a cross-cultural perspective. The cross-cultural focus will provide students with the comparative framework necessary to understand the diversity of gender roles within the context of specific cultural, political and economic processes. While exploring how both Western and non-Western cultures from diverse parts of the world imagine, negotiate, and even contest gender identities and relations, this course will also address key theoretical issues and anthropological approaches to understanding gender.

ANTH 298 Independent Study: Anthropology (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

ANTH 299 Selected Topics: Anthropology (1-4 Credits)

This course is in development.

Anthropology - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer (AAOT) degree with a focus in anthropology is designed for students who wish to pursue bachelor's degree with this major. Bachelor degree graduates may work in fields such as public service, conservation and heritage management, museum studies, and social work; those who enter graduate school may work in anthropology, law, public health, medicine, science, or teaching.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline Studies		
Cultural Literacy:		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose at least three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose at least four courses from at least two prefixes		12-16
Recommend: ANTH 102, ANTH 103, ANTH 240		
Science/Math/Computer Science: (p. 403)		
Choose at least four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Recommend: ANTH 234		
Electives		
General Electives		39
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated

Advising Notes

In general, very few bachelor's degrees in Anthropology have specific science requirements. However, if the interest is primarily archaeological, then Geology would fulfill the lab requirements. If the interest is primarily in biological anthropology, then select a Biology sequence or the Human Anatomy and Physiology sequence.

In choosing electives, consider two years of a world language since many BA degrees (including many anthropology programs) require two years or equivalent of a world language. Some anthropology degrees may also require an upper-division statistics course. Taking MTH 243 Introduction to Probability and Statistics I and MTH 244 Introduction to Probability and Statistics 2 is good preparation for the upper-division requirement. Either of these could count toward the non-lab requirement in the science/math/computer science general education requirement.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits	
Discipline Studies Arts & Letters	3-4	
Oral Communication: (p. 399)	3-4	
MTH 105	Math in Society	4
WR 121	Academic Composition	4
Credits		14-16
Second Term		
Discipline Studies Social Science (recommend ANTH 102)	4	
Discipline Studies Arts & Letters	3-4	
Health (3 credits with HHP or HHPA prefix) ¹	3	
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		14-15
Third Term		
Discipline Studies Social Science (recommend ANTH 103)	4	
Discipline Studies Science/Math/Computer Science (recommend ANTH 234)	4	
Discipline Studies Arts & Letters	3-4	
Elective	4	
Credits		15-16
Fourth Term		
Discipline Studies Social Science (recommend ANTH 240)	4	
Discipline Studies Science/Math/Computer Science	3-5	
Elective	4	
Elective	4	
Credits		15-17
Fifth Term		
Discipline Studies Social Science	3-4	
Discipline Studies Science/Math/Computer Science	3-5	
Elective	4	
Elective	4	
Elective	3	
Credits		17-20
Sixth Term		
Discipline Studies Science/Math/Computer Science	3-5	
Elective	4	
Elective	4	
Elective	4	
Credits		15-17
Total Credits		90-101

Art

COCC's Visual Arts discipline provides a foundation in art history, two and three dimensional design, photography, drawing, watercolor, painting, ceramics, metals, jewelry and sculpture. Opportunity for in-depth investigation is offered through advanced level studio classes for students to produce, view, and interpret art using a variety of mediums. Pence Hall and Ochoco Hall on the Bend campus house art studios equipped with drawing tables, easels, potter's wheels, sculpting and metalwork equipment, all exclusively for student use. Students and faculty members develop extraordinary art exhibits each year that are

displayed in the Gallery at the Pinckney Center and the Barber Library Rotunda Gallery, which also display exhibits by artists from across the nation.

<https://www.cocc.edu/programs/art/>

Contact:

Bill Hoppe
541-383-7510
Pence Hall, Bend Campus

Department: Fine Arts and Communication
Department Chair: Michael Gesme

Programs

Transfer

- Art - Associate of Arts Oregon Transfer (AAOT) (p. 17)

Courses

ARH 180 Co-op Work Experience Art History (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

ARH 188 Special Studies: Art History (1-4 Credits)

Explores topics of current interest in the discipline.

ARH 199 Selected Topics: Art History (1-4 Credits)

This course is in development.

ARH 201 Art History: Western: Prehistory to Early Byzantine (4 Credits)

Recommended preparation: WR 065 or higher.

Surveys the major periods of visual arts in the West, with a focus on the ancient world. Introduces students to the concepts of art and surveys the development of art in historical context from Prehistory through the early Byzantine Empire. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them.

ARH 202 Art History: Western: Early Medieval to Late Renaissance (4 Credits)

Recommended preparation: WR 065.

Surveys the major periods of visual arts in the West, with a focus on the Middle Ages and the Renaissance. Introduces students to the concepts of art and surveys the development of art in historical context from the Early Middle Ages through the Late Renaissance. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them.

ARH 203 Art History: Western: Baroque to Early Modern (4 Credits)

Recommended preparation: WR 065.

Surveys the major periods of visual arts in the West with an emphasis on the Baroque through early Modern eras. Introduces students to the concepts of art and surveys the development of art in historical context from the early 1600s through the turn of the 20th Century. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them.

ARH 206 Art History: Western: Modern and Contemporary (4 Credits)

A specialized chronological survey of Modern and Contemporary art from the mid-19th Century to the present day. Explores the many eclectic developments in Modern art from its beginnings through the Postmodern contemporary era. Emphasizes major artists, movements, and critical concepts in modern art and theory, and relates those concepts to the art of the past as well as issues facing artists and society today.

ARH 207 Native American Art History (4 Credits)

Survey of the arts indigenous to Mesoamerican and North American Indian cultures emphasizing architecture, pottery, painting and the fiber arts.

ARH 208 Art History: Non-Western (4 Credits)

Recommended preparation: WR 065.

A specialized survey of the art of Non-Western cultures around the world, from the Prehistoric past through the present day. This course will examine the artistic and cultural traditions of Islam, India, East Asia, the Pacific Islands, Sub-Saharan Africa, and the Americas. The course will focus on understanding select works of art and architecture within their original cultural, religious, and historical contexts, and will contrast various Non-Western artistic philosophies and values with those of the Western world.

ARH 298 Independent Study: Art History (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study in art history to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

ART 101 Introduction to the Visual Arts (4 Credits)

Introduces approaches to the understanding and appreciation of the visual arts. Provides a foundation in the basic concepts, vocabulary of the elements and principles of design as well as materials, methods and processes. A wide variety of artworks are explored. May include some hands-on experience with various mediums.

ART 110 Introduction to Graphic Design (3 Credits)

Students will use standard graphic design applications such as Adobe Illustrator and Photoshop for drawing and page layout purposes for art, design, and the web.

ART 115 Basic Design: 2-D (3 Credits)

Provides an introduction to visual language and the basic elements of design. Basic Design 2D employs design elements and principles of organization to communicate visual ideas in black and white. 2-D composition, structure, visual balance and rhythm, unity and emphasis along with the elements of point, line, plane, texture, form and space, value, and their interactions are explored through hands on projects and activities.

ART 116 Basic Design: Color (3 Credits)

Introduction to color theory and studio practice using value, hue and intensity with the elements of line, shape, texture and the principles of organization to articulate visual ideas with two-dimensional color design problems. Munsell color theory for paint mixing, Albers visual Interaction of color and Itten's proportional, cultural and subjective color theories are presented.

ART 117 Basic Design: 3-D (3 Credits)

Explores the elements and principles of three-dimensional design. Studio projects offer hands-on experience by which to explore basic elements such as scale, proportion, mass, volume, line, physical texture and planes in space. A foundation course for students interested in ceramics, sculpture, architecture and other three-dimensional fields. For art and non-art majors.

ART 121 Ceramics: Introductory Hand Building (3 Credits)

Recommended preparation: ART 117 and ART 131.

Introduces basic hand building skills, simple glaze application and an understanding of fundamental ceramic processes, for students with little or no experience. Includes presentation of historical, cultural and contemporary trends in ceramics. Students should plan on at least one term of this course and one term of Introductory Wheel Throwing before advancing to Intermediate Ceramics and beyond. May be repeated up to 9 credits.

ART 122 Ceramics: Introductory Wheel Throwing (3 Credits)

Recommended preparation: ART 117 and ART 131.

Introduces basic wheel throwing skills, simple glaze application and an understanding of fundamental ceramic processes, for students with little or no experience. Includes presentation of historical, cultural and contemporary trends in ceramics. Students should plan on at least one term of this course and one term of Introductory Hand Building before advancing to Intermediate Ceramics and beyond. May be repeated up to 9 credits.

ART 131 Drawing I (3 Credits)

Recommended preparation: ART 115.

Emphasis on observing and developing fundamental drawing and composition skills. Still life material used extensively. Combined Lecture and Lab sessions include historical and cultural approaches to drawing and drawing materials.

ART 132 Drawing II (3 Credits)

Recommended preparation: ART 131.

This is a foundation course with emphasis on observation and the development of fundamental drawing and composition skills. Concepts and skills developed in ART 131 will be applied to drawing the human figure and portraiture. Live models are used for the study of the human figure and portrait. Representational as well as expressive approaches will be applied. This course may be considered as part of the foundation for all further study in the visual arts.

ART 133 Drawing III (3 Credits)

Recommended preparation: ART 131 or ART 132.

Foundational course with emphasis on landscape drawing and creative expression working with a broader range of media. Technical, aesthetic and conceptual aspects will be addressed, along with the discipline of working in a series. This course can be considered as part of the foundation for all further study in the visual arts. Drawing III is excellent preparation for Figure Drawing, Painting, Illustration, as well as Printmaking.

ART 157 Metalcraft I (3 Credits)

Recommended preparation: MTH 060.

Basic skills necessary to work nonferrous metals plus hot and cold fabrication, forging, texturing and cabochon stone-setting are included in the metalwork sequence. Projects can be jewelry, hollowware or small sculpture. Development of imaginative ideas and personal aesthetic direction is expected. Experimentation and invention is encouraged. Should be taken in sequence.

ART 157A1 Metalwork & Jewelry - Hot Fabrication I (2 Credits)

Introduction to the basic skills used to fabricate non-ferrous metals including silver, copper and copper alloys to make jewelry or other small metal objects. Projects will be joined using high temperature silver solder and natural gas/compressed air torches as the heat source. Additional instruction includes developing designs, annealing, drilling, sawing, filing, texturing, dapping and finishing techniques.

ART 157A2 Metalwork & Jewelry - Hot Fabrication II (2 Credits)

Recommended preparation: ART 157A1.

Builds the skills learned in ART 157A1. Students will develop soldering skill by designing more complex and dimensional projects. Bezel setting a cabochon stone, making hinges, and more complex forming techniques and texturing methods will also be included.

ART 157B1 Metalwork & Jewelry - Cold Fabrication I (2 Credits)

Introduction to the basic skills used to fabricate non-ferrous metals including silver, copper and copper alloys to make jewelry or other small metal objects. Projects will be joined using rivets, tabs, links and other methods of cold connections. Additional instruction includes developing design, annealing, drilling, sawing, filing, texturing, dapping and finishing techniques.

ART 157B2 Metalwork & Jewelry - Cold Fabrication II (2 Credits)

Recommended preparation: ART 157B1.

Builds the skills learned in ART 157B1 with more challenging project assignments. Students will develop technical skills by designing projects, which include simple forming techniques, moving parts, incorporating found objects and/or stone settings.

ART 157C1 Jewelry - Precious Metal Clay I (1 Credit)

An introduction to working with Precious Metal Clay (PMC) to make fine silver jewelry. The course will include designing projects, making a texture stamp, manipulation and joining techniques for both soft and unfired PMC, kiln firing and finishing techniques.

ART 158B1 Jewelry - Casting & Chain Making I (2 Credits)

An introduction to centrifugal lost wax casting process. Additive and subtractive methods will be used to sculpt small-scale wax models, which will be sprued, invested and cast. Fusing links to weave simple chains and finishing techniques will be included.

ART 158B2 Jewelry - Casting & Chain Making II (2 Credits)

Recommended preparation: ART 158B1 and ART 157A1.

Builds on the skills learned in ART 158B1. It will include centrifugal, vacuum, cuttlebone casting and sand casting. The use of molds to duplicate textures to transfer onto wax, creating stone settings in wax, controlling the wax burn-out and weaving complex linked chains will be included.

ART 158C1 Jewelry - Enameling I (1 Credit)

Basic introduction to enameling on copper and fine silver. Techniques for texturing, using stencils, sifting and wet-packing enamel, adding foils, kiln firing, cold connecting and finishing techniques will be included.

ART 158C2 Jewelry - Enameling II (1 Credit)

Recommended preparation: ART 158C1 and ART 157A1.

Builds on the skills learned in ART 158C1. Techniques of champléve, cloisonné, image transfer and fusing the enamel with a torch will be included.

ART 159A1 Metalwork & Jewelry - Forming I (2 Credits)**Recommended preparation:** ART 157A1.

Students will make non-ferrous metal projects which include a third dimension. The projects can be fabricated jewelry, containers, or small-scale sculpture made using folding, scoring, chasing and repousse, or other metalworking techniques used to form sheet metal. Projects may include the use of hot and/or cold connections and non-metal materials.

ART 159A2 Metalwork & Jewelry - Forming II (2 Credits)**Recommended preparation:** ART 157A1 and ART 159A1.

Builds on the skills learned in ART 159A1. The projects can be fabricated from sheet metal using angle raising, shell forming, hydraulic-press forming and electro-forming. Projects may include the use of hot and/or cold connections and non-metal materials.

ART 159B2 Metalwork & Jewelry - Etching & Hydraulic Press II (2 Credits)**Recommended preparation:** ART 159B1 and either ART 157A1 or ART 157B1.

Builds on the skills learned in ART 159B1. Etching resists will include markers, oil paint and asphaltum varnish as resists for copper. Non-conforming carved acrylic and liquid steel conforming dies will be made to form the etched metal using the hydraulic press.

ART 159C1 Jewelry - Precious Metal Clay & Enameling I (2 Credits)**Recommended preparation:** ART 157C1.

Focuses on improving designs for fine silver precious metal clay. The fired projects will be enhanced with enamel to add color and then fired again to fuse the enamel.

ART 159C2 Jewelry - Precious Metal Clay & Enameling II (2 Credits)**Recommended preparation:** ART 159C1.

Focuses on designing projects to create recesses in the precious metal clay. After firing the PMC, enamel is placed in the depressions. The project is fired again to fuse the enamel. Cold connections and adding gold will also be covered.

ART 161 Photography I (3 Credits)**Recommended preparation:** ART 115.

Introduction to traditional black and white film photography including camera operation, composition, film processing, printing and presentation. Emphasis is on creative problem solving and understanding the basic photographic concepts used to create good visual communication. Weekly photo assignments will require shooting outside of class, as will text readings. In-class critiques of work are a major part of this course.

ART 162 Photography II (3 Credits)**Recommended preparation:** ART 161.

Introduction to black and white fine printing in the traditional wet darkroom. Course includes a basic overview of the Zone System, with the goal of "pre-visualizing" a scene as a finished photograph being an expected outcome. Students work with fiber-base printing paper, print bleaching, toning, archival print finishing and other advanced techniques to create an expressive print statement. Creative problem solving and development of personal vision are a course emphasis. Weekly shooting and printing assignments, class critiques and a final project are part of the course.

ART 163 Photography III (3 Credits)**Recommended preparation:** ART 161.

An exploration of alternative darkroom processes including hand coloring, multiple image printing, selective/multiple toning, "solarization" (Sabattier effect), negative prints and more. A course goal is to use a "post-visualization" approach, allowing students to evolve visual communication beyond what was initially conceived in the field. Creative problem solving and development of personal vision are emphasized. Weekly printing assignments, class critiques and a final project are part of the course.

ART 180 Co-op Work Experience Art (1-4 Credits)**Prerequisites:** Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

ART 181 Painting I (3 Credits)**Recommended preparation:** ART 115 and ART 131.

Introduction to materials and techniques using alkyd oil, acrylic and/or water-soluble oil paints, building canvas supports, stretching canvas and preparing painting grounds. Studio experience using still life, self-portrait, landscape and the figure.

ART 182 Painting II (3 Credits)**Recommended preparation:** ART 131 and ART 181 or instructor approval.

Introduction to color theory and personal expression. Studio experience using still life, portrait, figure and landscape. Application of compositional principles using the grid, sequential imagery and continuous field.

ART 183 Painting III (3 Credits)**Recommended preparation:** ART 131 and ART 182.

Exploration of personal iconography. Studio experience using still life, landscape, figure in context, abstract spatial and abstract geometric.

ART 184 Watercolor I (3 Credits)

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.

ART 185 Watercolor II (3 Credits)**Recommended preparation:** ART 131 and ART 184 or instructor approval.

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.

ART 186 Watercolor III (3 Credits)**Recommended preparation:** ART 131 and ART 185.

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.

ART 188 Special Studies: Art (1-4 Credits)

Explores topics of current interest in the discipline.

ART 190 Figurative Clay Sculpture (3 Credits)**Recommended preparation:** ART 131 and ART 154.

Introduction to modeling the human form in clay from clothed and unclothed models using traditional additive and subtractive processes. Historical treatments of the figure and contemporary approaches will be referenced.

ART 191 Sculpture (3 Credits)**Recommended preparation:** ART 117.

Studio introduction to articulation of visual ideas in three dimensions using additive, subtractive and construction processes.

ART 197 Art Portfolio Creation (3 Credits)

Prepares students for the business and professional art world. Create both digital and hard-copy portfolios while learning about public relations, marketing, promoting, business guidelines, time management, contracts, presentations, goal setting, long-term inspiration and commitment to their craft, as well as exhibition hanging, timelines and reception set-ups. Review art school requirements and learn how to fill out applications for art schools, residencies, grants and art scholarships. Includes practical experience in art exhibitions in the Pence Gallery at Pinckney Center.

ART 199 Selected Topics: Art (1-3 Credits)

This course is in development.

ART 234 Figure Drawing I (3 Credits)

Recommended preparation: ART 131 or instructor approval.

Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media.

ART 235 Figure Drawing II (3 Credits)

Recommended preparation: ART 234 or instructor approval.

Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media.

ART 236 Figure Drawing III (3 Credits)

Recommended preparation: ART 235 or instructor approval.

Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media.

ART 252 Ceramics: Intermediate Wheel Throwing (3 Credits)

Recommended preparation: ART 121 and ART 122.

Enhances ceramic wheel throwing skills, with an emphasis on complex functional forms, as well as the understanding of glaze formulation, testing and kiln firing. Includes presentation of historical, cultural and contemporary trends in ceramics. May be repeated up to 9 credits.

ART 253 Ceramics: Intermediate Ceramics (3 Credits)

Recommended preparation: ART 121 and ART 122.

Enhances ceramic hand building and wheel throwing skills. Continued focus on complex thrown and hand built forms with attention to design elements, as well as the understanding of glaze formulation, testing and kiln firing. Includes presentation of historical, cultural and contemporary trends in ceramics. Independent development of a unique body of work, for presentation/exhibition, is expected. May be repeated up to 9 credits.

ART 257 Metalcraft IV (3 Credits)

Recommended preparation: ART 159 and ART 117.

Skills to work nonferrous metals such as hydraulic press, enameling, granulation, reticulation, electro-forming, fold forming, chasing and repousse, angle-raising, and fabricated hollowware are included. Projects can be jewelry, hollowware or small sculpture. Development of imaginative ideas and personal aesthetic direction is expected. Experimentation and invention are encouraged.

ART 258 Metalcraft V (3 Credits)

Recommended preparation: ART 257 and ART 117.

Skills to work nonferrous metals such as hydraulic press, enameling, granulation, reticulation, electro-forming, fold forming, chasing and repousse, angle-raising, and fabricated hollowware are included. Projects can be jewelry, hollowware or small sculpture. Development of imaginative ideas and personal aesthetic direction is expected. Experimentation and invention are encouraged.

ART 259 Metalcraft VI (3 Credits)

Recommended preparation: ART 117 and ART 158.

Skills to work nonferrous metals such as hydraulic press, enameling, granulation, reticulation, electro-forming, fold forming, chasing and repousse, angle-raising, and fabricated hollowware are included. Projects can be jewelry, hollowware and small sculpture. Development of imaginative ideas and personal aesthetic direction is expected. Experimentation and invention is encouraged. Should be taken in sequence.

ART 261 Darkroom Photography (3 Credits)

Recommended preparation: ART 161.

This course is an application of darkroom photography. Students must have prior knowledge of traditional black and white film photography including: camera operation, film processing and darkroom printing. Emphasis is on creative problem solving and understanding the photographic concepts used to create good visual communication. Requirements include outside-of-class shooting, and independent in-lab processing and printing. In-class photo critiques of work and a hanging of work are a major part of this course.

ART 265 Digital Photography (3 Credits)

Introduces students to the basics of composition and camera settings and provides an understanding of digital photo-editing for the purpose of creating successful landscape, portrait, montage and other photographic forms.

ART 266 Raku-Special Topics (2 Credits)

Recommended preparation: ART 154.

Short course focusing on the raku firing process.

ART 267 Digital Photography II (3 Credits)

Recommended preparation: ART 265.

This course is an intermediate continuation of digital photography including: the zone system technique for image exposure; advanced photo-editing techniques; lighting concepts; and presentation. Emphasis is on creative problem solving and mastering the basic photographic concepts used to create good visual communication. Requirements include outside-of-class shooting, as well as readings. In-class photo labs and critiques of work are a major part of this course.

ART 270 Printmaking (3 Credits)

Recommended preparation: ART 131.

Practice printmaking, including relief, intaglio process on an individual project basis. Processes and materials are presented for students to complete four to five hand-pulled prints. All projects serve as an introduction to various printmaking methods and reproduction printing techniques.

ART 281 Painting IV (3 Credits)

Recommended preparation: ART 131 and ART 183.

Introduction to materials and techniques using alkyd oil, oil and/or water-soluble oil paints and mediums with emphasis on exploration, self-expression and nontraditional supports. Introduces color theory and personal expression; students apply composition principles using the grid, sequential imagery and continuous field with still life, portrait, figure and landscape.

ART 282 Painting V (3 Credits)

Recommended preparation: ART 131 and ART 281.

Emphasis on individual exploration of color, visual concepts, critical doubling, the diptych and scale.

ART 283 Painting VI (3 Credits)

Recommended preparation: ART 131 and ART 282.

Emphasis on independent projects, the triptych, exploration of contemporary problems in painting, statement of a thesis, painting the proposition through a series of interrelated works and the professional documentation and exhibition of the paintings.

ART 284 Watercolor IV (3 Credits)

Recommended preparation: ART 131 and ART 186.

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.

ART 285 Watercolor V (3 Credits)

Recommended preparation: ART 131 and ART 284 or instructor approval.

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.

ART 286 Watercolor VI (3 Credits)

Recommended preparation: ART 131 and ART 285.

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.

ART 291 Mold Making for Ceramics and Sculpture (3 Credits)

Recommended preparation: ART 191 and/or ART 121.

Intermediate studio course with emphasis on developing skills and technical knowledge in mold making processes. Topics covered include plaster molds for ceramic slip casting, block molds, two part and complex molds. Lecture and research topics encompass Mold Making and Casting in Art and Industry, Historical Uses of Mold Making, and Contemporary Materials/Processes.

ART 292 Site Specific Sculpture (3 Credits)

Recommended preparation: ART 117 and/or ART 191.

Explores the possibilities of using non-traditional means such as site, time, and interactivity to communicate ideas. Through a process of research and collaboration, students create interactive sculptural artworks on site. Culminates with a public exhibition of individual and group projects/installations.

ART 293 Outdoor and Public Sculpture (3 Credits)

Recommended preparation: ART 117 and/or ART 191.

Explores the meaning and varieties of art created in and for public spaces, especially concentrating on work that contains environmental and social themes. Each student will generate several proposals, informed by research and readings, then create a work of public art as the primary goal.

ART 298 Independent Study: Art (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

ART 299 Selected Topics: Art (1-3 Credits)

This course is in development.

Art - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer (AAOT) with a focus in art includes courses that form a foundation for this major and meets lower division

general education requirements at all Oregon public universities. COCC's art curriculum includes courses in art history, two dimensional and three dimensional design, drawing, watercolor, painting, sculpture, digital and darkroom photography, ceramics, jewelry and metalwork.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/ Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/ Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose at least three courses chosen from at least two prefixes		9-12
Recommend two of the following: ARH 201 Art History: Western: Prehistory to Early Byzantine, ARH 202 Art History: Western: Early Medieval to Late Renaissance and ARH 203 Art History: Western: Early Baroque to Late 20th Century plus one additional course from COCC's Discipline Studies list with an ART prefix.		
Social Science: (p. 404)		
Choose at least four courses from at least two prefixes		12-16
Science/Math/Computer Science: (p. 403)		
Choose at least four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39
Recommend: ART 115 Basic Design: 2-D, ART 116 Basic Design: Color, ART 117 Basic Design: 3-D and ART 131 Drawing I.		
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated

Advising Notes

Two years of a world language is recommended.

Successful transfer to an upper-division arts school or program is usually based not only on transcripts, but also on the student's portfolio. Students seeking transfer to an accredited art school in Oregon or elsewhere are encouraged to work closely with their advisors to build that portfolio.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher

Sample Plan

First Term	Credits
Health (3 credits with HHPor HHPA prefix) ¹	3
Mathematics	4
Oral Communication: (p. 399)	3-4
WR 121	Academic Composition
	Credits
	14-15
Second Term	
Discipline Studies Arts & Letters (recommend ARH 201)	4
Discipline Studies Arts & Letters (recommend ARH 202)	4
Discipline Studies Social Science	3-4
Elective (recommend ART 115)	3
	Credits
	14-15
Third Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective (recommend ART 116)	3
WR 122	Argument, Research, and Multimodal
or WR 227	Composition
	Technical Writing
	Credits
	16-20
Fourth Term	
Discipline Studies Social Science	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective (recommend ART 117)	3
Elective (recommend ART 131)	3
Elective	4
	Credits
	16-19
Fifth Term	
Discipline Studies Social Science	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective	3
Elective	3
Elective	3
	Credits
	15-18
Sixth Term	
Discipline Studies Science/Math/Computer Science	3-5
Elective	4

Elective	4
Elective	4
Credits	15-17
Total Credits	90-104

Automotive Technology

The Automotive Technology Program at COCC offers you the opportunity to become a skilled automotive service technician, providing you with the fundamental skills necessary to succeed in an ever changing and challenging industry. Students attending the COCC Automotive Technology Program have the opportunity to achieve a degree in:

- Automotive Management AAS
- Automotive Technology in Electronics and Diagnostics AAS
- Master Automotive Technician Certificate
- 14 additional Career Pathway Certificates

We are preparing future technicians for the technologies of the future.

The National Automotive Technicians Education Foundation (NATEF), an arm of the industry certifying body, Automotive Service Excellence (ASE), accredits the COCC Automotive Technology Program.

<https://www.cocc.edu/programs/automotive/> (<https://www.cocc.edu/programs/automotive/default.aspx>)

Contact:

Ken Mays
541-383-7753
Ponderosa Hall, Bend Campus

Department: Natural and Industrial Resources
Department Chair: Paula Simone

Programs

Career and Technical Education

- Automotive Basic Skills with Basic Engine Performance - Career Pathway Certificate of Completion (CPCC) (p. 22)
- Automotive Basic Skills with Welding - Career Pathway Certificate of Completion (CPCC) (p. 23)
- Automotive Controller Systems Technician Level 1 - Career Pathway Certificate of Completion (CPCC) (p. 24)
- Automotive Controller Systems Technician Level 2 - Career Pathway Certificate of Completion (CPCC) (p. 25)
- Automotive Drive Train Technician - Career Pathway Certificate of Completion (CPCC) (p. 26)
- Automotive Electrical Technician (Advanced) - Career Pathway Certificate of Completion (CPCC) (p. 27)
- Automotive Electrical Technician (Basic) - Career Pathway Certificate of Completion (CPCC) (p. 28)
- Automotive Engine Performance Technician - Career Pathway Certificate of Completion (CPCC) (p. 29)
- Automotive Engine Technician - Career Pathway Certificate of Completion (CPCC) (p. 30)
- Automotive Heating & Air Conditioning Technician - Career Pathway Certificate of Completion (CPCC) (p. 30)

- Automotive Hybrid Electric Vehicles (HEV) Technician - Level 1 - Career Pathway Certificate of Completion (CPCC) (p. 31)
- Automotive Hybrid Electric Vehicles (HEV) Technician - Level 2 - Career Pathway Certificate of Completion (CPCC) (p. 32)
- Automotive Management - Associate of Applied Science (AAS) (p. 34)
- Automotive Technology in Electronics and Diagnostics - Associate of Applied Science (AAS) - Pending Approval (p. 35)
- Clean Energy Diesel Technician (Advanced) - Career Pathway Certificate of Completion (CPCC) (p. 37)
- Master Automotive Technician - Two Year Certificate of Completion (CC2) (p. 38)
- Undercar Technician - Career Pathway Certificate of Completion (CPCC) (p. 40)

Courses

AUT 101 Basic Electricity for Automotive (2 Credits)

Prerequisites with concurrency: AUT 106.

Provides understanding of fundamental principles of electricity. Covers basic electrical quantities, Ohm's law, power, series, and parallel circuits, magnetism, electromagnetism and an introduction to DC-current troubleshooting. Introduces student to the use of a digital multimeter and oscilloscope. Student will also be introduced to electrical schematics. A self-paced course.

AUT 102 Automotive Electric I (5 Credits)

Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.

Covers Automotive Electrical Skills. Introduces the testing, disassembly, and rebuilding of various electrical equipment. Troubleshooting and using various test equipment common to the Automotive trade will be stressed. Introduces the use of automotive scan tools for basic diagnostics. Introduces the use of intrusive and non-intrusive testing methods.

AUT 103 Automotive Electric II (2 Credits)

Prerequisites: AUT 102.

Studies disassembly, testing and rebuilding of various electrical equipment. Stresses troubleshooting and using various test equipment common to the automotive trade.

AUT 104 Automotive Electric III (2 Credits)

Prerequisites: AUT 103.

A hands-on study and familiarization of repair procedures for air bag, security entry and cruise control systems. Learn diagnostic and repair procedures using body control modules. Learn diagnostics and repair procedures for hybrid and new electrical systems.

AUT 105 Diesel Performance I (2 Credits)

Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Introduces principles of diesel systems and basic diagnosis. Includes engine analysis, cooling and exhaust systems, fuel management systems and diesel engines.

AUT 106 Automotive Program Orientation (1 Credit)

Recommended preparation: or to be taken with AUT 101, AUT 107, AUT 110, AUT 115, and MTH 020 or higher or minimum placement into MTH 060.

Introduction to the Automotive program. Provides an introduction of the fundamental principles of automotive shop safety and tool care. Guidance given on the self-paced course format. This course is required prior to taking any automotive course. This is a three-day, intensive course that is only taught at the beginning of each term. Permissible to be taken in a term along with other automotive courses.

AUT 107 Mechanical Systems I (3 Credits)

Prerequisites with concurrency: AUT 106.

Provides an understanding of the fundamental principles of automotive shop safety and tool care. Develops mechanical knowledge and skills utilized throughout a career in the automotive field. Includes techniques of routine vehicle maintenance. Includes customer vehicle identification and handling, new vehicle pre-delivery inspection and preparation, safety inspection, lubrication tasks, and light line tasks. A self-paced course.

AUT 110 Small Gas Engines (3 Credits)

Prerequisites with concurrency: AUT 106.

Designed to study and apply the theory, operation, diagnoses and repair of small gas engines and their use in the world today. A self-paced course.

AUT 111 Computerized Engine Controls (5 Credits)

Prerequisites: AUT 205.

Studies advanced electrical systems found on late-model vehicles. Provides solid understanding of computerized automotive engine control systems and how they operate and the ability to diagnose, troubleshoot and repair computerized engine control systems.

AUT 112 Basic Engine Performance I (1 Credit)

Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Designed to study and apply the theory, operation, diagnoses and repair of the points-type ignition and carburetion systems as they were used in vehicles of the past.

AUT 113 Basic Engine Performance II (1 Credit)

Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Designed to continue the study and apply the theory presented in AUT 112 Basic Engine Performance I. Continues with the operation, diagnoses, and repair of the carburetion system as it was used in vehicles of the past.

AUT 114 Welding for the Automotive Trade (3 Credits)

Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110, and AUT 115.

Provides a basic understanding of the fundamental principles of automotive fabrication, including safety topics. Topics introduce students to focused areas that are required when replacing vehicle components that include a light level of fabrication. (A scheduled self-paced course).

AUT 115 College Success for Automotive Technology (2 Credits)

Prerequisites with concurrency: AUT 106.

Recommended preparation: or to be taken with MTH 020 or higher or minimum placement into MTH 060.

Prepares students for successful completion of the Automotive Technology degree at COCC and explores careers as an automotive technician and professional. Offers a condensed version of the College Success course geared toward the two Automotive Technology degrees and/or the multiple Automotive Certificates. Introduces the various automotive information systems, hand tool usage, Scan Tool introduction, and resume preparation.

AUT 199 Selected Topics: Automotive (1-4 Credits)

This course is in development.

AUT 201 Automotive Engines (4 Credits)

Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.

Provides information on the construction, operation and design of the internal combustion engine. Teaches the concepts and procedures of engine work to cover the proper procedure in rebuilding a four-cycle internal combustion engine. Includes a combination of guided lecture and laboratory applications, stressing safety, accuracy of measure, proper usage of tools, and application of repair manuals through actual overhaul of engines.

AUT 202 Manual Drive Trains I (3 Credits)

Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.

A self-paced course that studies standard transmissions and transaxles. Students will learn on college-owned components. The students will learn operating principles, diagnosis, construction, approved repair procedures, and overhaul of current transmission types on manual transmissions and transaxles.

AUT 203 Manual Drive Trains II (3 Credits)

Prerequisites: AUT 202.

Second part of a manual transmission sequence. A study of standard transmission and the relationship to clutches, driveshafts, rear axle assembly, transaxle, shift controls and four-wheel drive components. Students will learn on college-owned components. The student will learn operating principles, diagnosis and approved repair procedures on manual transmissions and related power train components. Includes emphasis on diagnosis, service, and procedure to conform to current service manuals.

AUT 204 Steering and Suspension (3 Credits)

Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Recommended preparation: AUT 208.

Designed to study and apply the theory, operation, diagnoses and repair of the modern suspension and steering systems.

AUT 205 Engine Performance I (2 Credits)

Prerequisites: AUT 103.

Studies the diagnosis of drivability problems. Covers engine analysis, cooling and exhaust systems, ignition and fuel management systems.

AUT 206 Engine Performance II (2 Credits)

Prerequisites: AUT 111.

Studies diagnosis of drivability problems. Includes further study of engine analysis, ignition and fuel management systems, and super performance diagnosis. Provides the technician with a look into the causes of automotive emissions in relation to vehicles that are four years old and newer. Looks at various methods of emissions inspection/maintenance testing, the diagnosis of failed vehicles, and enhanced on-board computer systems. Also covers the testing of alternative-fuel vehicles.

AUT 208 Automotive Brakes (3 Credits)

Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.

Studies the theory, operation, diagnosis and repair of the modern braking systems of both domestic and import vehicles. Includes an introduction to anti-lock brake systems.

AUT 211 ASE Test Prep I (1 Credit)

Recommended preparation: completion of two terms of Automotive Technology curriculum and WR 60.

This self-paced, program-specific course allows the student to study in preparation for the ASE A1-A5 areas.

AUT 212 ASE Test Prep II (1 Credit)

Recommended preparation: completion of two terms of Automotive Technology curriculum and WR 60.

This self-paced, program-specific course allows the student to study in preparation for the ASE A6-A8 areas.

AUT 216 Co-op Work Experience Automotive (1-4 Credits)

Prerequisites: completion of two terms of Automotive Technology curriculum.

Provides an environment in which students can begin to recognize their strengths and limitations in their chosen career. The student is placed in an actual job environment where pressure, production and personalities are experienced. Cooperative Work Experience is a program requirement for students in the Automotive Technology program. Two CWE sections are required for the student who will achieve the Master Automotive Technician Certificate.

AUT 216A CWE Automotive A (4 Credits)

Prerequisites: instructor approval.

Recommended preparation: at least 24 credits of automotive courses.

The student is provided with the environment in which he/she can begin to recognize his/her strengths and limitations in their chosen career. The student is placed in an actual job environment where the experiences of pressure, production, and personalities are experienced. Cooperative Work Experience, is a program requirement for students in the Automotive Technology Program. Two CWE sections are required for the student who will achieve the Master Automotive Technician Certificate. 4 credits per section (144 hours).

AUT 216B CWE Automotive B (4 Credits)

Prerequisites: instructor approval.

Recommended preparation: at least 24 credits of automotive courses.

The student is provided with the environment in which he/she can begin to recognize his/her strengths and limitations in their chosen career. The student is placed in an actual job environment where the experiences of pressure, production, and personalities are experienced. Cooperative Work Experience, is a program requirement for students in the Automotive Technology Program. Two CWE sections are required for the student who will achieve the Master Automotive Technician Certificate. 4 credits per section (144 hours).

AUT 251 Automatic Transmissions I (3 Credits)

Prerequisites: AUT 203.

Provides an understanding of the basic principles and theory of planetary gear sets, torque converters and hydraulic controls as applied to automatic transmissions. Includes construction, operation and overhaul of current transmission types with emphasis on diagnosis, service and procedures to conform to current service manuals. A self-paced course.

AUT 253 Automotive Air Conditioning (3 Credits)

Prerequisites: AUT 102.

Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.

A hands-on study of automotive air conditioning and heating systems, concurrent with EPA Recovery Requirements for R-12, R-134a systems, diagnosis and service. A study of advanced electrical systems found on late-model vehicles.

AUT 256 Automatic Transmissions II (2 Credits)

Prerequisites: AUT 251.

This is the second part of an automatic transmission sequence. This course will continue principles and theory of planetary gear sets, torque converters, and hydraulic controls as applied to automatic transmissions. Includes emphasis on diagnosis, service, and procedures to conform to current service manuals. The student will also be introduced to Constant Velocity Transmissions/Hybrid Electric Vehicles/Electric Vehicle type transmissions.

AUT 260 Diesel Performance II (4 Credits)

Prerequisites: AUT 206.

This is the second part of a diesel performance sequence. This course will provide the operational principles and theory of: Hydraulically actuated Electronically controlled Unit Injection *(HEUI) systems, the Electronic Unit Injection *(EUI) systems, and the Common Rail (CR) systems, as they are applied to Diesel Engine Performance. The course will include, in depth, Controller Area Networking (CAN),multiplexing, Controller Area Networking (CAN C) language (J1939 protocol), Software Updates, (J2534 re-flash), Vehicle Communication Interface (VCI), Selective Catalytic Reduction (SCR), Exhaust Gas Recirculation (EGR) systems, Variable Geometry Turbo-chargers (VGT), Constant Geometry Turbo-chargers (CGT) systems, Diesel Particulate Filter (DPF) variations, Diesel Oxidation Catalyst (DOC) systems, and diagnostic strategies, that will lead to accurate conclusions. The student will be exposed to multiple vehicle product lines during this course and,will be introduced to the proper techniques and procedures to repair them.

AUT 270 Automotive Controller Systems I (4 Credits)

Prerequisites: AUT 206.

Technological advancements in modern vehicles have changed how we perform diagnosis. This course examines various methods of those enhancements of automotive drive systems, with major emphasis on electronic programming, and how to accurately repair them, using computers and scan tools. This course will require the student technician to build on current diagnostic routines into advanced applications.

AUT 271 Automotive Controller Systems II (4 Credits)

Prerequisites: AUT 206.

Recommended preparation: AUT 270.

Vehicle performance is enhanced by a variety of methods. This course examines various methods of performance enhancements of automotive drive systems with major emphasis on electronic programming. Manufacturer scan tools will be included with vehicle testing.

AUT 280 Hybrid Electric Vehicles I (4 Credits)

Prerequisites: AUT 206.

A study of HEV (hybrid electric vehicles) and EV (electric vehicles). Safety procedures will be strongly emphasized. Vehicle systems that will be covered: Hybrid safety and service procedures, introduction to hybrid batteries and service, introduction to hybrid electric motors, generators, and controls, regenerative braking systems, introduction to hybrid vehicle transmissions and transaxles, hybrid vehicle heating and air conditioning, first responder safety and procedures, introduction to manufacturer scan tools, hybrid vehicle diagnostic trouble codes.

AUT 281 Hybrid Electric Vehicles II (4 Credits)

Prerequisites: AUT 206.

Recommended preparation: AUT 280.

A study of HEV (hybrid electric vehicles) and EV (electric vehicles) part 2. Safety procedures will be strongly emphasized. Vehicle systems that will be covered include: Hybrid safety and service procedures, advanced hybrid batteries testing and service, advanced testing of hybrid electric motors, generators, and controls along with extensive manufacturer scan tools use and vehicle testing.

Automotive Basic Skills with Basic Engine Performance - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Basic Skills with Basic Engine Performance Career Pathway Certificate of Completion is designed to capture a range of skills that are required for the automotive industry, including basic internal combustion engines and theory, basic DC electrical and schematic understanding, and vehicle inspection. The largest portion addresses shop and vehicle safety. This coursework prepares students for the ASE certification in (G1) Maintenance and Light Repair.

The Automotive Basic Skills with Basic Engine Performance Career Pathway Certificate of Completion also introduces the operation, diagnoses and repair of the carburetion system and the points ignition system. Green statement: As with all engine performance related subjects, fuel delivery in carburetors affects air quality. This class introduces the student to the skill of reducing hydrocarbon and carbon dioxide emissions.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology including the following:
- Demonstrate correct voltage, current, and resistance measurements on series and parallel circuits using a digital multimeter.
- Describe the fundamental principles of automotive shop safety and tool care. Describe and apply basic mechanical skills to the tasks of basic vehicle identification, inspection, routine maintenance, handling, and lubrication.
- Demonstrate the correct name and function of basic hand tools.
- Demonstrate the use of an automotive diagnostic scan tool and record various data from the scan tool.
- Demonstrate and apply safety protocols while working in the shop, around small gas engines, and handling hazardous materials.
- Gain exposure and experience with the operation, diagnoses, and repair of the carburetion system and the points ignition system.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for

Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.

- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 112	Basic Engine Performance I	1
AUT 113	Basic Engine Performance II	1
AUT 115	College Success for Auto Tech	2
Total Credits		13

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Credits		11

Second Term

AUT 112	Basic Engine Performance I	1
AUT 113	Basic Engine Performance II	1
	Credits	2
Total Credits		13

Automotive Basic Skills with Welding - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Basic Skills with Welding Career Pathway Certificate of Completion is designed to capture a range of skills that are required for the automotive industry, including basic internal combustion engines and theory, basic DC electrical and schematic understanding, and vehicle inspection. The largest portion addresses shop and vehicle safety. This coursework prepares students for the ASE certification in (G1) Maintenance and Light Repair.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology including the following:
 - Demonstrate correct voltage, current, and resistance measurements on series and parallel circuits using a digital multimeter.
 - Describe the fundamental principles of automotive shop safety and tool care.
 - Describe and apply basic mechanical skills to the tasks of basic vehicle identification, inspection, routine maintenance, handling, and lubrication.
 - Demonstrate the correct name and function of basic hand tools.
 - Demonstrate the use of an automotive diagnostic scan tool and record various data from the scan tool.
 - Demonstrate and apply safety protocols while working in the shop, around small gas engines, and handling hazardous materials.
 - Gain exposure and experience with the operation of welding as it applies to automotive applications.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 114	Welding for the Auto Trade	3
AUT 115	College Success for Auto Tech	2
Total Credits		14

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Credits		11
Second Term		
AUT 114	Welding for the Auto Trade	3
Credits		3
Total Credits		14

Automotive Controller Systems Technician Level 1 - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Controller Systems Technician Level I Career Pathway Certificate of Completion trains students to be the key troubleshooter in figuring out a vehicle's drivability problems. Students learn to identify everything from powertrain malfunctions to ignition failures and other engine-related problems using state-of-the-art computer diagnostic equipment, as well as the best way to fix the problem for the client. Students will be well prepared to work with multiple vehicle platforms to reprogram vehicle computer systems for safety and vehicle function. Students will become competent working with logic circuits and Controller Area Network. This coursework applies toward ASE certification in (A6) Automotive Electrical/Electronic Systems and (A8) Automotive Engine Performance.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses, plus second level electrical / electronic courses.
- Perform various scan tool operations to update vehicle modifications.
- Describe the use of Controller Area Network on operational vehicles.
- Describe the need for system features as applied to vehicle safety.
- Perform Vehicle Data List, Parameter Identification (PIDS) and Service Identification (SIDS) extraction.
- Describe vehicle reprogramming for performance and emissions.
- Perform vehicle reprogramming for software issues updates.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing

- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 115	College Success for Auto Tech	2
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 270	Auto Controller Systems I	4
Total Credits		35

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Credits		11
Second Term		
AUT 102	Automotive Electric I	5
AUT 105	Diesel Performance I	2
Credits		7
Third Term		
AUT 103	Automotive Electric II	2
Credits		2
Fourth Term		
AUT 104	Automotive Electric III	2

AUT 205	Engine Performance I	2
	Credits	4
Fifth Term		
AUT 111	Computerized Engine Controls	5
	Credits	5
Sixth Term		
AUT 206	Engine Performance II	2
AUT 270	Auto Controller Systems I	4
	Credits	6
	Total Credits	35

Automotive Controller Systems Technician Level 2 - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Controller Systems Technician Level 2 Career Pathway Certificate of Completion trains students to be the key troubleshooter in figuring out a vehicle's drivability problems. Students learn to identify everything from powertrain malfunctions to ignition failures and other engine-related problems using state-of-the-art computer diagnostic equipment. This coursework applies toward ASE certification in (A6) Automotive Electrical/Electronic Systems, (A8) Automotive Engine Performance, and the (L1) Advanced Engine Performance Specialist.

The Automotive Controller Systems Technician Level 2 Career Pathway Certificate of Completion also trains students in testing volumetric efficiency, performance as it relates to program modification, dynamometer operation and safety, and reprogramming for performance.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses, plus second level electrical / electronic courses.
- Calculate volumetric efficiency of operational vehicles.
- Describe vehicle performance before and after vehicle modification.
- Perform OBD diagnostics, analyze and report findings.
- Perform Vehicle Dynamometer Operation.
- Describe vehicle reprogramming for performance and emissions.
- Perform vehicle reprogramming for performance and emissions.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 115	College Success for Auto Tech	2
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 270	Auto Controller Systems I	4
AUT 271	Auto Controller Systems II	4
Total Credits		39

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
	Credits	11

Second Term

AUT 102	Automotive Electric I	5
AUT 105	Diesel Performance I	2
	Credits	7

Third Term

AUT 103	Automotive Electric II	2
	Credits	2

Fourth Term

AUT 104	Automotive Electric III	2
	Credits	2

Fifth Term

AUT 205	Engine Performance I	2
	Credits	2

Sixth Term

AUT 111	Computerized Engine Controls	5
	Credits	5

Seventh Term

AUT 206	Engine Performance II	2
AUT 270	Auto Controller Systems I	4
	Credits	6

Eighth Term

AUT 271	Auto Controller Systems II	4
	Credits	4
	Total Credits	39

Automotive Drive Train Technician - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Drive-Train Technician Career Pathway Certificate of Completion prepares students on all elements of manual and automatic transmissions, as well as basic hydraulic and electrical principles. This Career Pathway Certificate also prepares students to work with vehicle drivelines, transaxles, clutches, differentials, transmissions. The automotive drive-train courses apply toward ASE certification in (A2) Automotive Automatic Transmission, (A3) Automotive Manual Drive Trains and Axles, and (G1) Maintenance and Light Repair.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses.
- Apply Pascal's Law on the study of force and fluid dynamics.
- Diagnose and repair automatic transmission systems.
- Diagnose and repair manual transmission systems.
- Perform analysis techniques working with computer controls that apply to transmission systems.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
AUT 202	Manual Drive Trains I	3
AUT 203	Manual Drive Trains II	3
AUT 251	Automatic Transmissions I	3
AUT 256	Automatic Transmissions II	2
Total Credits		22

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Credits		11
Second Term		
AUT 202	Manual Drive Trains I	3
Credits		3
Third Term		
AUT 203	Manual Drive Trains II	3
Credits		3
Fourth Term		
AUT 251	Automatic Transmissions I	3
Credits		3
Fifth Term		
AUT 256	Automatic Transmissions II	2
Credits		2
Total Credits		22

Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.

- Recommended:
- High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Automotive Electrical Technician (Advanced) - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Electrical Technician (Advanced) Career Pathway Certificate of Completion prepares students in the electrical technician coursework establishing skill in voltage drops, electrical troubleshooting, vehicle ignition systems, logic controls, air bag systems, Controller Area Network, and cruise control. This coursework prepares students for ASE certification in (A6) Electrical/Electronic Systems, (A8) Engine Performance, and (G1) Maintenance and Light Repair.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses, plus first level electrical / electronic courses.
- Apply the 3rd Maxwell's Equation and Faraday's Law of Induction on the study of ignition systems.
- Diagnose and repair ignition systems.
- Study logic controls and Controller Area Network.
- Diagnose and repair air bag / safety systems and cruise control.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Total Credits		20

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Credits		11

Second Term

AUT 102	Automotive Electric I	5
	Credits	5

Third Term

AUT 103	Automotive Electric II	2
	Credits	2

Fourth Term

AUT 104	Automotive Electric III	2
	Credits	2
	Total Credits	20

Automotive Electrical Technician (Basic) - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Electrical Technician (Basic) Career Pathway Certificate of Completion prepares students in the electrical technician coursework establishing skill in charging systems, starting systems, voltage drops, electrical troubleshooting, lighting, gauges, accessories, battery load testing, and repairs. This coursework prepares students for the ASE certification in (A6) Electrical/Electronic Systems and (G1) Maintenance and Light Repair.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses.
- Apply Kirchhoff's Law and Ohm's Law on the study of schematics and vehicle diagnosis and repair.
- Diagnose and repair starting and charging systems.
- Analyze battery state-of-charge in the vehicle system diagnostic routine.
- Study auxiliary systems and perform course pack exercises to validate.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Required Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Total Credits		16

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
	Credits	11
Second Term		
AUT 102	Automotive Electric I	5
	Credits	5
	Total Credits	16

Automotive Engine Performance Technician - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Engine Performance Technician Career Pathway Certificate of Completion trains students to be the key troubleshooter in figuring out a vehicle's drivability problems. Students learn to identify everything from powertrain malfunctions to ignition failures and other engine-related problems using state-of-the-art computer diagnostic equipment, as well as the best way to repair a vehicle. This coursework applies toward ASE certification in (A6) Automotive Electrical/Electronic Systems (A8) Automotive Engine Performance, and the (L1) Advanced Engine Performance Specialist.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses, plus first level electrical / electronic courses.
- Apply Charles's Law and Boyle's Law on the study of engine performance.
- Diagnose and repair ignition and fuel systems.
- Perform analysis techniques working with computer controls, emission systems, and vehicle performance.
- Diagnose and repair output devices and system actuators using oscilloscopes, digital volt / ohmmeters, and scan tools.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 115	College Success for Auto Tech	2
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
Total Credits		29

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Credits		11
Second Term		
AUT 102	Automotive Electric I	5
AUT 105	Diesel Performance I	2
Credits		7
Third Term		
AUT 103	Automotive Electric II	2
Credits		2
Fourth Term		
AUT 205	Engine Performance I	2
Credits		2
Fifth Term		
AUT 111	Computerized Engine Controls	5
Credits		5

Sixth Term

AUT 206	Engine Performance II	2
	Credits	2
Total Credits		29

Automotive Engine Technician - Career Pathway Certificate of Completion (CPCC)

Description

Preparation and study of an automotive engine rebuilding process. Included is the study of diesel engine systems. This coursework applies toward ASE certification in (A1) Automotive Engine Repair, (A9) Light Vehicle Diesel Engines, and (G1) Maintenance and Light Repair.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses.
- Apply the Otto Cycle and Diesel principles on internal combustion engines.
- Perform a complete engine disassembly, measurements, and reassembly.
- Perform various levels of machining and develop precision measurement techniques.
- Diagnose diesel systems on assigned vehicles.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
AUT 201	Automotive Engines	4
Total Credits		17

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Credits		11
Second Term		
AUT 105	Diesel Performance I	2
AUT 201	Automotive Engines	4
Credits		6
Total Credits		17

Automotive Heating & Air Conditioning Technician - Career Pathway Certificate of Completion (CPCC)

Program Description

The Automotive Heating and Air Conditioning Career Pathway Certificate of Completion gives students a hands-on opportunity to learn about automotive air conditioning and heating systems, EPA Recovery Requirements for R-12, R-134a, and R1234yf systems, and general

diagnosis and service. Courses in this option apply toward ASE certification in (A7) Automotive Heating and Air Conditioning, (A6) Electrical/Electronic Systems, and (G1) Maintenance and Light Repair.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses, plus first level electrical / electronic courses.
- Prepare for the national Refrigerant Recovery and Recycling Program.
- Study pressure / temperature relationships as applied to Freon used in automotive systems.
- Diagnose and repair air conditioning and heating controls.
- Demonstrate the safe handling of Freon while repairing multiple vehicles.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3

AUT 115	College Success for Auto Tech	2
AUT 253	Automotive Air Conditioning	3
Total Credits		19

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Credits		11
Second Term		
AUT 102	Automotive Electric I	5
Credits		5
Third Term		
AUT 253	Automotive Air Conditioning	3
Credits		3
Total Credits		19

Automotive Hybrid Electric Vehicles (HEV) Technician - Level 1 - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Hybrid Electric Vehicles Technician – Level 1 Career Pathway Certificate of Completion trains students to be the key troubleshooter in figuring out a vehicle’s drivability problems. Students learn to identify everything from powertrain malfunctions to ignition failures and other engine-related problems using state-of-the-art computer diagnostic equipment, as well as the best way to fix the problem for the client. Students will be introduced to hybrid (HEV) and electric (EV) vehicles to study and apply skills on diagnosing systems on an array of vehicles with electric drive systems. This coursework applies toward ASE certification in (A6) Automotive Electrical/Electronic Systems and (L3) Light Duty Hybrid / Electric Vehicle Specialist.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses, plus second level electrical / electronic courses.

- Develop diagnosis and repair procedures for HEV (hybrid electric) and EV (electric vehicles).
- Describe hybrid safety and service procedures along with First Responder safety and procedures.
- Describe hybrid batteries and service, hybrid electric motors, generators, and controls
- Describe hybrid batteries and service, hybrid electric motors, generators, and controls
- Describe regenerative braking systems, hybrid vehicle transmissions and transaxles
- Perform vehicle diagnosis using manufacturer and generic scan tools.

AUT 111	Computerized Engine Controls	5
AUT 115	College Success for Auto Tech	2
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 280	Hybrid Electric Vehicles I	4
Total Credits		35

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Credits		11
Second Term		
AUT 102	Automotive Electric I	5
AUT 105	Diesel Performance I	2
AUT 205	Engine Performance I	2
Credits		9
Third Term		
AUT 103	Automotive Electric II	2
AUT 111	Computerized Engine Controls	5
Credits		7
Fourth Term		
AUT 104	Automotive Electric III	2
AUT 206	Engine Performance II	2
AUT 280	Hybrid Electric Vehicles I	4
Credits		8
Total Credits		35

Automotive Hybrid Electric Vehicles (HEV) Technician - Level 2 - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Hybrid Electric Vehicles Technician – Level 2 Career Pathway Certificate of Completion is a continuation on the Automotive Hybrid Electric Vehicles Technician – Level 1 Career Pathway Certificate. Students will become well prepared to analyze and repair electric drive vehicles as it applies to the state-of-health and predictive maintenance on vehicles with electric drive systems. Students will be able to experience extensive time with analysis of vehicles with electric drive systems.

Emphasis will be placed on high voltage battery systems and inverter diagnosis. This coursework applies toward ASE certification in (A6) Automotive Electrical/Electronic Systems and (L3) Light Duty Hybrid / Electric Vehicle Specialist.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses, plus second level electrical / electronic courses.
- Describe and perform diagnosis and repair HEV (hybrid electric) and EV (electric vehicles).
- Develop the capacity to train other technicians on the safety precautions and procedures when working on HEV and EV vehicles.
- Perform testing and restoration of HEV and EV drive motors and battery systems.
- Describe the use of oscilloscopes, multimeters, and hand-held testers to assist in diagnosis.
- Perform the use of manufacturer and generic scan tools to capacity.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2

AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 115	College Success for Auto Tech	2
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 280	Hybrid Electric Vehicles I	4
AUT 281	Hybrid Electric Vehicles II	4
Total Credits		39

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Credits		11
Second Term		
AUT 102	Automotive Electric I	5
AUT 105	Diesel Performance I	2
Credits		7
Third Term		
AUT 103	Automotive Electric II	2
Credits		2
Fourth Term		
AUT 104	Automotive Electric III	2
Credits		2
Fifth Term		
AUT 205	Engine Performance I	2
Credits		2
Sixth Term		
AUT 111	Computerized Engine Controls	5
Credits		5
Seventh Term		
AUT 206	Engine Performance II	2
AUT 280	Hybrid Electric Vehicles I	4
Credits		6

Eighth Term

AUT 281	Hybrid Electric Vehicles II	4
	Credits	4
	Total Credits	39

Automotive Management - Associate of Applied Science (AAS)

Description

The Automotive Technology program emphasizes educating students as multi-skilled workers with the ability to complete a wide variety of tasks within the automotive technology service and repair setting. Coursework includes technical skills in computer applications, electrical, electronic, mechanical, hydraulic and network systems, both in theory as well as hands-on training. A self-paced method of instruction is offered for the entry-level courses. Communication skills are also highly emphasized throughout each program. The Associate of Applied Science degree enables students to enter the transportation industry as an automotive technician and/or middle management.

Learning Outcomes

1. Communication - Demonstrate oral and written strategies for directing automotive employees to perform duties correctly and to communicate with managerial staff members clearly.
2. Diagnose and Analyze Specialized Areas - Demonstrate how to use defined procedures to accurately assess problem solving in vehicle application issues, in personnel behaviors, and in addressing clients concerns, in a manner that is most likely to lead to a successful outcome
3. Professional -- Model professional practices of the automotive industry and the needs of a service environment, by demonstrating team attitude, displaying management behavior in regard to tasks, by behavior specific to management tasks related to the concern, and by keeping an orderly, task-based mindset of learned processes document.
4. Certification - Substantiate knowledge of up-to-date automotive and service industry practices by successfully completing NATEF, and Master Automotive Service Excellence Certification (levels A1-A8, from Engine Repair to Engine Performance) and understanding of sophisticated drivability and emissions-related issues by obtaining Advanced Engine Performance Specialist Certification (LI).

Entrance Requirements

Academic Entrance Requirements

Required:

- Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.

Recommended:

- High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 112	Basic Engine Performance I	1
AUT 113	Basic Engine Performance II	1
AUT 114	Welding for the Auto Trade	3
AUT 115	College Success for Auto Tech	2
AUT 201	Automotive Engines	4
AUT 202	Manual Drive Trains I	3
AUT 203	Manual Drive Trains II	3
AUT 204	Steering and Suspension	3
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 208	Automotive Brakes	3
AUT 216A	CWE Automotive A ¹	4
AUT 251	Automatic Transmissions I	3
AUT 253	Automotive Air Conditioning	3
AUT 256	Automatic Transmissions II	2
BA 101	Intro to Business	4
BA 111	Applied Accounting I	3
BA 178	Customer Service	3
BA 206	Management Fundamentals I	4
BA 223	Marketing Principles I	4
BA 280	Co-op Work Experience Business	3
BA 286	Managing Business Processes	4
or BA 250	Entrepreneurship	

Other Courses

CIS 120	Computer Concepts (or Computer Competency Test)	0-4
HHP 252A	Fitness/First Aid	3
MTH 060	Beginning Algebra I (or higher)	4
WR 121	Academic Composition	4
Total Credits		100-104

¹ Automotive CWE may be taken after 24 credits of automotive courses in addition to the basic skills courses, including summer. Students may not enroll in CWE without first being cleared by an instructor. Exceptions are based on individual student goals.

Advising Notes

Full-time students are discouraged from working more than 15 hours each week due to a heavy course load. It is recommended that the ASE (Automotive Service Excellence) certification test be taken as the student completes the program

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
WR 121	Academic Composition	4
Credits		15
Second Term		Credits
AUT 102	Automotive Electric I	5
AUT 105	Diesel Performance I	2
AUT 202	Manual Drive Trains I	3
MTH 060	Beginning Algebra I (higher)	4
Credits		14
Third Term		Credits
AUT 103	Automotive Electric II	2
AUT 112	Basic Engine Performance I	1
AUT 203	Manual Drive Trains II	3
AUT 253	Automotive Air Conditioning	3
BA 101	Intro to Business	4
CIS 120	Computer Concepts (Computer Competency Test)	0-4
Credits		13-17
Fourth Term		Credits
AUT 104	Automotive Electric III	2

AUT 113	Basic Engine Performance II	1
AUT 204	Steering and Suspension	3
AUT 216A	CWE Automotive A ¹	4
AUT 251	Automatic Transmissions I	3
Credits		13

Fifth Term

AUT 205	Engine Performance I	2
AUT 208	Automotive Brakes	3
AUT 256	Automatic Transmissions II	2
BA 111	Applied Accounting I	3
BA 206	Management Fundamentals I	4
Credits		14

Sixth Term

AUT 111	Computerized Engine Controls	5
AUT 201	Automotive Engines	4
BA 178	Customer Service	3
HHP 252A	Fitness/First Aid	3
Credits		15

Seventh Term

AUT 114	Welding for the Auto Trade	3
AUT 206	Engine Performance II	2
BA 223	Marketing Principles I	4
BA 280	Co-op Work Experience Business	3
BA 286 or BA 250	Managing Business Processes Entrepreneurship	4
Credits		16
Total Credits		100-104

Automotive Technology in Electronics and Diagnostics - Associate of Applied Science (AAS) - Pending Approval

Description

The AAS Automotive Technology in Electronics and Diagnostics degree prepares students to enter the emerging field of service and diagnosis of vehicles powered by electricity generated by plug-in electric and hybrid-powertrain sources. Coursework includes technical skills in computer applications, electrical, electronic, mechanical, hydraulic and network systems. Students will learn theory as well as application, using the latest in computer skills and electronic testing equipment to diagnose and repair alternative fueled vehicles.

All courses for this program are offered on the Bend campus except the final five courses/20 credits (AUT 260 Diesel Performance II, AUT 270 Automotive Controller Systems I, AUT 271 Automotive Controller Systems II, AUT 280 Hybrid Electric Vehicles I, AUT 281 Hybrid Electric Vehicles II), which are offered on the Redmond campus.

Learning Outcomes

1. Communication - Demonstrate oral and written strategies for directing automotive employees to perform duties correctly and to communicate with managerial staff members clearly.

2. Certification - Substantiate knowledge of up-to-date automotive and service industry practices by successfully preparing for NATEF, and Master Automotive Service Excellence Certification (levels AI-A8, from Engine Repair to Engine Performance).
3. Preparation - Apply and maintain current skills in vehicle electrification systems diagnostics including extensive computer networking that includes automatic highway braking, driverless vehicles, LAN radar, and automatic parking.
4. Professionalism - Model professional practices of the automotive industry and the needs of a service environment, by demonstrating team attitude, displaying management behavior in regard to tasks, by behavior specific to management tasks related to the concern, and by keeping an orderly, task-based mindset of learned processes document.
5. Diagnose and Analyze Specialized Areas - Demonstrate how to use defined procedures to accurately assess problem solving in vehicle application issues, in personnel behaviors, and in addressing clients concerns, in a manner that is most likely to lead to a successful outcome.
6. Advanced Vehicle Training – Demonstrate skills in electric drive vehicle systems, by building competency in hybrid and electric vehicles, reprogramming and custom programming vehicle control systems, and application of clean diesel practices.

AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 115	College Success for Auto Tech	2
AUT 201	Automotive Engines	4
AUT 202	Manual Drive Trains I	3
AUT 203	Manual Drive Trains II	3
AUT 204	Steering and Suspension	3
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 208	Automotive Brakes	3
AUT 216A	CWE Automotive A ¹	4
AUT 216B	CWE Automotive B ¹	4
AUT 251	Automatic Transmissions I	3
AUT 253	Automotive Air Conditioning	3
AUT 256	Automatic Transmissions II	2
AUT 260	Diesel Performance II	4
AUT 270	Auto Controller Systems I	4
AUT 271	Auto Controller Systems II	4
AUT 280	Hybrid Electric Vehicles I	4
AUT 281	Hybrid Electric Vehicles II	4

Other Required Courses

BA 214	Business Communications	3
Choose one course from the Human Relations List.		3-4
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
MTH 058	Math Literacy I (or higher)	4
Total Credits		97-102

¹ Automotive CWE may be taken after 24 credits of automotive courses in addition to the basic skills courses, including summer. Students may not enroll in CWE without first being cleared by an instructor. Exceptions are based on individual student goals.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3

Advising Notes

Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.

Full-time students are discouraged from working more than 15 hours each week due to a heavy course load. It is recommended that the ASE (Automotive Service Excellence) certification test be taken as the student completes the program.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

Fall		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
MTH 058	Math Literacy I (higher)	4
Credits		15

Winter

AUT 102	Automotive Electric I	5
AUT 105	Diesel Performance I	2
BA 214	Business Communications	3
CIS 120	Computer Concepts (Computer Competency Test)	0-4
Credits		10-14

Spring

AUT 103	Automotive Electric II	2
AUT 202	Manual Drive Trains I	3
AUT 204	Steering and Suspension	3
AUT 253	Automotive Air Conditioning	3
One course from the Human Relations List		3-4
Credits		14-15

Summer

AUT 205	Engine Performance I	2
AUT 216A	CWE Automotive A	4
Credits		6

Second Year

Fall

AUT 111	Computerized Engine Controls	5
AUT 201	Automotive Engines	4
AUT 208	Automotive Brakes	3
Credits		12

Winter

AUT 104	Automotive Electric III	2
AUT 203	Manual Drive Trains II	3
AUT 206	Engine Performance II	2
CIS 131	Software Applications	4
Credits		11

Spring

AUT 251	Automatic Transmissions I	3
AUT 260	Diesel Performance II	4
AUT 270	Auto Controller Systems I	4
AUT 280	Hybrid Electric Vehicles I	4
Credits		15

Summer

AUT 216B	CWE Automotive B	4
AUT 256	Automatic Transmissions II	2
AUT 271	Auto Controller Systems II	4

AUT 281	Hybrid Electric Vehicles II	4
Credits		14
Total Credits		97-102

Clean Energy Diesel Technician (Advanced) - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Clean Energy Diesel Technician (Advanced) Career Pathway Certificate of Completion trains students to be the key troubleshooter in figuring out a vehicle's drivability problems on the most current light duty diesel systems. Students learn to identify everything on powertrain malfunctions using the most current computer diagnostic equipment. The Automotive Clean Energy Diesel Technician (Advanced) Career Pathway Certificate of Completion also trains students on the operational principles and theory of Hydraulically actuated Electronically controlled Unit Injection (HEUI) systems, the Electronic Unit Injection (EUI) systems, and the Common Rail (CR) systems. This coursework applies toward ASE certification in (A6) Automotive Electrical/Electronic Systems and (A9) Diesel Engine Performance.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses, plus second level electrical / electronic courses.
- Develop safety strategies in relation to high-pressure injection systems.
- Describe diesel engine dynamics and basic operation.
- Describe the evolution of the diesel fuel systems.
- Perform On-Vehicle testing on EUI* and HUEI* Systems
- Describe the operation of exhaust gas recirculation (EGR) and perform testing.
- Perform On-Vehicle (DPF) Diesel Particulate Filter cleaning and (DOC) Diesel Oxidation Catalyst testing.
- Describe Controller Area Network (CAN) and Society of Automotive Engineers (SAE) J1939 as they apply to Diesel onboard communication.
- Develop sustainable practices of recycling fluids and batteries.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
AUT 111	Computerized Engine Controls	5
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 260	Diesel Performance II	4
Total Credits		35

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Credits		11
Second Term		
AUT 102	Automotive Electric I	5

AUT 105	Diesel Performance I	2
Credits		7
Third Term		
AUT 103	Automotive Electric II	2
Credits		2
Fourth Term		
AUT 104	Automotive Electric III	2
AUT 205	Engine Performance I	2
Credits		4
Fifth Term		
AUT 111	Computerized Engine Controls	5
Credits		5
Sixth Term		
AUT 206	Engine Performance II	2
AUT 260	Diesel Performance II	4
Credits		6
Total Credits		35

Master Automotive Technician - Two Year Certificate of Completion (CC2)

Description

The Master Automotive Technician Two Year Certificate program emphasizes educating students as multi-skilled workers with the ability to complete a wide variety of tasks within the automotive technology service and repair setting. Coursework includes technical skills in computer applications, electrical, electronic, mechanical, hydraulic and network systems, both in theory as well as hands-on training. A self-paced method of instruction is offered for the entry-level classes. Communication skills are also highly emphasized throughout the program. The program is planned so that students will be able to complete the program in approximately 12 to 15 months as well as earn up to seven career pathway certificates. This two year certificate enables students to enter the transportation industry as an automotive technician.

Learning Outcomes

1. Demonstrate the importance of and practice ethical behavior in a professional work setting, both within the workforce and within the community.
2. Implement effective written and oral communication skills.
3. Communicate electrical and mechanical analytical diagnostic skills.
4. Apply theories, principles, and concepts to address skills developed to the NATEF Certified areas of the Automotive Technology Program.
5. The student will be prepared to take all Automotive Service Excellence (ASE) exams that are taught in the COCC program.
6. Utilize 100% of P-1 NATEF specific tasks.
7. Utilize 95% of the P-2 NATEF specific tasks.
8. Utilize 65% of the P-3 NATEF specific tasks.

*National Automotive Technician Education Foundation (NATEF)

Entrance Requirements

Academic Entrance Requirements

- Required:
 - AUT 106 Automotive Program Orientation is a prerequisite or co-requisite to AUT 101 Basic Electricity for Automotive, AUT 110 Small Gas Engines and AUT 115 College Success for Automotive Technology. These four courses are prerequisites to all other AUT courses.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment Fees

- AUT prefix courses may have a \$15 course fee based on lab usage

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 105	Diesel Performance I	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 115	College Success for Auto Tech	2
AUT 201	Automotive Engines	4
AUT 202	Manual Drive Trains I	3
AUT 203	Manual Drive Trains II	3
AUT 204	Steering and Suspension	3
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 208	Automotive Brakes	3
AUT 216A & AUT 216B	CWE Automotive A and CWE Automotive B ¹	8
AUT 251	Automatic Transmissions I	3
AUT 253	Automotive Air Conditioning	3
AUT 256	Automatic Transmissions II	2
Select two Automotive Electives courses from the following:		2-4
AUT 112	Basic Engine Performance I	

AUT 113	Basic Engine Performance II	
AUT 114	Welding for the Auto Trade	
AUT 211	ASE Test Prep I	
AUT 212	ASE Test Prep II	
Other Required Courses		
Human Relations approved course		3-4
MTH 060	Beginning Algebra I (or higher)	4
WR 060	Rhetoric/Critical Thinking I (or higher)	4
Total Credits		76-79

¹ Recommended preparation for CWE is 24 credits of automotive courses in addition to the basic skills courses.

Advising Notes

- Full-time students are discouraged from working more than 15 hours each week due to a heavy course load.
- It is recommended that the ASE (Automotive Service Excellence) certification test be taken as the student completes the program.
- This two year certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
MTH 060	Beginning Algebra I	4
Credits		15
Second Term		
AUT 102	Automotive Electric I	5
AUT 105	Diesel Performance I	2
AUT 202	Manual Drive Trains I	3
WR 060	Rhetoric/Critical Thinking I	4
Credits		14
Third Term		
AUT 103	Automotive Electric II	2
AUT 201	Automotive Engines	4
AUT 203	Manual Drive Trains II	3
Human Relations approved course		3-4
Credits		12-13
Fourth Term		
AUT 104	Automotive Electric III	2
AUT 204	Steering and Suspension	3

AUT 205	Engine Performance I	2
Automotive Elective Courses		2-4
Credits		9-11
Fifth Term		
AUT 111	Computerized Engine Controls	5
AUT 208	Automotive Brakes	3
AUT 216A	CWE Automotive A ¹	4
AUT 251	Automatic Transmissions I	3
Credits		15
Sixth Term		
AUT 206	Engine Performance II	2
AUT 216B	CWE Automotive B ¹	4
AUT 253	Automotive Air Conditioning	3
AUT 256	Automatic Transmissions II	2
Credits		11
Total Credits		76-79

Undercar Technician - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Under-Car Technician Career Pathway Certificate of Completion gives students an in-depth understanding of under-vehicle systems: brakes, suspension, driveline and electrical, and prepares students for a job in suspension and brakes, either as a technician or manager. The under-car technician courses apply toward ASE certification in (A5) Automotive Brakes, (A4) Automotive Steering and Suspension, and (G1) Maintenance and Light Repair.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Automotive Technology from previous basic skills courses.
- Study safety of hydraulic pressures and safety to validate vehicle safety. Demonstrate the correct method of brake and suspension repair.
- Diagnose tire imbalance, deterioration, and the cause of tire wear.
- Demonstrate the use of equipment for vehicle alignment.
- Demonstrate the use of brake component machining.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must complete the following five courses prior to proceeding into other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107 Mechanical Systems I, AUT 110 Small Gas Engines, and AUT 115 College Success for Automotive Technology.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Enrollment fees

- All AUT prefix courses up to AUT 260 Diesel Performance II have a \$15 course fee
- All advanced AUT courses (AUT 260 Diesel Performance II and above) have a \$200 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
AUT 204	Steering and Suspension	3
AUT 208	Automotive Brakes	3
Total Credits		17

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
AUT 101	Basic Electricity-Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 115	College Success for Auto Tech	2
Credits		11
Second Term		
AUT 204	Steering and Suspension	3
Credits		3
Third Term		
AUT 208	Automotive Brakes	3
Credits		3
Total Credits		17

Aviation

The COCC Aviation - Professional Pilot discipline provides students with the knowledge and skills required to enter the exciting world of professional aviation. COCC provides instruction in airplane, helicopter, and unmanned aerial systems in a small class setting with close support of experienced instructors.

<https://www.cocc.edu/programs/aviation/>

Contact:

Karl Baldessari
541-318-3702
Grandview Hall, Bend Campus

Department: Business/Aviation
Department Chair: Michael Hansen

Programs

Career and Technical Education

- Aviation - Professional Pilot Airplane - Associate of Applied Science (AAS) (p. 46)
- Aviation - Professional Pilot Helicopter- Associate of Applied Science (AAS) (p. 49)
- Unmanned Aerial Systems (UAS) Operations - Associate of Applied Science (AAS) (p. 55)

Transfer

- Aviation-Technology and Management (OIT Transfer) Emphasis - Associate of Science (AS) (p. 53)

Courses

AV 101 Introduction to Aviation (3 Credits)

This course introduces the student to the Federal Aviation Regulations/ Aeronautical Information Manual (FAR/AIM). Designed to build an understanding of the pilot credentials required for a career in aviation and help students explore various career options. A variety of employment opportunities are investigated, including commercial, business, corporate, military and general aviation-related business. Emphasis will be given to careers in operations and flight technology. Airplane and helicopter pilot careers will be emphasized.

AV 104 Introduction to Aircraft Systems (4 Credits)

Introduces the student to the training aircraft that are used in general aviation, and will look in detail at those aircraft used in this program. Aircraft in current use for training by industry will be studied and emphasis placed on basic aircraft systems operations, including emergencies. Applicable Federal Aviation Regulations, including the use of Minimum Equipment Lists, will be studied.

AV 108 Meteorology I (4 Credits)

A survey course in atmospheric science that covers weather basics and atmospheric circulations. Included is a systematic development of the following: the atmosphere, energy and temperature, wind, atmospheric moisture, horizontal and vertical pressure patterns, clouds, atmospheric circulation, stability, air masses, fronts, fog, icing, thunderstorms, jet streams and turbulence. Students will study surface weather observations, routine weather reports and forecasts, surface maps and constant pressure maps.

AV 110 Private Pilot - Airplane (5 Credits)

Recommended preparation: MTH 020 or higher.

Provides initial ground instruction in aeronautical skills and knowledge for the FAA Private Pilot certificate. Involves an introduction to fundamentals of flight, aerodynamics, flight operations, airspace, weather and weather products, flight planning, decision-making, human factors, human factors in aviation, and crew resource management. Comprehensive course that prepares student for the FAA Private Pilot airman knowledge written exam.

AV 112 Technically Advanced Aircraft (2 Credits)

Covers the differences in design, handling characteristics, capability and operation of complex avionics packages in today's modern aircraft. Concentrates on the Garmin 430, Garmin 500, Garmin 750, and Garmin 1000 glass cockpit systems, providing hands-on training in the programming and utilization of advanced automated flight decks.

AV 115 Private Pilot-Helicopter (5 Credits)

Recommended preparation: MTH 020 or higher.

Covers fundamentals of flight, flight operations, aviation weather, performance, navigation, aircraft systems, aeronautical publications, FAA regulations, flight planning, radio procedures, meteorology and human factors. Comprehensive course that prepares student for the FAA Private Pilot airman knowledge exam.

AV 117 Helicopter Fundamentals (3 Credits)

Recommended preparation: MTH 20.

This course covers fundamentals of helicopter flight, flight operations, helicopter performance, navigation, helicopter systems, aeronautical publications, helicopter flight maneuvers, flight planning, radio procedures, meteorology, and human factors.

AV 150 Aerodynamics (4 Credits)

Recommended preparation: MTH 85, MTH 111, or higher.

An in-depth study of aerodynamics, beginning with a brief history of the development of flight and flight theory. The physics of lift, drag, weight and thrust are related to airfoil and aircraft design and operational characteristics. Aircraft stability and control are related to aircraft performance and safety. Students will demonstrate their knowledge of aerodynamics through projects in which they predict aircraft performance.

AV 188 Special Studies: Aviation (1-5 Credits)

Explores topics of current interest in the discipline.

AV 199 Selected Topics: Aviation (1-8 Credits)

This course is in development.

AV 200 Aviation Law (3 Credits)

This course offers an introductory analysis of legal concepts related to the aviation industry, including aircraft operations, airports, fixed based operators (FBOs), contracts, insurance and liability, regulatory statutes, and case law. The historical development of aviation law in the United States is included.

AV 201 Airport Management (3 Credits)

This course is a study of the development of airports and the functions and responsibilities of airport management. This course provides an historical background and studies the roles of various governmental agencies in the management and regulation of airports.

AV 204 Advanced Aircraft Systems (4 Credits)**Recommended preparation:** AV 104.

Encompasses a detailed study of aircraft systems and structures and enables the student to progress into heavier, more complex single and multi-engine aircraft. Aircraft in current use by industry will be studied with an emphasis placed on operations, including emergencies. Applicable FAR and Minimum Equipment Lists, will be studied.

AV 208 Meteorology II (4 Credits)**Recommended preparation:** AV 108 or instructor approval.

Focuses on application of meteorology theory and the availability, understanding and use of weather products. Emphasis is placed on maximizing aircraft performance and minimizing exposure to weather hazards. Includes examining the weather forecasting models, detailed use and interpretation of graphic weather products, access to telephone and internet weather briefing sites, and utilization of weather products.

AV 210 Instrument - Airplane (5 Credits)**Prerequisites:** AV 110 (or Private Pilot Certificate).

The instrument rating ground school prepares students for the FAA Instrument airman knowledge test and an FAA Instrument Rating. Includes an in-depth study of basic attitude instrument flying, IFR navigation systems and procedures, aircraft flight instruments, aviation weather, applicable FARs and the instrument charts required for IFR flight.

AV 215 Instrument Helicopter (5 Credits)**Prerequisites:** AV 115 (or Private Pilot Certificate).

The instrument rating ground school for helicopter prepares students for the FAA Instrument knowledge test and an FAA Instrument Rating. Includes an in-depth study of aircraft flight instruments, basic attitude instrument flying, IFR navigation systems and procedures, aviation weather, applicable FARs, and the instrument charts required for IFR flight.

AV 220 Commercial Pilot-Airplane (4 Credits)**Prerequisites:** AV 110 (or Private Pilot Certificate).

Ground instruction of aeronautical skills and knowledge applicable to the FAA Commercial Pilot Certification portion of the Professional Pilot training syllabus. Covers night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance, complex aircraft operations, advanced airplane systems, commercial operations and FAA Regulations for commercial pilots and noncommercial flight operations, with emphasis on human factors, crew resource management, and decision-making.

AV 222A Airplane Flight Lab (1 Credit)**Prerequisites:** Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222A, AV222B, AV222C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222B Airplane Flight Lab (1 Credit)**Prerequisites:** Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222A, AV222B, AV222C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222C Airplane Flight Lab (1 Credit)**Prerequisites:** Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222A, AV222B, AV222C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222D Airplane Flight Lab (1 Credit)**Prerequisites with concurrency:** AV 110 (or Private Pilot Certificate), AV 222A, AV 222B, AV 222C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222D, AV 222E, cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222E Airplane Flight Lab (1 Credit)**Prerequisites with concurrency:** AV 110 (or Private Pilot Certificate), AV 222A, AV 222B, AV 222C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222D, AV 222E, cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222F Airplane Flight Lab (1 Credit)**Prerequisites with concurrency:** AV 110 (or Private Pilot Certificate), AV 222A, AV 222B, AV 222C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222F and AV 222G covers night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance, complex aircraft operations, advanced airplane systems, commercial operations and FAA Regulations for commercial pilots and noncommercial flight operations, with emphasis on human factors, crew resource management and decision-making. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222G Airplane Flight Lab (1 Credit)**Prerequisites with concurrency:** AV 110 (or Private Pilot Certificate), AV 222A, AV 222B, AV 222C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222F and AV 222G covers night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance, complex aircraft operations, advanced airplane systems, commercial operations and FAA Regulations for commercial pilots and noncommercial flight operations, with emphasis on human factors, crew resource management and decision-making. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222H Airplane Flight Lab (1 Credit)

Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, AV 222I, AV 222J, AV 250 (or Certified Flight Instructor/Instrument Instructor Pilot Certificates) and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 222K, AV 222H emphasize engine failure, multiengine aerodynamics, minimum controllable airspeed, propeller feathering, V-speeds, flight planning, decision-making, human factors and crew resource management. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222I Airplane Flight Lab (1 Credit)

Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 222I, AV 222J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222J Airplane Flight Lab (1 Credit)

Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 222I, AV 222J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222K Airplane Flight Lab (1 Credit)

Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, AV 222I, AV 222J, AV 250 (or Certified Flight Instructor/Instrument Instructor Pilot Certificates) and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 222K, AV 222H emphasize engine failure, multiengine aerodynamics, minimum controllable airspeed, propeller feathering, V-speeds, flight planning, decision-making, human factors and crew resource management. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 225 Commercial Pilot-Helicopter (4 Credits)

Prerequisites: AV 115 (or Private Pilot Certificate). Reviews the principles of flight, aircraft systems, pertinent federal aviation regulations and airman publications and service in order to prepare the student for the FAA Commercial Helicopter Pilot airman knowledge exam.

AV 227A Helicopter Flt Lab Series I (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 227A, AV227B, AV227C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 227B Helicopter Flt Lab Series I (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 227A, AV227B, AV227C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 227C Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 227A, AV227B, AV227C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 227D Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 227A, AV 227B, AV 227C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 227D, AV 227E, AV 227N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training.

AV 227E Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 227A, AV 227B, AV 227C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 227D, AV 227E, AV 227N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training.

AV 227F Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV227F, AV227G, AV227H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 227G Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV227F, AV227G, AV227H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 227H Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV227F, AV227G, AV227H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 227I Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 225 (or Commercial Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227F, AV 227G, AV 227H, AV 227N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 227I, AV 227J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training.

AV 227J Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 225 (or Commercial Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227F, AV 227G, AV 227H, AV 227N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 227I, AV 227J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training.

AV 227N Helicopter Flt Lab Series I (1 Credit)

Prerequisites with Concurrency: AV 115 (or Private Pilot Certificate), AV 227A, AV 227B, AV 227C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 227D, AV 227E, AV 227N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training.

AV 228A Helicopter Flt Lab Series II (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228A, AV228B, AV228C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 228B Helicopter Flt Lab Series II (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228A, AV228B, AV228C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 228C Helicopter Flt Lab Series II (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228A, AV228B, AV228C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 228D Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 228A, AV 228B, AV 228C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228D, AV 228E, AV 228N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training.

AV 228E Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 228A, AV 228B, AV 228C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228D, AV 228E, AV 228N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training.

AV 228F Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV228F, AV228G, AV228H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 228G Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV228F, AV228G, AV228H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 228H Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV228F, AV228G, AV228H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 228I Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 225 (or Commercial Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228F, AV 228G, AV 228H, AV 228N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228I, AV 228J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training.

AV 228J Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215, 225 (or Instrument Pilot Certificate and Commercial Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228F, AV 228G, AV 228H, AV 228N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228I, AV 228J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training.

AV 228N Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 228A, AV 228B, AV 228C and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228D, AV 228E, AV 228N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. Ensures compliance with Federal Aviation Administration flight hour and certification requirements. Students will earn the basic night vision goggle endorsement coincident to their instrument training.

AV 230 Multiengine Pilot (2 Credits)

Prerequisites: AV 220 (or Commercial Pilot Certificate) and AV 250 (or Certified Flight Instructor/Flight Instructor with Instrument). Ground instruction of aeronautical skills and knowledge applicable to the commercial multi-engine pilot certification. Emphasis is on engine failure, multiengine aerodynamics, minimum controllable airspeed, propeller feathering, V-speeds, flight planning, decision-making, human factors, and crew resource management.

AV 235 Human Factors (4 Credits)

An introduction to the field of human behavior and characteristics as critical factors in the design and operation of electronic/machine systems. Emphasis is on crew resource management and human factors, including the study of human performance in complex systems with an examination of personality, stress, anxiety, fatigue, communication skills, decision-making, situational awareness, analysis of aviation and accidents, and practical application of human factors and performance to modern aviation.

AV 245 Advanced Helicopter Operations (4 Credits)

The course will address advanced helicopter operations in a ground school environment. Students will be introduced to operations of turbine helicopters. The mountain flying phase will provide students with a working knowledge of operations in and around mountainous terrain. The external load phase covers the basic skills of flying with an external longline attached to the aircraft. The night vision goggle (NVG) phase will introduce the student to a new realm of flying safely at night, and will be completed using an Internet based FAA approved Part 141 training syllabus and classroom instruction. Students will also be introduced to the unique aspect of overwater operations. NVG course licensing fee applies. See aviation program director for current course fee.

AV 246 Aviation Safety (3 Credits)

A detailed introduction into aspects of aviation safety, intended to promote flight safety in the general aviation and training environment. Topics include risk management, pilot psychology, human factors, accident trends, analysis of accident reports, and safety survival.

AV 250 Certified Flight Instructor-Airplane (5 Credits)

Prerequisites: AV 210 (or Instrument Rating) and AV 220 (or Commercial Pilot Certificate).

Provides the flight instructor applicant with fundamental concepts and practice for successful flight instruction at the recreational, private and commercial pilot level. Elements include fundamentals of instruction, developing lesson plans for private pilot and commercial pilot syllabus, designing curriculum, creating objective evaluation and grading criteria, and practical application in presenting technical material in an interactive classroom setting. Two FAA airman knowledge tests are required to obtain the CFI certificate, and a third is recommended. See Aviation Program director for current fees.

AV 255 Certified Flight Instructor-Helicopter (5 Credits)

Prerequisites: AV 215 (or Instrument Pilot Certificate), AV 225 (or Commercial Pilot Certificate and instructor approval based on proof of valid Second Class (or higher) Medical Certificate).

Teaches techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice instructing will be required. Student will prepare for the FAA Fundamentals of Instruction (FOI), CFI Helicopter, and Advanced Ground Instructor (AGI) exams. See Aviation Program director for current fee schedule.

AV 271 Introduction to Unmanned Aerial Systems (4 Credits)

Prerequisites: instructor approval.

This course introduces students to the history of Unmanned Aerial Systems (UAS) and surveys current UAS platforms, sensors, terminology, challenges to integrating unmanned systems into the national airspace system, operational theory, and the Federal Aviation Administration (FAA) certificate of authorization (COA) process.

AV 272 Unmanned Aerial Systems (UAS) Operations (5 Credits)

Recommended preparation: AV 271.

Surveys current UAS platforms, sensors, and terminology. Explores integration and application of UAS resources in United States Airspace. Focuses on building and executing simulated operations in a noncombative environment.

AV 273 Unmanned Aerial Sys Ops Maint (5 Credits)

Prerequisites: AV 272.

Recommended preparation: AV 271.

Progression to higher level simulation and mission planning/ execution. Includes a transition from the classroom setting to field operations for actual launches, recoveries, and maintenance of Unmanned Aerial Systems.

AV 288 Special Studies: Aviation (1-5 Credits)

Explores topics of current interest in the discipline.

AV 299 Selected Topics: Aviation (1-8 Credits)

This course is in development.

Aviation - Professional Pilot Airplane - Associate of Applied Science (AAS) Program Description

The Aviation - Professional Pilot Airplane AAS trains individuals to work as professional pilots in the air transportation industry. The opportunities in the pilot career field are fascinating and many, and include piloting a commercial airliner, flying for a corporation providing a service to the leaders of the company, flying as a charter pilot taking passengers point-to-point, providing flight instruction to new student pilots, and operating autonomous aerial vehicles.

Students in the airplane track will be eligible to earn the FAA Private Pilot and Commercial Pilot certificates (single and multiengine), the Instrument rating, the Multiengine rating, and Certified Flight Instructor certificate/ratings (CFI, CFII, MEI) upon satisfactory completion of the prescribed flight elements. Training will be conducted under Federal Aviation Regulations Part 61

Learning Outcomes

1. Demonstrate skills necessary to independently operate fixed wing aircraft safely and proficiently.
2. Recall fixed wing aviation knowledge commensurate with level of qualification.
3. Demonstrate the ability to develop fixed wing aviation lesson plans.
4. Demonstrate the ability to teach from a lesson plan in a clear and effective manner (one-on-one and in small classroom settings).
5. Demonstrate the ability to deliver practical fixed wing flight training.

Entrance Requirements

Academic Entrance Requirements

- There are no formal academic entrance requirements for the Aviation - Professional Pilot Airplane AAS.

Other Entrance Requirements

- Required:
- Students who enroll in this course of study must have a valid FAA Medical Certificate and a student pilot certificate. A doctor designated by the FAA as an Aviation Medical Examiner must conduct the medical exam. Incoming students in the professional pilot program are encouraged to obtain at least a second-class medical certificate prior to entry into the program to ensure that they can eventually pursue a career in commercial aviation. The medical application form will ask the applicant's prior medical history, prior DUI/DUII, any record of alcohol or substance abuse and any history of non-traffic misdemeanors or felonies.

Additional Program Costs (beyond standard tuition/fees and textbooks)

- All fees for the term must be paid in full by 5 p.m. on Friday of the second week of the term.

- Unless under unusual, nonacademic and documented circumstances simulator fees are non-refundable.
- Used portions of flight fees are non-refundable.
- Licensure Fees are non-refundable.
- Pilot headset, approximately \$350.
- Flight Labs: Authorized Aircraft and Hourly Rates: Airplane Aircraft:
 - C-172, C-182, Seminole, Bonanza, Baron, Decathlon, FTD
 - AV222A Airplane Flight Lab, Private Pilot (AV110)
 - Cessna 172
 - 16 hrs. Pre/Post Instruction @ \$35 = \$560
 - 20 hrs. Dual flight @ \$200 = \$4,000
 - 2 hrs. Solo flight @ \$165 = \$330
 - 2 hrs. Dual FTD @ \$125 = \$250
 - Total = \$5,140.00
 - Total Flight Hrs. = 24 hrs. (1 credit)
 - AV222B Airplane Flight Lab, Private Pilot (AV110)
 - Cessna 172
 - 14 hrs. Pre/Post Instruction @ \$35 = \$490
 - 15 hrs. Dual flight @ \$200 = \$3,000
 - 5 hrs. Solo flight @ \$165=\$825
 - 3 hrs. Dual FTD @ \$125 = \$375
 - Written Exam: \$160
 - Total = \$4,850.00
 - Total Flight Hrs. =23 hrs. (1 credit)
 - AV222C Airplane Flight Lab, Private Pilot (AV110)
 - Cessna 172
 - 11 hrs. Pre/Post Instruction @ \$35 = \$385
 - 10 hrs. Dual flight @ \$200 = \$2,000
 - 8 hrs. Solo flight @ \$165=\$1,320
 - 3 hrs. Dual FTD @ \$125 = \$375
 - DPE Fee: \$450
 - Total = \$4,530.00
 - Total Flight Hrs. =21 hrs. (1 credit)
 - AV222D Airplane Flight Lab, Instrument Pilot (AV210)
 - Cessna 172
 - 13 hrs. Pre/Post Instruction @ \$35 = \$455
 - 24 hrs. Dual flight @ \$200 = \$4,800
 - 10 hrs. Dual FTD @ \$125 = \$1,250
 - Written Exam: \$160
 - Total = \$6,665.00
 - Total Flight Hrs. =34 hrs. (1 credit)
 - AV222E Airplane Flight Lab, Instrument Pilot (AV210)
 - Cessna 172
 - 13 hrs. Pre/Post Instruction @ \$35 = \$455
 - 24 hrs. Dual flight @ \$200 = \$4,800
 - 12 hrs. Dual FTD @ \$125 = \$1,500
 - DPE Fee: \$450
 - Total = \$7,205.00
 - Total Flight Hrs. =36 hrs. (1 credit)
 - AV222F Airplane Flight Lab, Commercial Pilot (AV220)
 - Cessna 172
 - 8 hrs. Pre/Post Instruction @ \$35 = \$280
 - 10 hrs. Dual flight @ \$200 = \$2,000
 - 45 hrs. Solo flight @ \$165=\$7,425
 - 12 hrs. Dual FTD @ \$125 = \$1,500
 - Total = \$11,205.00
 - Total Flight Hrs. =67 hrs. (1 credit)
 - AV222G Airplane Flight Lab, Commercial Pilot (AV220)
 - Cessna 172, Cessna 182, Bonanza
 - 12 hrs. Pre/Post Instruction @ \$35 = \$420
 - 15 hrs. Dual flight @ \$200 = \$3,000
 - 20 hrs. Dual flight @ \$260=\$5,200
 - 30 hrs. Solo flight @ \$165=\$4,950
 - 12 hrs. Dual FTD @ \$125 = \$1,500
 - Written Exam: \$160
 - DPE Fee: \$450
 - Total = \$15,680.00
 - Total Flight Hrs. =77 hrs. (1 credit)
 - AV222I Airplane Flight Lab, Certified Flight Instructor (AV250)
 - Cessna 172
 - 25 hrs. Pre/Post Instruction @ \$35 = \$875
 - 25 hrs. Dual flight @ \$200=\$5,000
 - 8 hrs. Solo flight @ \$165= \$1,320
 - 5 hrs. Dual FTD @ \$125= \$625
 - Written Exam: \$320
 - DPE Fee: \$650
 - Total = \$8,790.00
 - Total Flight Hrs. =38 hrs. (1 credit)
 - AV222J Airplane Flight Lab, Certified Flight Instructor (AV250)
 - Cessna 172
 - 12 hrs. Pre/Post Instruction @ \$35 = \$420
 - 15 hrs. Dual flight @ \$200 = \$3,000
 - 6 hrs. Dual FTD @ \$125 = \$750
 - Written Exam: \$160
 - DPE Fee: \$450
 - Total = \$4,780.00
 - Total Flight Hrs. =21 hrs. (1 credit)
 - AV222K Airplane Flight Lab, Multi Engine Pilot (AV230)
 - Baron, Seminole
 - 10 hrs. Pre/Post Instruction @ \$35 = \$350
 - 20 hrs. Dual flight @ \$385 = \$7,700
 - DPE Fee: \$450
 - Total = \$8,500.00
 - Total Flight Hrs. =20 hrs. (1 credit)
 - AV222H Airplane Flight Lab, Multi Engine Pilot (AV230)
 - Baron, Seminole
 - 10 hrs. Pre/Post Instruction @ \$35 = \$350
 - 22 hrs. Dual flight @ \$385 = \$8,470
 - DPE Fee: \$450

- Total = \$9,270.00
- Total Flight Hrs. =22 hrs. (1 credit)

Course Requirements

Course	Title	Credits
Core Courses		
AV 101	Introduction to Aviation ¹	3
AV 104	Intro to Aircraft Systems ¹	4
AV 108	Meteorology I ¹	4
AV 110	Private Pilot - Airplane ²	5
AV 112	Technically Advanced Aircraft	2
AV 150	Aerodynamics ¹	4
AV 200 or AV 201	Aviation Law ¹ Airport Management	3
AV 204	Advanced Aircraft Systems ¹	4
AV 208	Meteorology II ¹	4
AV 210	Instrument - Airplane ⁴	5
AV 220	Commercial Pilot-Airplane ⁴	4
AV 230	Multiengine Pilot ⁴	2
AV 235	Human Factors ¹	4
AV 246	Aviation Safety ¹	3
AV 250	CFI - Airplane ⁴	5
Airplane Flight Labs ³		11
AV 222A	Airplane Flight Lab	
AV 222B	Airplane Flight Lab	
AV 222C	Airplane Flight Lab	
AV 222D	Airplane Flight Lab	
AV 222E	Airplane Flight Lab	
AV 222F	Airplane Flight Lab	
AV 222G	Airplane Flight Lab	
AV 222H	Airplane Flight Lab	
AV 222I	Airplane Flight Lab	
AV 222J	Airplane Flight Lab	
AV 222K	Airplane Flight Lab	
Other Required Courses		
BA 206 or BA 101	Management Fundamentals I Intro to Business	4
BA 285 or COMM 218	Business Human Relations Interpersonal Communication	3
CIS 120	Computer Concepts (Computer Competency Test)	0-4
Discipline Studies Courses		9
MTH 085	Technical Mathematics I (or MTH 111 or higher)	4
WR 121 or BA 214	Academic Composition ⁵ Business Communications	3-4
Total Credits		90-95

¹ May be taken in any order, in any term and may be taken before, with or after the flight courses.

² Must be taken as the first flight course. May be taken any term.

³ Flight fees, simulator fees and FAA testing fees are required in addition to normal tuition for all flight labs and must be paid by the end of the second week of the term. Used portions of flight fees are not refundable. Contact the Aviation program director, 541.318.3702, for more information.

⁴ The Instrument Airplane course AV 210, Commercial Airplane course AV220 and Certified Flight Instructor course AV 250 shall be completed before the Multiengine Pilot course AV230 can be taken.

⁵ WR 121 is recommended for students who plan to pursue a bachelor's degree.

Advising Notes

Airplane students in particular should plan to transfer to an institution granting bachelor's degrees to enhance employment opportunities. Therefore, the program works with several universities for transfer options. The AAS degree is designed to train the student as a professional pilot. Universities that have an aviation bachelor's degree (Eastern Kentucky University, Embry-Riddle Aeronautical University, etc.) will often accept the majority of these credits toward their degree.

Those wishing to transfer to Oregon Institute of Technology should use the Associate of Science (AS) degree program. For information about transfer requirements at other institutions, contact the Aviation program director, 541.318.3702.

Performance Standards

• Academic Requirements:

- Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Students must maintain a minimum 2.0 GPA while enrolled in the program. Students who do not maintain this standard and desire to continue the program, require completion of a training plan approved by their COCC advisor.
- All courses in the program must be completed with a grade of C or higher.

• Additional Requirements:

- Students must be prepared to fly three to four days per week in order to maintain the rigorous schedule that is required in order to complete the flight training in a timely manner.
- National/state legal eligibility or unique requirements for licensure and/or entry into occupation, or advancement in the occupation
- Pilots are credentialed by the Federal Aviation Administration (FAA) and must meet the requirements of the Federal Aviation Regulations to qualify for the pilot certificates/ratings.
- FAA medical certificate required prior to beginning flight training.
- Student Pilot certificate required prior to beginning flight training.
- The FAA requires applicants pass an airman knowledge exam for pilot certificates/ratings. A third-party company administers those exams and a \$160 testing fee is required.

- Pilot certificates/ratings are issued after an applicant passes a practical exam (ground oral exam and flight check) administered by a Designated Pilot Examiner (DPE) who will charge a fee for that exam.
- Background checks and random drug screening can be expected in any aviation industry position.

Sample Plan

First Term		Credits
AV 101	Introduction to Aviation	3
AV 104	Intro to Aircraft Systems	4
AV 110	Private Pilot - Airplane	5
AV 222A	Airplane Flight Lab	1
AV 222B	Airplane Flight Lab	1
Credits		14
Second Term		
AV 108	Meteorology I	4
AV 222C	Airplane Flight Lab	1
AV 246	Aviation Safety	3
MTH 085 or MTH 111	Technical Mathematics I College Algebra	4
Credits		12
Third Term		
WR 121 or BA 214	Academic Composition Business Communications	3-4
AV 112	Technically Advanced Aircraft	2
AV 210	Instrument - Airplane	5
AV 222D	Airplane Flight Lab	1
AV 222E	Airplane Flight Lab	1
Credits		12-13
Fourth Term		
AV 204	Advanced Aircraft Systems	4
AV 222F	Airplane Flight Lab	1
BA 285 or COMM 218	Business Human Relations Interpersonal Communication	3
CIS 120	Computer Concepts (Computer Competency Test)	0-4
AV 200 or AV 201	Aviation Law Airport Management	3
Credits		11-15
Fifth Term		
AV 150	Aerodynamics	4
AV 220	Commercial Pilot-Airplane	4
AV 222G	Airplane Flight Lab	1
BA 101 or BA 206	Intro to Business Management Fundamentals I	4
Credits		13
Sixth Term		
AV 230	Multiengine Pilot	2
AV 222I	Airplane Flight Lab	1
AV 222J	Airplane Flight Lab	1
Discipline Studies Course		3

Discipline Studies Course	3	
Discipline Studies Course	3	
Credits	13	
Seventh Term		
AV 208	Meteorology II	4
AV 235	Human Factors	4
AV 250	CFI - Airplane	5
AV 222H	Airplane Flight Lab	1
AV 222K	Airplane Flight Lab	1
Credits		15
Total Credits		90-95

Aviation - Professional Pilot Helicopter- Associate of Applied Science (AAS)

Program Description

The Aviation - Professional Pilot Helicopter AAS trains individuals to work as professional pilots in the air transportation industry. Students in the helicopter track will be eligible to earn the FAA Private Pilot and Commercial Pilot certificates, the Instrument rating and Certified Flight Instructor certificate/rating (CFI, CFII). Training will be conducted under Federal Aviation Regulations Part 61

Learning Outcomes

1. Demonstrate skills necessary to independently operate rotary wing aircraft safely and proficiently.
2. Recall rotary wing aviation knowledge commensurate with level of qualification.
3. Demonstrate the ability to develop rotary wing aviation lesson plans.
4. Demonstrate the ability to teach from a lesson plan in a clear and effective manner (one-on-one and in small classroom settings).
5. Demonstrate the ability to deliver practical rotary wing flight training.

Entrance Requirements

Academic Entrance Requirements

- There are no formal academic entrance requirements for the Aviation - Professional Pilot Helicopter AAS.

Other Entrance Requirements

- Required:
 - Students who enroll in this course of study must have a valid FAA Medical Certificate and a student pilot certificate. A doctor designated by the FAA as an Aviation Medical Examiner must conduct the medical exam.
- Recommended:
 - Incoming students in the professional pilot program are encouraged to obtain at least a second-class medical certificate prior to entry into the program to ensure that they can eventually pursue a career in commercial aviation.

Additional Program Costs (beyond standard tuition/fees and textbooks)

- All fees for the term must be paid in full by 5 p.m. on Friday of the second week of the term.
- Unless under unusual, nonacademic and documented circumstances simulator fees are non-refundable.
- Used portions of flight fees are non-refundable.
- Licensure fees are non-refundable.
- Pilot headset, approximately \$350.
- Flight Labs: Authorized Aircraft and Hourly Rates: Helicopter Series I Aircraft: Robinson R22, R44, B206, FTD
 - AV 227A Helicopter Flight Lab, Private Pilot (AV115)
 - Robinson R22
 - 15 hrs. Pre/Post Instruction @ \$35 = \$525
 - 24 hrs. Dual flight @ \$360 = \$8,640
 - 3 hrs. Dual FTD @ \$195 = \$585
 - Total = \$9,750.00
 - Total Flight Hrs. =27 hrs. (1 credit)
 - AV 227B Helicopter Flight Lab, Private Pilot (AV115)
 - Robinson R22
 - 16 hrs. Pre/Post Instruction @ \$35 = \$560
 - 24 hrs. Dual flight @ \$360 = \$8,640
 - 2 hrs. Dual FTD @ \$195 = \$390
 - Written Exam Fee = \$160
 - Total = \$9,750.00
 - Total Flight Hrs. =26 hrs. (1 credit)
 - AV 227C Helicopter Flight Lab, Private Pilot (AV115)
 - Robinson R22
 - 16 hrs. Pre/Post Instruction @ \$35 = \$560
 - 14 hrs. Dual flight @ \$360 = \$5,040
 - 10 hrs. Solo flight @ \$360 * = \$3,600
 - 2 hrs. Dual FTD @ \$195 = \$390
 - DPE Fee = \$750
 - Total = \$10,340.00
 - Total Flight Hrs. =26 hrs. (1 credit)
 - *Supervised Solo- charged at a dual rate due to required presence of a certified flight instructor
 - AV 227D Helicopter Flight Lab, Instrument Pilot (AV215)
 - Robinson R44
 - 20 hrs. Pre/Post Instruction @ \$35 = \$700
 - 20 hrs. Dual flight @ \$650 = \$13,000
 - (Dual flight includes 15 hrs Pilot in Command)
- 10 hrs. Dual FTD @ \$195 = \$1,950
- Written Exam Fee = \$160
- Total = \$15,810.00
- Total Flight Hrs. =30 hrs. (1 credit)
- AV 227E Helicopter Flight Lab, Instrument Pilot (AV215)
 - Robinson R44
 - 25 hrs. Pre/Post Instruction @ \$35 = \$875
 - 15 hrs. Dual flight @ \$650 = \$9,750
 - 10 hrs. Dual FTD @ \$195 = \$1,950
 - DPE Fee = \$750
 - Total = \$13,325.00
 - Total Flight Hrs. =25 hrs. (1 credit)
- AV 227N Helicopter Flight Lab, Instrument Pilot (AV215)
 - Robinson R44
 - 10 hrs. Pre/Post Instruction @ \$35 = \$350
 - 10 hrs. Dual flight @ \$760* = \$7,600
 - NVG Fee = \$500
 - Total = \$8,450.00
 - Total Flight Hrs. =10 hrs. (1 credit)
 - * Flown in a night vision google compatible helicopter
- AV 227F Helicopter Flight Lab, Commercial Pilot (AV225)
 - Robinson R22
 - 18 hrs. Pre/Post Instruction @ \$35 = \$630
 - 35 hrs. Dual flight @ \$360 = \$12,600
 - (Dual flight includes 15 hrs Pilot in Command)
 - 2 hrs. Dual FTD @ \$195 = \$390
 - Total = \$13,620.00
 - Total Flight Hrs. =37 hrs. (1 credit)
- AV 227G Helicopter Flight Lab, Commercial Pilot (AV225)
 - Robinson R22
 - 18 hrs. Pre/Post Instruction @ \$35 = \$630
 - 35 hrs. Dual flight @ \$360 = \$12,600
 - 2 hrs. Dual FTD @ \$195 = \$390
 - Written Exam Fee= \$160
 - DPE Fee= \$750
 - Total = \$14,530.00
 - Total Flight Hrs. =37 hrs. (1 credit)
- AV 227H Helicopter Flight Lab, Commercial Pilot (AV225)

- Bell 206
- 12 hrs. Pre/Post Instruction @ \$35 = \$420

- 20 hrs. Dual flight @ \$935 = \$18,700
- Total = \$19,120.00
- Total Flight Hrs. =20 hrs. (1 credit)
- AV 227I Helicopter Flight Lab, Certified Flight Instructor (AV255)
 - Robinson R22
 - 53 hrs. Pre/Post Instruction @ \$35 = \$1,855

 - 20 hrs. Dual flight @ \$360 = \$7,200
 - 2 hrs. Dual FTD @ \$195 = \$390
 - Written Exam Fee = \$320
 - DPE Fee = \$850
 - Total = \$10,615.00
 - Total Flight Hrs. =22 hrs. (1 credit)
- AV 227J Helicopter Flight Lab, Certified Flight Instructor (AV255)
 - Robinson R44
 - 25 hrs. Pre/Post Instruction @ \$35 = \$875

 - 10 hrs. Dual flight @ \$650 = \$6,500
 - 5 hrs. Dual FTD @ \$195 = \$975
 - Written Exam Fee = \$160
 - DPE Fee = \$750
 - Total = \$9,260.00
 - Total Flight Hrs. =15 hrs. (1 credit)
 - Series II Aircraft: Robinson R44, B206, FTD
- AV 228A Helicopter Flight Lab, Private Pilot (AV115)
 - Robinson R44
 - 15 hrs. Pre/Post Instruction @ \$35 = \$525
 - 24 hrs. Dual flight @ \$650 = \$15,600
 - 3 hrs. Dual FTD @ \$195 = \$585
 - Total: \$16,710.00
 - Total Flight Hrs. =27 hrs. (1 credit)
- AV 228B Helicopter Flight Lab, Private Pilot (AV115)
 - Robinson R44
 - 16 hrs. Pre/Post Instruction @ \$35 = \$560
 - 24 hrs. Dual flight @ \$650 = \$15,600
 - 2 hrs. Dual FTD @ \$195 = \$390
 - Written Exam Fee = \$160
 - Total: \$16,710.00
 - Total Flight Hrs. =26 hrs. (1 credit)
- AV 228C Helicopter Flight Lab, Private Pilot (AV115)
 - Robinson R44
 - 16 hrs. Pre/Post Instruction @ \$35 = \$560
 - 14 hrs. Dual flight @ \$650 = \$9,100
 - 10 hrs, Solo Flight @ \$650 * = \$6,500
 - 2 hrs. Dual FTD @ \$195 = \$390
 - DPE Fee = \$750
 - Total: \$17,300.00
- Total Flight Hrs. =26 hrs. (1 credit)
- *Supervised Solo- charged at a dual rate due to required presence of a certified flight instructor
- AV 228D Helicopter Flight Lab, Instrument Pilot (AV215)
 - Robinson R44
 - 20 hrs. Pre/Post Instruction @ \$35 = \$700
 - 20 hrs. Dual flight @ \$650 = \$13,000
 - (Dual flight includes 15 hrs Pilot in Command)
 - 10 hrs. Dual FTD @ \$195 = \$1,950
 - Written Exam Fee = \$160
 - Total = \$15,810.00
 - Total Flight Hrs. =30 hrs. (1 credit)
- AV 228E Helicopter Flight Lab, Instrument Pilot (AV215)
 - Robinson R44
 - 25 hrs. Pre/Post Instruction @ \$35 = \$875
 - 15 hrs. Dual flight @ \$650 = \$9,750
 - 10 hrs. Dual FTD @ \$195 = \$1,950
 - DPE Fee = \$750
 - Total = \$13,325.00
 - Total Flight Hrs. =25 hrs. (1 credit)
- AV 228N Helicopter Flight Lab, Instrument Pilot (AV215)
 - Robinson R44
 - 10 hrs. Pre/Post Instruction @ \$35 = \$350
 - 10 hrs. Dual flight @ \$760* = \$7,600
 - NVG Fee = \$500
 - Total = \$8,450.00
 - Total Flight Hrs. =10 hrs. (1 credit)
 - * Flown in a night vision google compatible helicopter
- AV 228F Helicopter Flight Lab, Commercial Pilot (AV225)
 - Robinson R44
 - 18 hrs. Pre/Post Instruction @ \$35 = \$630
 - 35 hrs. Dual flight @ \$650 = \$22,750
 - (Dual flight includes 15 hrs Pilot in Command)
 - 2 hrs. Dual FTD @ \$195 = \$390
 - Total: \$23,770.00
 - Total Flight Hrs. =37 hrs. (1 credit)
- AV 228G Helicopter Flight Lab, Commercial Pilot (AV225)
 - Robinson R44
 - 18 hrs. Pre/Post Instruction @ \$35 = \$630
 - 35 hrs. Dual flight @ \$650 = \$22,750
 - 2 hrs. Dual FTD @ \$195 = \$390
 - Written Exam Fee= \$160
 - DPE Fee= \$750
 - Total: \$24,680.00
 - Total Flight Hrs. =37 hrs. (1 credit)
- AV 228H Helicopter Flight Lab, Commercial Pilot (AV225)
 - Bell 206
 - 12 hrs. Pre/Post Instruction @ \$35 = \$420
 - 20 hrs. Dual flight @ \$935 = \$18,700
 - Total = \$19,120.00
 - Total Flight Hrs. =20 hrs. (1 credit)

- AV 228I Helicopter Flight Lab, Certified Flight Instructor (AV255)
 - Robinson R44
 - 53 hrs. Pre/Post Instruction @ \$35 = \$1,855
 - 20 hrs. Dual flight @ \$650 = \$13,000
 - 2 hrs. Dual FTD @ \$195 = \$390
 - Written Exam Fee = \$320
 - DPE Fee = \$850
 - Total: \$16,415.00
 - Total Flight Hrs. =22 hrs. (1 credit)
- AV 228J Helicopter Flight Lab, Certified Flight Instructor (AV255)
 - Robinson R44
 - 25 hrs. Pre/Post Instruction @ \$35 = \$875
 - 10 hrs. Dual flight @ \$650 = \$6,500
 - 5 hrs. Dual FTD @ \$195 = \$975
 - Written Exam Fee = \$160
 - DPE Fee = \$750
 - Total = \$9,260.00
 - Total Flight Hrs. =15 hrs. (1 credit)

AV 227N	Helicopter Flt Lab Series I
Series II	
AV 228A	Helicopter Flt Lab Series II
AV 228B	Helicopter Flt Lab Series II
AV 228C	Helicopter Flt Lab Series II
AV 228D	Helicopter Flt Lab Series II
AV 228E	Helicopter Flt Lab Series II
AV 228F	Helicopter Flt Lab Series II
AV 228G	Helicopter Flt Lab Series II
AV 228H	Helicopter Flt Lab Series II
AV 228I	Helicopter Flt Lab Series II
AV 228J	Helicopter Flt Lab Series II
AV 228N	Helicopter Flt Lab Series II

Other Required Courses		
BA 206	Management Fundamentals I	4
or BA 101	Intro to Business	
BA 285	Business Human Relations	3
or COMM 218	Interpersonal Communication	
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
Discipline Studies Courses		8
MTH 085	Technical Mathematics I (or MTH 111 or higher)	4
WR 121	Academic Composition ⁵	3-4
or BA 214	Business Communications	
Total Credits		90-95

Course Requirements

Course	Title	Credits
Core Courses		
AV 101	Introduction to Aviation ¹	3
AV 104	Intro to Aircraft Systems ¹	4
AV 108	Meteorology I ¹	4
AV 112	Technically Advanced Aircraft	2
AV 115	Private Pilot-Helicopter ²	5
AV 117	Helicopter Fundamentals	3
AV 150	Aerodynamics ¹	4
AV 200	Aviation Law ¹	3
or AV 201	Airport Management	
AV 208	Meteorology II ¹	4
AV 215	Instrument Helicopter ⁴	5
AV 225	Commercial Pilot-Helicopter ⁴	4
AV 235	Human Factors ¹	4
AV 245	Advanced Helicopter Operations	4
AV 246	Aviation Safety ¹	3
AV 255	Cert Flight Instr-Helicopter	5
Helicopter Flight Labs (Choose Series I or Series II) ³		11
Series I		
AV 227A	Helicopter Flt Lab Series I	
AV 227B	Helicopter Flt Lab Series I	
AV 227C	Helicopter Flt Lab Series I	
AV 227D	Helicopter Flt Lab Series I	
AV 227E	Helicopter Flt Lab Series I	
AV 227F	Helicopter Flt Lab Series I	
AV 227G	Helicopter Flt Lab Series I	
AV 227H	Helicopter Flt Lab Series I	
AV 227I	Helicopter Flt Lab Series I	
AV 227J	Helicopter Flt Lab Series I	

- ¹ May be taken in any order, in any term and may be taken before, with or after the flight courses.
- ² Must be taken as the first flight course. May be taken any term.
- ³ Flight fees, simulator fees and FAA testing fees are required in addition to normal tuition for all flight labs and must be paid by the end of the second week of the term. Used portions of flight and simulator fees are not refundable. Contact the Aviation program director at 541.318.3702 for more information.
- ⁴ The Private Pilot Helicopter course AV 115 shall be completed prior to the Instrument Helicopter course AV215, and the Instrument Helicopter course AV215 shall be completed before the Commercial Pilot Helicopter course AV225.
- ⁵ WR 121 is recommended for students who plan to pursue a bachelor's degree.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Students must maintain a minimum 2.0 GPA while enrolled in the program. Students who do not maintain this standard and desire to continue the program, require completion of a training plan approved by their COCC advisor.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:

- The FAA requires applicants pass an airman knowledge exam for pilot certificates/ratings.
- Students must be prepared to fly three to four days per week in order to maintain the rigorous schedule that is required in order to complete the flight training in a timely manner.

AV 227I	Helicopter Flt Lab Series I	1
Credits		13
Seventh Term		
AV 208	Meteorology II	4
AV 235	Human Factors	4
AV 227J	Helicopter Flt Lab Series I	1
AV 255	Cert Flight Instr-Helicopter	5
Credits		14
Total Credits		90-95

Sample Plan

First Term		Credits
AV 101	Introduction to Aviation	3
AV 104	Intro to Aircraft Systems	4
AV 115	Private Pilot-Helicopter	5
AV 117	Helicopter Fundamentals	3
AV 227A	Helicopter Flt Lab Series I	1
AV 227B	Helicopter Flt Lab Series I	1
Credits		17
Second Term		Credits
AV 108	Meteorology I	4
AV 246	Aviation Safety	3
AV 227C	Helicopter Flt Lab Series I	1
MTH 085 or MTH 111	Technical Mathematics I College Algebra	4
Credits		12
Third Term		Credits
AV 112	Technically Advanced Aircraft	2
AV 215	Instrument Helicopter	5
AV 227D	Helicopter Flt Lab Series I	1
AV 227E	Helicopter Flt Lab Series I	1
WR 121 or BA 214	Academic Composition Business Communications	3-4
Credits		12-13
Fourth Term		Credits
AV 200 or AV 201	Aviation Law Airport Management	3
AV 227F	Helicopter Flt Lab Series I	1
AV 227N	Helicopter Flt Lab Series I	1
BA 285 or COMM 218	Business Human Relations Interpersonal Communication	3
CIS 120	Computer Concepts (Computer Competency Test)	0-4
Credits		8-12
Fifth Term		Credits
BA 101 or BA 206	Intro to Business Management Fundamentals I	4
AV 150	Aerodynamics	4
AV 225	Commercial Pilot-Helicopter	4
AV 227G	Helicopter Flt Lab Series I	1
AV 227H	Helicopter Flt Lab Series I	1
Credits		14
Sixth Term		Credits
Discipline Studies Course		4
Discipline Studies Course		4
AV 245	Advanced Helicopter Operations	4

Aviation-Technology and Management (OIT Transfer) Emphasis - Associate of Science (AS)

Description

The Aviation - Technology and Management (OIT Transfer) AS degree is intended to prepare students to continue on to Oregon Institute of Technology's Bachelor of Applied Science (BAS) in Technology and Management degree in order to promote career advancement into management or the aviation field.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and

3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Mathematics		
MTH 111	College Algebra	4
Oral Communication		
COMM 111	Fundamentals Public Speaking	4
Writing		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
WR 227	Technical Writing	4
General Education/Discipline studies		
Arts and Letters: (p. 399)		
Choose two courses from the Discipline Studies list		6-8
Social Science: (p. 404)		
Choose two courses from the Discipline Studies list		8
Recommend: EC 201 and EC 202		
Science/Math/Computer Science: (p. 403)		
Choose one lab science course from the Discipline Studies list		3-5
Program Requirements		
AV 108	Meteorology I	4
AV 208	Meteorology II	4
BA 206	Management Fundamentals I	4
BA 211	Financial Accounting I	4

BA 213	Managerial Accounting ¹	4
BA 223	Marketing Principles I	4
BA 226	Business Law I	4
CIS 125A	Access	4
CIS 125E	Excel	4
Electives		
Choose enough electives to reach a minimum total of 90 overall degree credits ²		17
Total Credits		90-94

¹ COCC recommends students take BA 212 Financial Accounting II prior to BA 213 Managerial Accounting.

² Elective credits must be 100-level and above with a maximum of 12 CTE credits and 15 credits of CWE/HHPA performance courses.

Performance Standards

- Academic Requirements:

- Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.

- All general education/foundational courses in the program must be completed with a grade of C or higher.

- Additional Requirements:

- None

Sample Plan

First Term		Credits
WR 121	Academic Composition	4
MTH 111	College Algebra	4
AV 108	Meteorology I	4
BA 206	Management Fundamentals I	4
Credits		16
Second Term		
BA 211	Financial Accounting I	4
Discipline Studies Social Science (recommend EC 201)		4
WR 122	Argument, Research, and Multimodal Composition	4
AV 208	Meteorology II	4
Credits		16
Third Term		
BA 213	Managerial Accounting	4
Discipline Studies Social Science (recommend EC 202)		4
COMM 111	Fundamentals Public Speaking	4
WR 227	Technical Writing	4
Credits		16
Fourth Term		
BA 223	Marketing Principles I	4
CIS 125A	Access	4
Discipline Studies Course: Arts & Letters		3-4
Discipline Studies Course: Science/Math/Computer Science		3-5
Credits		14-17

Fifth Term

BA 226	Business Law I	4
CIS 125E	Excel	4
Discipline Studies Course: Arts & Letters		3-4
Electives		4
Credits		15-16

Sixth Term

Electives		4
Electives		4
Electives		4
Electives		1
Credits		13
Total Credits		90-94

Unmanned Aerial Systems (UAS) Operations - Associate of Applied Science (AAS)

Description

The Aviation Unmanned Aerial Systems Operations (UAS) program trains individuals to work as professional UAS operators in the national/international arena. Students will learn to operate UAS to include: conducting mission/preflight planning, mission briefings and programming. They will learn how to obtain and evaluate weather forecasts, Notice to Airmen (NOTAMs), Special Instructions (SPINs) and airspace requirements. Students will be taught to perform limited UAS and ground support equipment testing, troubleshooting and maintenance. The UAS degree is intended to prepare students for a fast growing industry with many civilian applications including agriculture, search and rescue, monitoring environment and wildlife, border security, fire mapping, surveying structures after natural disasters, real estate photography and police surveillance.

Learning Outcomes

1. Demonstrate the ability to recall various unmanned aerial systems platforms, sensors, and terminology.
2. Demonstrate an understanding of Federal Aviation Administration regulations/ requirements necessary to commercially operate unmanned aerial systems.
3. Demonstrate the ability to configure unmanned aerial platforms with sensors appropriate to the prescribed operation.
4. Demonstrate the ability to plan and safely execute an unmanned aerial system operation.
5. Demonstrate the ability to safely operate unmanned aerial systems in a real world environment.
6. Develop GIS skills necessary to provide geospatial and thematic data.
7. Demonstrate the ability to translate data collection to GIS product development.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- AV 272 Unmanned Aerial Systems (UAS) Operations and AV 273 Unmanned Aerial Sys Ops Maint have \$750 fees to cover equipment costs.

Course Requirements

Course	Title	Credits
Core Courses		
AV 104	Intro to Aircraft Systems	4
AV 108	Meteorology I	4
AV 110 or AV 115	Private Pilot - Airplane Private Pilot-Helicopter	5
AV 150	Aerodynamics	4
AV 271	Introduction to UAS	4
AV 272	Unmanned Aerial Sys Ops	5
AV 273	Unmanned Aerial Sys Ops Maint	5
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
GEOG 211	Computer Cartography	4
GEOG 265	Geographic Information Systems	4
GEOG 266	Arc GIS	5
GEOG 267	Geodatabase Design	5
GEOG 273	Spatial Data Collection	5
GEOG 275	GIS Capstone	5
GEOG 285	Data Conversion/Documentation	5
GEOG 286	Remote Sensing	5
GEOG 287	Analysis of Spatial Data	5
Other Required Courses		
BA 206	Management Fundamentals I	4
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
MTH 085 or MTH 111	Technical Mathematics I ¹ College Algebra	4
WR 121	Academic Composition	4
Total Credits		94-98

¹ Or higher than MTH 111 College Algebra

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits	
AV 104	Intro to Aircraft Systems	4
BA 206	Management Fundamentals I	4

MTH 085 or MTH 111	Technical Mathematics I ¹ College Algebra	4
WR 121	Academic Composition	4
Credits		16
Second Term		
AV 110 or AV 115	Private Pilot - Airplane Private Pilot-Helicopter	5
AV 108	Meteorology I	4
AV 150	Aerodynamics	4
CIS 120	Computer Concepts (Computer Competency Test)	0-4
Credits		13-17
Third Term		
AV 271	Introduction to UAS	4
CIS 140	A+ Essentials I	4
GEOG 211	Computer Cartography	4
GEOG 265	Geographic Information Systems	4
Credits		16
Fourth Term		
AV 272	Unmanned Aerial Sys Ops	5
CIS 145	A+ Essentials II	4
GEOG 267	Geodatabase Design	5
GEOG 285	Data Conversion/Documentation	5
Credits		19
Fifth Term		
AV 273	Unmanned Aerial Sys Ops Maint	5
GEOG 275	GIS Capstone	5
GEOG 286	Remote Sensing	5
Credits		15
Sixth Term		
GEOG 266	Arc GIS	5
GEOG 273	Spatial Data Collection	5
GEOG 287	Analysis of Spatial Data	5
Credits		15
Total Credits		94-98

Biology

Biology is the study of life across molecular, cellular, organismal, ecological and evolutionary scales. Core concepts in biology include evolution, genetics, the connections between structure and function, transformations of energy and matter, and the development of emergent properties in living systems. The study of biology develops the ability to apply the process of science and use quantitative reasoning, models and simulations to solve biological problems. Biologists must have the ability to communicate and collaborate with other disciplines and understand the relationship between science and society. Careers in research, genetics, biotechnology, plant sciences, zoology, environmental science, education, human medicine, veterinary medicine, and dentistry are all possibilities for biology students.

<https://www.cocc.edu/programs/biology/> (<https://www.cocc.edu/programs/biology/default.aspx>)

Contact Information:
Science Department

541-383-7550
Science Center, Bend Campus
Department Chair: Carol Higginbotham
Administrative Assistant: Trina McLaughlin

Programs

Transfer

- Biological Sciences - Associate of Arts Oregon Transfer (AAOT) (p. 57)
- Dental Hygiene - Associate of Arts Oregon Transfer (AAOT) (p. 59)
- Pre-Dentistry, Pre-Medicine, Pre-Veterinary - Associate of Arts Oregon Transfer (AAOT) (p. 61)

Courses

BI 101 General Biology: Cells & Genes (4 Credits)

Designed to fulfill general education requirements, this course is intended for non-major students whose program requires biology courses. Centers on concepts of unity of living organisms including evolution, biochemistry, cell biology genetics and development. Need not be taken in sequence. Lab meets first week of classes.

BI 102 General Biology: Evolution (4 Credits)

Designed to fulfill general education requirements, this course is intended for non-major students whose program requires biology courses. Focus is on concepts of biological diversity including the evidence for and mechanisms of evolution, sexual selection, and adaptations to local environments. Need not be taken in sequence. Lab meets the first week of classes. This course includes animal dissection.

BI 103 General Biology: Ecology (4 Credits)

Designed to fulfill general education requirements, this course is intended for non-major students whose program requires biology courses. Focus is on ecological concepts including interactions between organisms and the abiotic environment, co-evolutionary adaptations, and Central Oregon flora and/or fauna. Scheduled labs may include outdoor field trips. Need not be taken in sequence. Lab meets the first week of classes.

BI 105 Essentials of Human Biology (3 Credits)

Introductory human biology course covering structure and function of the body. Topics include relevant terminology, selected anatomical structures, normal function of human body systems, as well as the impact of selected pathological processes and age. Designed for Allied Health programs.

BI 121 Anatomy and Function I (4 Credits)

Covers body organization, the cell, skin, blood, heart and circulation, immunity, respiration, bones and skeletal muscles. Designed for pharmacy technician, medical assisting and massage therapy programs. Lecture and lab are taken simultaneously; they are not offered as separate classes. Preserved animal tissues are used in some labs.

BI 122 Anatomy and Function II (4 Credits)

Recommended preparation: BI 121.

Covers the nervous system, eyes, ears, reproduction, genetics, digestion, urinary system, hormones and diabetes. Designed for pharmacy technician, medical assisting and massage therapy programs. Lecture and lab are taken simultaneously; not offered as separate classes. Preserved animal tissues are used in some labs.

BI 142 Introduction to Marine Biology (4 Credits)

Examines the physical, chemical, and biological aspects of the marine environment with emphasis on ecology, biodiversity, sustainability and conservation of marine resources. Laboratory focuses on field experience through a multi-day trip to the Oregon Coast.

BI 188 Special Studies: Biology (1-6 Credits)

Explores topics of current interest in the discipline. P/NP grading.

BI 202 General Botany (4 Credits)

Recommended preparation: At least one previous biology course (BI 101, 102, 103, 211, 212, 213).

Studies plant anatomy, human interactions with plants, and especially plant taxonomy within an evolutionary framework. Focuses on flowering plant families common in Central Oregon and identification using taxonomic keys.

BI 205 Scientific Terminology: Latin and Greek Roots (3 Credits)

Designed for majors in natural science and social science wishing to enhance their understanding of the basic Latin and Greek prefixes, suffixes, and language roots that are applicable to study and reading in science-related fields. Develops skill in how words are formed, the history, meaning, pronunciation and spelling of scientific terms.

BI 211 Principles of Biology (5 Credits)

Prerequisites: Minimum placement into WR 121 or WR 121 plus WR 98.

Prerequisites with concurrency: CH 104 or CH 221.

Introduces basic principles common to all living organisms. Emphasizes the relationship between structure and function at the molecular and cellular levels of life. Emphasizes the structure of macromolecules that make up the cell. Explores the evolution of cellular morphology and the chemical processes of cellular function. Explores the genetic basis of evolution and how genetic information flows from DNA to RNA and from RNA to proteins. Designed for majors in the life sciences. BI 211 must be taken before BI 212 and BI 213. Living animals (insects) will be studied and processed in this class.

BI 212 Principles of Biology (5 Credits)

Prerequisites: BI 211.

Emphasizes transformations of energy and matter, systems level biology, and the structure and function of ecosystems. Studies the interrelationships between all forms of life and their environment. Emphasizes aspects of plant morphology and physiology that influence ecosystem function. Designed for majors in life sciences as well as those pursuing botany. Field Trips may be required.

BI 213 Principles of Biology (5 Credits)

Prerequisites: BI 211.

Examines evolutionary biology as well as animal diversity and systematics, morphology and physiology. Designed for majors in life sciences. This course includes animal dissection.

BI 231 Human Anatomy and Physiology I (4 Credits)

Prerequisites: WR 065 or minimum placement into WR 121 or (WR 121 plus WR 098).

Examines the structure and function of the human body utilizing a systems approach. Emphasizes body organization, cells, tissues, as well as microscopic and gross anatomy along with the functional roles of the integumentary, skeletal and muscular systems, and concludes with nerve cells and tissue. Concurrent labs include hands-on dissections of a variety of tissues, organs, rats, fetal pigs and/or cats. First course of a sequence for students in pre-nursing and other pre-professional health programs. This course includes animal dissection and cadaver observation.

BI 232 Human Anatomy and Physiology II (4 Credits)

Prerequisites: BI 231.

Continuation of examination of the structure and function of the human body utilizing a systems approach with an emphasis on anatomical and physiological relationships between nervous, endocrine and cardiovascular systems. Concurrent labs include hands-on dissections of a variety of tissues, organs, fetal pigs and/or cats. For students in pre-nursing and other pre-professional health programs. This course includes animal dissection and cadaver observation.

BI 233 Human Anatomy and Physiology III (4 Credits)

Prerequisites: BI 232.

Continuation of examination of the structure and function of the human body utilizing a systems approach. BI 233 emphasizes the anatomical and physiological relationships between the lymphatic/immune, respiratory, digestive, urinary, and reproductive systems. Concurrent labs include hands-on dissections of a variety of tissues, organs, fetal pigs and/or cats. For students in pre-nursing and other pre-professional health programs. This course includes animal dissection and cadaver observation.

BI 234 Microbiology (4 Credits)

Prerequisites: WR 065 (or higher) or minimum placement into WR 121 or WR 121 plus WR 098, and (BI 101, or BI 231 or BI 211).

Learn the characteristics and disease-causing features of microorganisms, especially the bacteria and viruses that cause serious infectious diseases in humans. Covers defense mechanisms against infections and disease, and the development of immunity against future infections. The mechanisms of action of certain classes of anti-microbial drugs are discussed. Also covers some of the historically-common human infections and diseases. Designed especially for students in nursing, pre-pharmacy and other pre-professional health programs.

BI 280 Co-op Work Experience Biology (1-4 Credits)

Prerequisites: instructor approval.

Provides experience in which students apply previous biology classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

BI 288 Special Studies: Biology (1-4 Credits)

Explores topics of current interest in the discipline.

BI 299 Selected Topics: Biology (1-5 Credits)

This course is in development.

FN 225 Human Nutrition (4 Credits)

In-depth introduction to the science of nutrition, stressing characteristics of nutrients and their food sources. Examines digestion, absorption and metabolism of nutrients. Includes individualized diet analysis and current-interest topics including weight management and some disease therapies. Emphasis is placed on use of scientific research criteria for evaluation of current nutrition articles.

Biological Sciences - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer (AAOT) degree, with a focus in biology, is designed for students who wish to transfer to a four-year university to pursue a bachelor's degree in biology. Lower division coursework at COCC in physics, chemistry, biology and mathematics prepares students to transfer to a four-year university ready for upper division coursework in the biology major. Graduates with a bachelor of science in biology from their transfer institution will be well-

equipped for graduate school and other careers in biomedical fields, industry, governmental agencies and non-governmental organizations which require a broad-based education in science, mathematics and communication. Those graduates may enter such fields as conservation or environmental science, science writing, education, botany, forest or marine science, veterinary medicine, agricultural research, pharmaceuticals, human medicine or other life science careers such as research in microbiology, biotechnology, bio-informatics or genetics.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and

3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose three credits	¹	3
Mathematics: (p. 399)		
Choose one course		4
Recommend: MTH 111		
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline Studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses chosen from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Recommend: BI 211, BI 212, BI 213 and MTH 112		
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.	²	39
Recommend: CH 221, CH 222, CH 223, MTH 251, MTH 252, PH 201, PH 202, PH 203		
Total Credits		90-106

- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² Related courses to consider: BI 231 Human Anatomy and Physiology I, BI 232 Human Anatomy and Physiology II, BI 233 Human Anatomy and Physiology III, BI 234 Microbiology, and FN 225 Human Nutrition are not prerequisites for admission into dental, medicine, or veterinary programs, but may help a student preparing for any of those careers.

Advising Notes

Oregon public universities with a biology major include: Eastern Oregon University, Oregon Institute of Technology, Oregon State University, Portland State University, Southern Oregon University, University of Oregon, Western Oregon University.

BI 211 Principles of Biology, BI 212 Principles of Biology, and BI 213 Principles of Biology should be taken at the same institution to avoid transfer issues, see advisor for details.

Oregon State University: Recommend COMM 111 Fundamentals of Public Speaking, WR 227 Technical Writing, and HHP 295 Health and Fitness from the recommended Foundational Curriculum options.

University of Oregon: Recommend WR 122 Argument, Research, and Multimodal Composition from the recommended Foundational Curriculum options.

Eastern Oregon University, Portland State University, and Southern Oregon University: Recommend MTH 243 Introduction to Probability and Statistics I as an elective if room in the program.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Term		Credits
Mathematics (recommend MTH 111 or higher)		4
Health (3 credits with HHP or HHPA prefix)		3
Elective (recommend PH 201)		5
WR 121	Academic Composition	4
Credits		16
Second Term		Credits
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Discipline Studies Science/Math/Computer Science (recommend MTH 112)		4
Elective (recommend PH 202)		5

Discipline Studies Social Science	3-4
Credits	
	16-17
Third Term	
Discipline Studies Social Science	3-4
Oral Communication: (p. 399)	3-4
Elective (recommend PH 203)	5
Elective (recommend MTH 251)	4
Credits	
	15-17
Fourth Term	
Discipline Studies Lab Science (recommend BI 211)	5
Discipline Studies Arts & Letters	3-4
Elective (recommend MTH 252)	4
Elective (recommend CH 221)	5
Credits	
	17-18
Fifth Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Elective (recommend CH 222)	5
Discipline Studies Lab Science (recommend BI 213)	5
Credits	
	16-18
Sixth Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Elective (recommend CH 223)	5
Discipline Studies Lab Science (recommend BI 212)	5
Credits	
	16-18
Total Credits	
	96-104

Dental Hygiene - Associate of Arts Oregon Transfer (AAOT)

Description

While COCC does not offer a dental hygiene program, many students begin their course work here with the intent of transferring to another college to earn a dental hygiene degree.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Recommend: MTH 111		
Oral Communication: (p. 399)		
Choose one course		3-4

Recommend: COMM 111

Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	

General Education/Discipline Studies

Cultural Literacy: (p. 401)

One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).

Arts and Letters: (p. 399)

Choose at least three courses from at least two prefixes 9-12

Social Science: (p. 404)

Choose at least four courses from at least two prefixes 12-16

Recommend: SOC 201

Science/Math/Computer Science 12-20

Choose at least four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science

Recommend: BI 231, BI 232, BI 233, FN 225

Electives

Choose any college-level course that brings the total credits to 90 quarter hours² 39

Recommend: AH 111, BI 234, CH 104, CH 105, CH 106

Total Credits 90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated

² This may include up to 9 credits of Career and Technical Education courses (in addition to AH 111 Medical Terminology I) designated by COCC as acceptable.

Advising Notes

Information about accredited dental hygiene programs can be found at the American Dental Association's webpage (<https://www.ada.org/en/education-careers/careers-in-dentistry/dental-team-careers/dental-hygienist/>).

Students should consult the prerequisite requirements for their dental hygiene program of interest, as specific requirements vary by school and program.

If transferring to Lane Community College: PSY 201 Mind and Brain or PSY 202 Mind and Society and WR 227 Technical Writing are recommended. Lane gives additional application points for Spanish language proficiency (completion of SPAN 102 First Year Spanish II or CLEP test score of 50 or higher). See LCC's catalog and website for details.

If transferring to Mt. Hood Community College: a psychology elective is recommended. See MHCC's catalog and website for details.

If transferring to Oregon Tech (OIT): Oregon Institute of Technology requires DHE 100 Introduction to Dental Hygiene (2) and is offered online. OIT requires completion of CH 104 Introduction to Chemistry I only. See OIT's catalog and website for details.

If transferring to Portland Community College: a psychology elective is recommended. See PCC's catalog and website for details.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters	3-4
Mathematics (recommend MTH 111)	4
Oral Communication (recommend COMM 111)	4
WR 121 Academic Composition	4
Credits	15-16
Second Term	
Discipline Studies Social Science (recommend SOC 201)	3
Health (3 credits with HHP or HHPA prefix) ¹	3
Discipline Studies Arts & Letters	3-4
Elective (recommend AH 111) ²	3
WR 122 Argument, Research, and Multimodal Composition	4
Credits	16-17
Third Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Discipline Studies Science/Math/Computer Science (recommend BI 231)	4
Elective (recommend BI 234) ²	4
Elective ²	3-4
Credits	17-20
Fourth Term	
Discipline Studies Science/Math/Computer Science (recommend BI 232)	4
Discipline Studies Social Science	3-4
Elective (recommend CH 104) ²	4
Elective ²	3-4
Credits	14-16
Fifth Term	
Discipline Studies Science/Math/Computer Science (recommend BI 233)	4
Discipline Studies Social Science	3-4
Elective (recommend CH 105) ²	4
Elective ²	3-4
Credits	14-16
Sixth Term	
Discipline Studies Science/Math/Computer Science (recommend FN 225)	4
Elective (recommend CH 106) ²	4
Elective ²	3-4

Elective ²	3-4
Credits	14-16
Total Credits	90-101

Pre-Dentistry, Pre-Medicine, Pre-Veterinary - Associate of Arts Oregon Transfer (AAOT)

Description

Students interested in pursuing professional degrees in medicine, dentistry, or veterinary medicine are required to complete a bachelor's degree, preferably in a related area, including any of the biological or physical sciences. To provide a solid foundation for bachelor's degree work, students are encouraged to complete the Associate of Arts Oregon Transfer (AAOT) degree, with an emphasis on biological sciences-related coursework, though students should consult with their assigned academic advisors to choose the academic pathway that best supports their career goals.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits		3
Mathematics: (p. 399)		
Choose one course		4
Recommend: MTH 111		
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline Studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Recommend: BI 211, BI 212, BI 213, CH 221		
Electives		

Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.

Recommend: CH 222, CH 223, FN 225 or HHP 240, MTH 112, MTH 113, MTH 251, MTH 252, MTH 253, PH 201 or PH 211, PH 202 or PH 212, PH 203 or PH 213

Total Credits 90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

Students may transfer to a baccalaureate institution without the AAOT; however, completion of this degree guarantees that a student will transfer to an Oregon public university with junior standing and that all lower division general education coursework is complete. Students should speak with their assigned advisors to choose the most appropriate pathway/major that will best support their academic and career goals.

All Oregon public universities have coursework and offer majors appropriate for students interested in gaining admission to medical, veterinary or dental programs. These include Eastern Oregon University, Oregon Institute of Technology, Oregon State University, Portland State University, Southern Oregon University, University of Oregon, Western Oregon University.

BI 211 Principles of Biology, BI 212 Principles of Biology, and BI 213 Principles of Biology should be taken at the same institution to avoid transfer issues, see advisor for details.

Oregon State University: Recommends COMM 111 Fundamentals of Public Speaking, WR 227 Technical Writing, and HHP 295 Health and Fitness from the recommended Foundational Curriculum options.

University of Oregon: Recommends WR 122 Argument, Research, and Multimodal Composition from the recommended Foundational Curriculum options.

Eastern Oregon University, Portland State University, and Southern Oregon University: Recommend MTH 243 Introduction to Probability and Statistics I as an elective.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters	3-4
Mathematics (recommend MTH 111)	4
Oral Communication: (p. 399)	3-4
WR 121	Academic Composition
	Credits
	14-16

Second Term

Discipline Studies Science/Math/Computer Science (recommend CH 221)	5
Discipline Studies Social Science	3-4
Health (3 credits with HHP or HHPA prefix)	3
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing
	4
Credits	15-16

Third Term

Discipline Studies Arts & Letters	3-4
Discipline Studies Science/Math/Computer Science (recommend BI 211)	5
Discipline Studies Social Science	3-4
Elective	4
Credits	15-17

Fourth Term

Discipline Studies Science/Math/Computer Science (recommend BI 212)	5
Discipline Studies Social Science	3-4
Elective	3
Elective	4
Credits	15-16

Fifth Term

Discipline Studies Science/Math/Computer Science (BI 213)	5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
Credits	16-17

Sixth Term

Discipline Studies Arts & Letters	3-4
Elective	4
Elective	4
Elective	4
Credits	15-16
Total Credits	90-98

Business Administration

The field of business administration includes a diverse array of subjects such as management, marketing, organizational and human behavior, information technology, and small business development and entrepreneurship. COCC's business discipline offers courses and degrees for students planning to transfer as business majors into bachelor's degree programs, to move directly into the job market, or to build specific workplace skills. The discipline offers a variety of courses that combine theory and practical applications. Career opportunities in business include accounting, marketing, finance, small business development, and management in a variety of settings.

<https://www.cocc.edu/departments/business> (<https://www.cocc.edu/departments/business/>)

Contact:

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Grandview Hall, Bend Campus

Department: Business/Aviation
Department Chair: Michael Hansen

Programs

Career and Technical Education

- Accounting Clerk - One Year Certificate of Completion (CC1) (p. 66)
- Business Administration - Associate of Applied Science (AAS) (p. 69)
- Business Administration: Accounting - Associate of Applied Science Option (AASO) (p. 70)
- Business Administration: Management - Associate of Applied Science Option (AASO) (p. 71)
- Business Administration: Small Business and Entrepreneurship - Associate of Applied Science Option (AASO) (p. 73)
- Entrepreneurship - One Year Certificate of Completion (CC1) (p. 74)
- Marketing Communications - One Year Certificate of Completion (CC1) (p. 75)
- Office Assistant - One Year Certificate of Completion (CC1) (p. 76)
- Retail Management - One Year Certificate of Completion (CC1) (p. 77)

Transfer

- Business - Associate of Science Oregon Transfer (ASOT) (p. 67)

Courses

BA 101 Introduction to Business (4 Credits)

In this course students will learn about the many exciting and challenging facets of business and its dynamic role in today's environment. Students will gain a working knowledge of components of business including discussion of management, marketing, entrepreneurship and finance. During this course students will be introduced to topics which are covered in greater depth in higher level business courses. Students are encouraged to use this course to explore the breadth of business topics offered in the Business Administration degrees and identify specific areas of interest or specialization.

BA 104 Business Math (3 Credits)

Prerequisites with concurrency: MTH 060 (or higher) or minimum placement into MTH 065.

Designed to equip students with skills to handle everyday arithmetic problems relative to a business environment and lay the foundation for other business courses including computer classes that use basic business math as examples and assignments. Topics include ratio, proportion, percent, interest, time value of money, markup and discounts, payroll, stocks and bonds, and depreciation.

BA 111 Applied Accounting I (3 Credits)

Prerequisites with concurrency: MTH 060 (or higher) or minimum placement into MTH 065.

Designed to acquaint students with the basic functions of the bookkeeping and accounting process—journalizing transactions into the journal, posting to the general ledger, analyzing and adjusting the ledger, preparing simple financial statements for a service business and gaining an understanding and working knowledge of the overall payroll function. No previous accounting is required.

BA 112 Applied Accounting II (3 Credits)**Prerequisites:** BA 111.

Continuation of Applied Accounting I. Provides a detailed study of the mechanical and theoretical aspects of the bookkeeping and accounting process as it relates to a merchandising business.

BA 113 Applied Accounting III (3 Credits)**Prerequisites:** BA 112.

Continuation of Applied Accounting II. Provides an in-depth, more detailed background of specific areas of accounting to effectively deal with most accounting situations as they relate to all business forms.

BA 120 Introduction to Supply Chain Management (4 Credits)**Recommended preparation:** BA 101.

This course introduces the student to supply chain management which encompasses all activities associated with the flow and transformation of goods and services from beginning to the end user.

BA 121 Logistics Management (4 Credits)**Recommended preparation:** BA 101.

This course introduces the student to logistics management processes. Attention is given to such issues as transportation management, warehouse and facility location management, inventory management, and customer service strategies.

BA 123 Introduction to Transportation Logistics (4 Credits)**Recommended preparation:** BA 101.

This course provides a working knowledge of the processes involved in dispatching trucks, trip assembly, and transportation terminology.

BA 124 Trucking Operations Management (4 Credits)**Prerequisites:** BA 123.

This course provides a working knowledge of the basic regulations governing the movement of domestic cargo. Additionally, the student will understand how the various modalities of domestic and International cargo combine to move freight in the global supply chain.

BA 177 Payroll Accounting (3 Credits)**Recommended preparation:** or to be taken with BA 112 or BA 212.

Provides the fundamental accounting skills to calculate payroll for any business organization. Topics include calculating payroll based on current laws and regulations, recording payroll transactions in the general journal and general ledger, and completing required federal payroll tax forms and reports.

BA 178 Customer Service (3 Credits)

This course introduces principles of effective customer service. Students will learn to develop and implement customer service strategies using systems, technologies, and communication skills to serve diverse customer needs. By evaluating elements of customer service culture and delivery, students will understand standards of service excellence, causes of service breakdowns, and service recovery techniques.

BA 188 Special Studies: Business (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** completion of most Level I and Level II classes from the AAS degree.

Engages students with projects from local businesses in the areas of accounting, marketing, management and operations.

BA 199 Selected Topics: Business (1-5 Credits)**Prerequisites:** instructor approval.

Offers selected topics of study through workshop and independent study formats. Provides opportunities for students to investigate topics of interest beyond what is covered in current degrees.

BA 206 Management Fundamentals I (4 Credits)**Recommended preparation:** BA 101.

Introduces students to the theory and vocabulary of management in a business setting. All of the major theoretical foundations for understanding individual and group behavior and leadership are reviewed in a lecture and discussion instructional format.

BA 207 Management Fundamentals II (4 Credits)**Recommended preparation:** BA 206.

Covers the scope of activities and roles required to be an effective manager. Applying individual and group behavior and leadership theories, and exploring the critical skills of self-management, communication, logical thinking and team building, the major functional areas of management are examined in depth through the exploration of practical applications. Case study analysis and discussion are used extensively as the instructional methods.

BA 211 Financial Accounting I (4 Credits)**Recommended preparation:** MTH 060.

Introduces financial accounting theory, including the accounting cycle, recording transactions, financial analysis, and reporting corporate financial information in accordance with generally accepted accounting principles. BA 111, 112, and 113 are required for AAS accounting specialization.

BA 212 Financial Accounting II (4 Credits)**Recommended preparation:** BA 211.

Continues the presentation of fundamental accounting issues begun in BA 211, with emphasis on corporate investing and financing activities and preparation of the statement of cash flows.

BA 213 Managerial Accounting (4 Credits)**Recommended preparation:** BA 212.

Introduces managerial accounting theory, including cost-volume-profit analysis, product costing, budgeting, capital investing, and cost management in manufacturing and service organizations.

BA 214 Business Communications (3 Credits)**Recommended preparation:** WR 065.

Introduces students to prevailing practices of written and oral communication in business organizations, with special attention to audience-adaptation strategies and developing a modern communication style. Includes instruction in formatting techniques, document design, graphics, research strategies and documentation.

BA 217 Accounting Fundamentals (4 Credits)**Recommended preparation:** MTH 60.

Introduces non-business majors to the accounting process and the informational reports it generates. Topics include the analyzing, recording, summarizing, and reporting of business transactions, with a special focus on using accounting reports to make informed business decisions. This course is for non-business majors and no previous accounting is required.

BA 218 Personal Finance (3 Credits)

Gives students skills in basic money management. Investigates spending habits and develops personal and family financial budgets. Also focuses on dealing with financial institutions, applying for loans and establishing personal credit. Develops understanding of managing major household expenses. Develops skill in renting, buying and selling residential property. Also focuses on buying and leasing transportation, personal income taxes and different types of insurance. Covers scope and planning of investments and retirement planning. Students develop understanding of different investments including mutual funds, stock market, real estate as an investment and Social Security. Also covers wills and trusts.

BA 220 Business Analysis and Budgeting (4 Credits)**Prerequisites:** BA 104; BA 112; and CIS 131.**Recommended preparation:** CIS 125E.

This course is designed to develop mathematical analytical skills in performing the daily tasks of a manager or salesperson. The course has a threefold focus: strengthening understanding and use of business terminology in regards to financial information; development of spreadsheet skills in evaluating the costing, pricing and financing strategies of products and services; and development of skills in evaluating and making budgeting, financial and investment decisions. This is a hands-on, skills-oriented course.

BA 222 Business Finance (4 Credits)**Prerequisites:** BA 104 and choose BA 113 or BA 212.

Targets role of financial management in business and provides understanding of the effect of finance on business decisions. The course covers financial forecasting, capital budgeting and risk, financial institutions, securities markets, the investment process and working capital management.

BA 223 Marketing Principles I (4 Credits)**Recommended preparation:** BA 101.

Develops skills in understanding and developing strategies in the marketing environment. Covers principles and techniques of market research, consumer behavior, product development, pricing, distribution and promotion. Establishes basis for creating a marketing plan.

BA 224 Human Resources Management (4 Credits)**Recommended preparation:** BA 206.

Covers principles and techniques of human resources management. Includes the following topics: hiring practices, orientation, training, job enrichment, motivation, and performance and review. Covers wage policies, benefits programs and how to comply with a myriad of legal requirements.

BA 226 Business Law I (4 Credits)**Recommended preparation:** sophomore standing, WR 121 and BA 101.

Introduces general concepts, principles and individual conduct of business. The overview of law presented by this course introduces the general concepts of contract law which forms the foundation for the general conduct of business. Covers contract formation, dispute resolution, warranties, legal forms of business, and credit and collections. Emphasizes managing risk in the business environment.

BA 228 Computer Accounting Applications (3 Credits)**Recommended preparation:** CIS 131 and either BA 111 or BA 211.

Introduces double-entry, fully-integrated computerized accounting software on the microcomputer. Students will get hands-on experience recording a variety of business transactions and preparing financial statements using the software.

BA 229 QuickBooks (3 Credits)**Recommended preparation:** CIS 131 and either BA 111 or BA 211.

Introduces students to QuickBooks accounting software. It is designed to give students the basic skills to effectively use QuickBooks and to reinforce the concepts students learned in their first accounting course. Students will get hands-on experience using the software, including recording a variety of accounting transactions and creating financial statements and other financial reports useful in making business decisions.

BA 232 Branding (4 Credits)**Recommended preparation:** BA 223.

Branding is a fundamental element of a competitive marketing strategy. Students will develop skills to conduct the necessary research for a firm to develop a brand identity and brand strategy. This will include the writing of a brand brief, the use of typography and color theory as well as creating compelling content for various touch points that reinforce the brand.

BA 233 Internet Marketing (4 Credits)**Recommended preparation:** BA 223.

Building on the marketing concepts from BA 223, this course develops marketing skills in pricing, promotion and distribution strategies while using the internet. Design and content development for email, website and social media marketing based in an understanding of consumer behavior will also be covered. Additional topics include site optimization along with how to use analytic tools that will determine effectiveness of Internet marketing efforts. Note: this course does not cover HTML programming.

BA 237 Marketing Research (4 Credits)**Recommended preparation:** BA 223. Credits: 4 Lecture: 4.

Effective marketing research is essential to modern business development. The marketing concept is, by definition, customer driven. Without an accurate and complete assessment of customer needs and wants, business risk is increased. Marketing research has become the driving force of business excellence in the 21st century. This course will explore the best methodologies for confirming strategic initiatives before committing tactical assets. Marketing research provides the critical and essential input for crafting a strategy and developing a business model.

BA 239 Advertising (4 Credits)**Recommended preparation:** BA 223.

This course develops understanding of the principles and techniques necessary to create an advertising campaign for a business with a focus on the promotion component of the marketing mix. Examines the ways in which advertising fits into the scheme of business marketing. Also discusses advertising and its relationships with other promotional activities. Includes a thorough look into the use of different media choices and the planning of advertising campaigns. Also covers some of the basics regarding the design of commercials and printed copy. Includes work on real-life advertising campaigns.

BA 249 Retailing (4 Credits)**Recommended preparation:** BA 223.

Develops skills in understanding and developing strategies in the retail environment. Examines the retail industry including store location, layout, display, merchandise selection, inventory and operational controls and promotion. Includes tours of local retail stores.

BA 250 Entrepreneurship (4 Credits)

This course provides a solid foundation in entrepreneurship and small business management. Students will learn about the challenges facing entrepreneurship today, business management strategies, guerrilla marketing for success, the importance of financial planning and how to effectively present an elevator pitch. Additionally, students will learn about the various legal forms of business ownership, sources of financing a business, and E-Commerce. A balance between the practical learning and "real life" situations will be followed throughout the course.

BA 253 Business Plan Elements (4 Credits)

This course focuses on the elements of a business plan- the feasibility analysis, marketing plan, management plan, operations, pro forma financials, and how to present the plan.

BA 254 Business Strategies (4 Credits)

This course is an in depth look at business strategies covering management, financials, operations and selling with a focus on application.

BA 261 Consumer Behavior (4 Credits)

Recommended preparation: BA 223.

This course explores the determinants of consumer buying behavior and the process consumers use to make buying decisions. Study includes psychological and sociological principles and their impact on purchasing behaviors. Understanding of these behaviors and the purchase process are used to help design marketing strategies.

BA 271 Product Development Process (4 Credits)

This course covers the product development process from cradle to grave.

BA 272 Product Development Strategies (4 Credits)

This course is an in depth look at each of the phases of the product development process with a focus on application.

BA 280 Co-op Work Experience Business (1-3 Credits)

Prerequisites: instructor approval.

Provides work learning credit for student employment in fields pertaining to the business curriculum. Credit is given based upon a total workload of 100 hours per term and completion of learning objectives. Learning experience coordinated with student's supervisor. P/NP grading.

BA 285 Business Human Relations (3 Credits)

Recommended preparation: WR 121.

Examines the sociological and psychological aspects of the workplace with practical applications. Based on the premise that the practice of sound human relations is essential to success in any context. Group exercises, discussion, and lecture are the pedagogies used, in that order of importance.

BA 286 Managing Business Processes (4 Credits)

Recommended preparation: BA 101 and BA 206.

Introductory course in understanding and managing business processes. Develops understanding of general concepts and principles of process management. Includes implementation procedures and specific tools used in analyzing processes, uncovering problems and finding solutions to those problems.

BA 290 Business Seminar (3 Credits)

Prerequisites: BA 206; BA 113; BA 220; and BA 223.

BA 290 is the capstone course for all specializations in the Associate of Applied Science degree in Business. It is an opportunity for students to demonstrate all they have learned in the areas of accounting, management, finance, marketing and operations. It also allows for the opportunity to demonstrate communication and technology skills. The end result will be a great sample of work for the portfolio that students can use in seeking employment or advancement. This is a hands-on, skills-oriented course.

BA 298 Independent Study: Business (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Accounting Clerk - One Year Certificate of Completion (CC1)

Description

The Accounting Clerk one year certificate of completion is designed to give students a foundation for careers in clerical accounting. All coursework may be applied to an Associate of Applied Science (AAS) Business degree.

Learning Outcomes

1. Apply effective written and verbal communication skills individually and in groups.
2. Apply analytical, technology, and reasoning skills relevant to the profession.
3. Apply appropriate ethical choices on both a professional and personal level.
4. Demonstrate an understanding of accounting terminology.
5. Perform basic accounting functions, such as complete steps in the accounting cycle, prepare financial statements, and document transactions.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 065 Beginning Algebra II placement or completion of MTH 060 Beginning Algebra I.

Course Requirements

Course	Title	Credits
BA 101	Intro to Business	4
BA 104	Business Math	3
BA 111	Applied Accounting I	3
BA 112	Applied Accounting II	3
BA 113	Applied Accounting III	3
BA 177	Payroll Accounting	3
BA 178	Customer Service	3
or BA 285	Business Human Relations	
BA 229	QuickBooks	3
BA Elective (any BA prefix)		3-4
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 125E	Excel	4
CIS 131	Software Applications	4
WR 121	Academic Composition	4
Total Credits		40-45

Advising Notes

Students should consult their advisor if they have transfer credits, are not able to attend full time, or are not at college level in reading, writing and math.

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Academic dishonesty will not be tolerated and can result in the offending student being dropped from the program. Students wishing reinstatement must seek endorsement from the department chair after completing a progressive review.

Sample Plan

First Year

Fall		Credits
BA 101	Intro to Business	4
BA 104	Business Math	3
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts (Computer Competency Test)	0-4
	Credits	10-14

Winter

BA 112	Applied Accounting II	3
BA 178 or BA 285	Customer Service Business Human Relations	3
CIS 131	Software Applications	4
WR 121	Academic Composition	4
	Credits	14

Spring

BA 113	Applied Accounting III	3
BA 177	Payroll Accounting	3
BA 229	QuickBooks	3
BA Elective (Any BA prefix)		3-4
CIS 125E	Excel	4
	Credits	16-17
	Total Credits	40-45

Business - Associate of Science Oregon Transfer (ASOT)

Description

The Associate of Science Oregon Transfer Business degree (ASOT) is designed for students with a high level of certainty about their decision to earn a bachelor's degree with a major in business from an Oregon public university. Students completing the ASOT – Business will have

met lower division general education requirements upon transfer to an Oregon public institution, and will have junior standing for registration purposes. Admission to the business school is not guaranteed; students are strongly encouraged to contact the institution(s) to which they intend to transfer when choosing from the selection of courses within the ASOT – Business degree.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - College-level math placement.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Mathematics: (p. 399)		
MTH 243	Introduction to Probability and Statistics I	4
Two additional courses of MTH 105 or higher.		8
Oral Communication: (p. 399)		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy:		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from two or more prefixes		9-12
Social Sciences:		
EC 201	Microeconomics	4
EC 202	Macroeconomics	4
Choose two courses (at least one must have a different prefix than EC)		6-8
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Business Specific Requirements:		
BA 101	Intro to Business	4
BA 211	Financial Accounting I	4
BA 212	Financial Accounting II	4
BA 213	Managerial Accounting	4
BA 226	Business Law I	4
Electives		
Choose enough elective credits to reach a minimum of 90 credits (with a maximum of 12 Career and Technical Education (CTE) credits). ¹		12

Recommend: BA 206 and BA 223

Total Credits 90-104

¹ See advisor for recommended electives as well as specific institution transfer requirements.

Advising Notes

All courses should be aligned with the student's intended program of study and the degree requirements of the university or college to which the student plans to transfer. Admission to an Oregon public university is not guaranteed upon completion of the ASOT – Business degree. Every student is strongly encouraged to contact the institution(s) to which they intend to transfer when choosing from the selection of courses within the ASOT – Business degree.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Term	Credits
BA 101 Intro to Business	4
Mathematics (recommend MTH 111)	4
WR 121 Academic Composition	4
Elective (recommend HD 100)	3
Credits	15
Second Term	Credits
Mathematics (recommend MTH 241)	4
Discipline Studies Arts & Letters	3-4
Discipline Studies Science/Math/Computer Science	3-5
WR 122 Argument, Research, and Multimodal Composition	4
or WR 227 Technical Writing	
Credits	14-17
Third Term	Credits
BA 226 Business Law I	4
Discipline Studies Arts & Letters	3-4
Oral Communication (recommend COMM 111 or COMM 114)	4
Discipline Studies Social Sciences (no EC prefix)	3-4
Credits	14-16
Fourth Term	Credits
BA 211 Financial Accounting I	4
EC 201 Microeconomics	4
Discipline Studies Science/Math/Computer Science	3-5

MTH 243	Introduction to Probability and Statistics I	4
	Credits	15-17
Fifth Term		
BA 212	Financial Accounting II	4
Discipline Studies Arts & Letters		3-4
EC 202	Macroeconomics	4
Elective (recommend MTH 244)		4
	Credits	15-16
Sixth Term		
BA 213	Managerial Accounting	4
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Sciences		3-4
Elective (recommend BA 250)		4
	Credits	14-17
	Total Credits	87-98

Business Administration - Associate of Applied Science (AAS)

Description

The Business Administration Associate of Applied Science degree prepares students for immediate employment in business occupations. Business Administration AAS degrees may be awarded indicating emphasis in the following areas of specialization: General Business, Accounting, Management or Small Business/Entrepreneurship.

Learning Outcomes

1. Apply effective written and verbal communication skills individually and in groups.
2. Apply analytical, technology, and reasoning skills relevant to the profession.
3. Apply appropriate ethical choices on both a professional and personal level.
4. Identify how a business operates and external factors that can affect its performance.
5. Identify and resolve business problems through critical thinking and the decision making process.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 065 Beginning Algebra II placement or completion of MTH 060 Beginning Algebra I.

Course Requirements

Course	Title	Credits
Level 1 Foundation Courses		
BA 101	Intro to Business	4
BA 104	Business Math	3

BA 111	Applied Accounting I	3
BA 178	Customer Service	3
or BA 285	Business Human Relations	
BA 218	Personal Finance	3
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
LIB 100	Intro to Finding Information	1
WR 121	Academic Composition	4

Level 2 Core Courses

BA 112	Applied Accounting II	3
BA 113	Applied Accounting III	3
BA 206	Management Fundamentals I	4
BA 214	Business Communications	3
BA 223	Marketing Principles I	4
BA 226	Business Law I	4
BA 250	Entrepreneurship	4
BA 261	Consumer Behavior	4
CIS 125E	Excel	4

Level 3 General Business Specialization

Choose an additional 21-24 credits of any courses with a BA prefix and/or CIS 178 21-24

Level 4 Advanced Core and Capstone Courses

BA 220	Business Analysis & Budgeting	4
BA 222	Business Finance	4
BA 290	Business Seminar	3

Total Credits 90-97

Advising Notes

Take as many Level 1 courses as possible before attempting Level 2 courses, and take as many Level 2 courses before Level 3 courses. Level 3 courses may be taken concurrently with Level 4 courses.

This degree is designed for students planning to enter their chosen career upon graduation. Only selected credits are considered transferrable to public or private baccalaureate institutions. See advisor for additional information.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Year

		Credits
BA 101	Intro to Business	4
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts	0-4
BA 178 or BA 285	Customer Service Business Human Relations	3
LIB 100	Intro to Finding Information	1
Credits		11-15

Winter

BA 104	Business Math	3
BA 112	Applied Accounting II	3
CIS 131	Software Applications	4
WR 121	Academic Composition	4
Credits		14

Spring

BA 206	Management Fundamentals I	4
BA 113	Applied Accounting III	3
BA 223	Marketing Principles I	4
BA 218	Personal Finance	3
Credits		14

Summer

BA 214	Business Communications	3
BA 226	Business Law I	4
BA 250	Entrepreneurship	4
Credits		11

Second Year

		Credits
BA Elective		3-4
BA Elective		3-4
BA Elective		3-4
CIS 125E	Excel	4
Credits		13-16

Winter

BA 220	Business Analysis & Budgeting	4
BA 261	Consumer Behavior	4
BA Elective		3-4
BA Elective		3-4
Credits		14-16

Spring

BA 222	Business Finance	4
BA 290	Business Seminar	3
BA Elective		3-4
BA Elective		3-4
Credits		13-15

Total Credits		90-101
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Business Administration: Accounting - Associate of Applied Science Option (AASO)

Description

The Associate of Applied Science Business Administration Accounting Specialization degree qualifies graduates for employment as accounting managers, full-charge bookkeepers, staff accountants, accounts payable managers, and accounts receivable managers.

Learning Outcomes

1. Apply effective written and verbal communication skills individually and in groups.
2. Apply analytical, technology, and reasoning skills relevant to the profession.
3. Apply appropriate ethical choices on both a professional and personal level.
4. Demonstrate an understanding of accounting terminology.
5. Perform basic accounting functions, such as complete steps in the accounting cycle, prepare financial statements, and document transactions.
6. Make informed decisions about the operating performance, financial position, and cash flow activities of a company using relevant accounting information.
7. Use managerial accounting tools to provide management with data useful in managing the company's planning, controlling, and evaluating activities.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 065 Beginning Algebra II placement or completion of MTH 060 Beginning Algebra I.

Course Requirements

Course	Title	Credits
Level 1 Foundation Courses		
BA 101	Intro to Business	4
BA 104	Business Math	3
BA 111	Applied Accounting I	3
BA 178 or BA 285	Customer Service Business Human Relations	3
BA 218	Personal Finance	3
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
LIB 100	Intro to Finding Information	1
WR 121	Academic Composition	4

Level 2 Core Courses

BA 112	Applied Accounting II	3
BA 113	Applied Accounting III	3
BA 206	Management Fundamentals I	4
BA 214	Business Communications	3
BA 223	Marketing Principles I	4
BA 226	Business Law I	4
BA 250	Entrepreneurship	4
BA 261	Consumer Behavior	4
CIS 125E	Excel	4
Level 3 Accounting Specialization		
BA 177	Payroll Accounting	3
BA 211	Financial Accounting I	4
BA 212	Financial Accounting II	4
BA 213	Managerial Accounting	4
BA 228	Computer Accounting Appls	3
BA 229	QuickBooks	3
BA Elective	Any BA prefix course	3-4
Level 4 Advanced Core and Capstone Courses		
BA 220	Business Analysis & Budgeting	4
BA 222	Business Finance	4
BA 290	Business Seminar	3
Total Credits		93-98

Advising Notes

Take as many Level 1 courses as possible before attempting Level 2 courses, and take as many Level 2 courses before Level 3 courses. Level 3 courses may be taken concurrently with Level 4 courses.

This degree is designed for students planning to enter their chosen career upon graduation. Only selected credits are considered transferrable to public or private baccalaureate institutions. See advisor for additional information.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Year		Credits
Fall		
BA 101	Intro to Business	4
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts	0-4
BA 178 or BA 285	Customer Service Business Human Relations	3

LIB 100	Intro to Finding Information	1
		<hr/>
		Credits 11-15
Winter		
BA 104	Business Math	3
BA 112	Applied Accounting II	3
CIS 131	Software Applications	4
WR 121	Academic Composition	4
		<hr/>
		Credits 14
Spring		
BA 113	Applied Accounting III	3
BA 177	Payroll Accounting	3
BA 206	Management Fundamentals I	4
BA 218	Personal Finance	3
BA Elective		3-4
		<hr/>
		Credits 16-17
Summer		
BA 214	Business Communications	3
BA 223	Marketing Principles I	4
		<hr/>
		Credits 7
Second Year		
Fall		
BA 211	Financial Accounting I	4
BA 229	QuickBooks	3
BA 250	Entrepreneurship	4
CIS 125E	Excel	4
		<hr/>
		Credits 15
Winter		
BA 212	Financial Accounting II	4
BA 220	Business Analysis & Budgeting	4
BA 226	Business Law I	4
BA 228	Computer Accounting Appls	3
		<hr/>
		Credits 15
Spring		
BA 213	Managerial Accounting	4
BA 261	Consumer Behavior	4
BA 222	Business Finance	4
BA 290	Business Seminar	3
		<hr/>
		Credits 15
Total Credits		93-98

Business Administration: Management - Associate of Applied Science Option (AASO)

Description

The Associate of Applied Science Business Administration Management Specialization degree qualifies graduates for employment in entry-level management positions within a small/medium organization. This degree can also help those already in management positions who strive to be more effective managers. Employment opportunities and job functions will vary greatly with industry, size of business, and geographical region.

Learning Outcomes

1. Apply effective written and verbal communication skills individually and in groups.
2. Apply analytical, technology, and reasoning skills relevant to the profession.
3. Apply appropriate ethical choices on both a professional and personal level.
4. Demonstrate practical knowledge and understanding of the four functions of management – planning, organizing, leading and controlling.
5. Demonstrate an understanding of the importance of attracting, developing, and retaining a high quality workforce.
6. Describe the processes and techniques manager's can use in successfully managing the global environment, diversity, and social responsibility.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 065 Beginning Algebra II placement or completion of MTH 060 Beginning Algebra I.

Course Requirements

Course	Title	Credits
Level 1 Foundation Courses		
BA 101	Intro to Business	4
BA 104	Business Math	3
BA 111	Applied Accounting I	3
BA 178	Customer Service	3
or BA 285	Business Human Relations	
BA 218	Personal Finance	3
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
LIB 100	Intro to Finding Information	1
WR 121	Academic Composition	4
Level 2 Core Courses		
BA 112	Applied Accounting II	3
BA 113	Applied Accounting III	3
BA 206	Management Fundamentals I	4
BA 214	Business Communications	3
BA 223	Marketing Principles I	4
BA 226	Business Law I	4
BA 250	Entrepreneurship	4
BA 261	Consumer Behavior	4
CIS 125E	Excel	4
Level 3 Management Specialization		
BA 207	Management Fundamentals II	4
BA 224	Human Resources Management	4

BA 286	Managing Business Processes	4
Choose 9-12 credits from any BA prefix		9-12
Level 4 Advanced Core and Capstone Courses		
BA 220	Business Analysis & Budgeting	4
BA 222	Business Finance	4
BA 290	Business Seminar	3
Total Credits		90-97

Advising Notes

Take as many Level 1 courses as possible before attempting Level 2 courses, and take as many Level 2 courses before Level 3 courses. Level 3 courses may be taken concurrently with Level 4 courses.

This degree is designed for students planning to enter their chosen career upon graduation. Only selected credits are considered transferrable to public or private baccalaureate institutions. See advisor for additional information.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Year		Credits
Fall		
BA 101	Intro to Business	4
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts	0-4
BA 178	Customer Service	3
or BA 285	Business Human Relations	
LIB 100	Intro to Finding Information	1
Credits		11-15
Winter		
BA 104	Business Math	3
BA 112	Applied Accounting II	3
CIS 131	Software Applications	4
WR 121	Academic Composition	4
Credits		14
Spring		
BA 113	Applied Accounting III	3
BA 206	Management Fundamentals I	4
BA 218	Personal Finance	3
BA 250	Entrepreneurship	4
Credits		14
Summer		
BA 214	Business Communications	3

BA 223	Marketing Principles I	4
	Credits	7
Second Year		
Fall		
BA 224	Human Resources Management	4
BA 261	Consumer Behavior	4
BA Elective		3-4
CIS 125E	Excel	4
	Credits	15-16
Winter		
BA 220	Business Analysis & Budgeting	4
BA 226	Business Law I	4
BA Elective		3-4
BA Elective		3-4
	Credits	14-16
Spring		
BA 207	Management Fundamentals II	4
BA 222	Business Finance	4
BA 286	Managing Business Processes	4
BA 290	Business Seminar	3
	Credits	15
	Total Credits	90-97

Business Administration: Small Business and Entrepreneurship - Associate of Applied Science Option (AASO)

Description

The Associate of Applied Science Business Administration Small Business/Entrepreneurship Specialization degree qualifies graduates to start and run a business, grow an existing business, or be employed in a new startup venture. The skills learned will enable the student to comprehend and assist in the basics of successfully operating a small business. Employment opportunities and job functions will vary greatly with industry, size of business, and geographical region.

Learning Outcomes

1. Apply effective written and verbal communication skills individually and in groups.
2. Apply analytical, technology, and reasoning skills relevant to the profession.
3. Apply appropriate ethical choices on both a professional and personal level.
4. Construct financial data and use it to make informed decisions about the operating performance of a company.
5. Develop a marketing plan and strategies behind product/service positioning, pricing, distribution (placement), and promotion.
6. Develop a comprehensive feasibility study that will position a business for success in a competitive marketplace.
7. Create and present an elevator pitch.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 065 Beginning Algebra II placement or completion of MTH 060 Beginning Algebra I.

Course Requirements

Course	Title	Credits
Level 1 Foundation Courses		
BA 101	Intro to Business	4
BA 104	Business Math	3
BA 111	Applied Accounting I	3
BA 178	Customer Service	3
or BA 285	Business Human Relations	
BA 218	Personal Finance	3
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
LIB 100	Intro to Finding Information	1
WR 121	Academic Composition	4
Level 2 Core Courses		
BA 112	Applied Accounting II	3
BA 113	Applied Accounting III	3
BA 206	Management Fundamentals I	4
BA 214	Business Communications	3
BA 223	Marketing Principles I	4
BA 226	Business Law I	4
BA 250	Entrepreneurship	4
BA 261	Consumer Behavior	4
CIS 125E	Excel	4
Level 3 Small Business/Entrepreneurship Specialization		
BA 232	Branding	4
BA 233	Internet Marketing	4
BA 237	Marketing Research	4
BA 253	Business Plan Elements	4
Choose two from the following:		8
BA 239	Advertising	
BA 254	Business Strategies	
BA 271	Product Development Process	
BA 272	Product Development Strategies	
CIS 178	Internet in Depth	
Level 4 Advanced Core and Capstone Courses		
BA 220	Business Analysis & Budgeting	4
BA 222	Business Finance	4
BA 290	Business Seminar	3
Total Credits		93-97

Advising Notes

Take as many Level 1 courses as possible before attempting Level 2 courses, and take as many Level 2 courses before Level 3 courses. Level 3 courses may be taken concurrently with Level 4 courses.

This degree is designed for students planning to enter their chosen career upon graduation. Only selected credits are considered transferable to public or private baccalaureate institutions. See advisor for additional information.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Year

		Credits
Fall		
BA 101	Intro to Business	4
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts	0-4
BA 178 or BA 285	Customer Service Business Human Relations	3
LIB 100	Intro to Finding Information	1
Credits		11-15
Winter		
BA 104	Business Math	3
BA 112	Applied Accounting II	3
CIS 131	Software Applications	4
WR 121	Academic Composition	4
Credits		14
Spring		
BA 113	Applied Accounting III	3
BA 218	Personal Finance	3
BA 223	Marketing Principles I	4
BA 250	Entrepreneurship	4
Credits		14
Summer		
BA 206	Management Fundamentals I	4
BA 214	Business Communications	3
Credits		7

Second Year

Fall		
BA 253	Business Plan Elements	4
BA 261	Consumer Behavior	4
BA Elective		4

CIS 125E	Excel	4
Credits		16
Winter		
BA 220	Business Analysis & Budgeting	4
BA 226	Business Law I	4
BA 232	Branding	4
BA 237	Marketing Research	4
Credits		16
Spring		
BA 222	Business Finance	4
BA 233	Internet Marketing	4
BA 290	Business Seminar	3
BA Elective		4
Credits		15
Total Credits		93-97

Entrepreneurship - One Year Certificate of Completion (CC1)

Description

The Entrepreneurship One Year Certificate of Completion is designed to give students a foundation for starting their own business or assisting in the business startup activities of others. All coursework may be applied to an Associate of Applied Science (AAS) Business degree.

Learning Outcomes

1. Apply effective written and verbal communication skills individually and in groups.
2. Apply analytical, technology, and reasoning skills relevant to the profession.
3. Apply appropriate ethical choices on both a professional and personal level.
4. Interpret financial data and use it to make informed decisions about the operating performance of a company.
5. Describe the marketing plan and strategies behind product/service positioning, pricing, distribution (placement), and promotion.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 065 Beginning Algebra II placement or completion of MTH 060 Beginning Algebra I.

Course Requirements

Course	Title	Credits
Core Courses		
BA 101	Intro to Business	4
BA 104	Business Math	3
BA 206	Management Fundamentals I	4

BA 217	Accounting Fundamentals	4
BA 223	Marketing Principles I	4
BA 237	Marketing Research	4
BA 250	Entrepreneurship	4
BA 253	Business Plan Elements	4
or BA 271	Product Development Process	
BA 254	Business Strategies	4
or BA 272	Product Development Strategies	
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
LIB 100	Intro to Finding Information	1
WR 121	Academic Composition	4
Total Credits		44-48

Advising Notes

Students should consult their advisor if they have transfer credits, are not able to attend full time, or are not at college level in reading, writing and math.

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Academic dishonesty will not be tolerated and can result in the offending student being dropped from the program. Students wishing reinstatement must seek endorsement from the department chair after completing a progressive review.

Sample Plan

First Year

Fall		Credits
BA 101	Intro to Business	4
BA 104	Business Math	3
BA 253	Business Plan Elements	4
or BA 271	Product Development Process	
CIS 120	Computer Concepts (Computer Competency Test)	0-4
LIB 100	Intro to Finding Information	1
Credits		12-16

Winter

BA 217	Accounting Fundamentals	4
BA 223	Marketing Principles I	4
BA 237	Marketing Research	4
CIS 131	Software Applications	4
Credits		16

Spring

BA 206	Management Fundamentals I	4
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BA 250	Entrepreneurship	4
BA 254	Business Strategies	4
WR 121	Academic Composition	4
Credits		16
Total Credits		44-48

Marketing Communications - One Year Certificate of Completion (CC1)

Description

The Marketing Communications One Year Certificate gives students the skills to research target consumer preferences and utilize that research to create a branding strategy and promotional content for both electronic and traditional marketing media channels. A student pursuing this certificate should be seeking to add these skills to other previously acquired business education or experience. All coursework may be applied to an Associate of Applied Science (AAS) Business degree.

Learning Outcomes

1. Apply effective written and verbal communication skills individually and in groups.
2. Apply analytical, technology, and reasoning skills relevant to the profession.
3. Apply appropriate ethical choices on both a professional and personal level.
4. Utilize market segmentation tactics and customer behavior principles to develop product, price, place, and promotion strategies.
5. Evaluate current advertising tools and online communication channel options as potential elements of a promotion strategy that reinforces a company's brand.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 065 Beginning Algebra II placement or completion of MTH 060 Beginning Algebra I.
 - Work experience providing an understanding of general business functions or completion of BA 101 Introduction to Business.

Course Requirements

Course	Title	Credits
Core Courses		
BA 104	Business Math	3
BA 178	Customer Service	3
BA 214	Business Communications	3
BA 223	Marketing Principles I	4
BA 232	Branding	4

BA 233 or BA 239	Internet Marketing Advertising	4
BA 237	Marketing Research	4
BA 261	Consumer Behavior	4
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
CIS 178	Internet in Depth	4
LIB 100	Intro to Finding Information	1
WR 121	Academic Composition	4
Total Credits		42-46

Advising Notes

Students should consult their advisor if they have transfer credits, are not able to attend full time, or are not at college level in reading, writing and math.

This One Year Certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Academic dishonesty will not be tolerated and can result in the offending student being dropped from the program. Students wishing reinstatement must seek endorsement from the department chair after completing a progressive review.

Sample Plan

First Year

Fall		Credits
BA 104	Business Math	3
BA 223	Marketing Principles I	4
CIS 120	Computer Concepts (Computer Competency Test)	0-4
LIB 100	Intro to Finding Information	1
WR 121	Academic Composition	4
Credits		12-16
Winter		
BA 232	Branding	4
BA 237	Marketing Research	4
BA 261	Consumer Behavior	4
CIS 131	Software Applications	4
Credits		16
Spring		
BA 178	Customer Service	3
BA 214	Business Communications	3
BA 233	Internet Marketing	4

CIS 178	Internet in Depth	4
Credits		14
Total Credits		42-46

Office Assistant - One Year Certificate of Completion (CC1)

Description

The Office Assistant One Year Certificate is designed for persons preparing for immediate entry-level employment in office occupations and those already in business who desire to update and enhance their skills.

Learning Outcomes

- Demonstrate professional skills that will assure workplace success.
- Communicate effectively using oral and written skills.
- Exhibit critical thinking and decision-making skills.
- Utilize appropriate technology relevant to the profession.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 065 Beginning Algebra II placement or completion of MTH 060 Beginning Algebra I.
 - Keyboarding skills at 25 words per minute or better (CIS 010 Computer Keyboarding is recommended for basic keyboarding skills acquisition).

Course Requirements

Course	Title	Credits
Core Courses		
BA 101	Intro to Business	4
BA 104	Business Math	3
BA 111	Applied Accounting I	3
BA 178	Customer Service	3
BA 214	Business Communications	3
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 125E	Excel	4
CIS 131	Software Applications	4
WR 121	Academic Composition	4
Choose two courses from the following:		8
CIS 122	Introduction to Programming	
CIS 125A	Access	
CIS 125G	Photoshop	
CIS 140	A+ Essentials I	

CIS 178	Internet in Depth	
CIS 195	Web Development I	
Total Credits		36-40

CIS 195	Web Development I	
Credits		12
Total Credits		36-40

Advising Notes

Full-time suggested term-by-term coursework schedule assumes college-level placement in reading, writing and math. Part-time students and those with schedule conflicts, should see an advisor for proper course sequencing and prerequisite requirements.

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Academic dishonesty will not be tolerated and can result in the offending student being dropped from the program. Students wishing reinstatement must seek endorsement from the department chair after completing a progressive review.

Sample Plan

First Year

Fall		Credits
BA 101	Intro to Business	4
BA 104	Business Math	3
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts (Computer Competency Test)	0-4
WR 121	Academic Composition	4
Credits		14-18

Winter

BA 178	Customer Service	3
BA 214	Business Communications	3
CIS 131	Software Applications	4
Credits		10

Spring

CIS 125E	Excel	4
Choose two courses from the following:		8
CIS 122	Introduction to Programming	
CIS 125A	Access	
CIS 125G	Photoshop	
CIS 140	A+ Essentials I	
CIS 178	Internet in Depth	

Retail Management - One Year Certificate of Completion (CC1)

Description

The Retail Management One Year Certificate of Completion is designed to give students a foundation for careers in retail business management. All coursework may be applied to an AAS Business degree.

Learning Outcomes

1. Apply effective written and verbal communication skills individually and in groups.
2. Apply analytical, technology, and reasoning skills relevant to the profession.
3. Apply appropriate ethical choices on both a professional and personal level.
4. Identify and examine human relations skills within the retail organization.
5. Utilize and properly interpret financial reports.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 065 Beginning Algebra II placement or completion of MTH 060 Beginning Algebra I.

Course Requirements

Course	Title	Credits
Core Courses		
BA 101	Intro to Business (or any BA prefix course)	4
BA 104	Business Math	3
BA 111	Applied Accounting I	3
BA 178	Customer Service (or any BA prefix course) ¹	3
BA 206	Management Fundamentals I	4
BA 214	Business Communications	3
BA 223	Marketing Principles I	4
BA 224	Human Resources Management	4
BA 249	Retailing	4
BA 285	Business Human Relations	3
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
WR 121	Academic Composition	4
Total Credits		43-47

¹ Students planning to continue education and apply coursework toward any AAS Business Specialization are advised to plan these 3 credits carefully with an advisor.

Advising Notes

Students should consult their advisor if they have transfer credits, are not able to attend full time, or are not at college level in reading, writing and math.

This one year certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Western Association of Food Chains provides an industry certificate of completion for 8 courses of the COCC Retail Management certificate coursework. See retailmanagementcertificate.com (<http://retailmanagementcertificate.com>) for course list and application information.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Academic dishonesty will not be tolerated and can result in the offending student being dropped from the program. Students wishing reinstatement must seek endorsement from the department chair after completing a progressive review.

Sample Plan

First Year

Fall		Credits
BA 101	Intro to Business	4
BA 111	Applied Accounting I	3
BA 224	Human Resources Management	4
CIS 120	Computer Concepts (Computer Competency Test)	0-4
	Credits	11-15
Winter		
BA 104	Business Math	3
BA 178	Customer Service	3
BA 206	Management Fundamentals I	4
BA 285	Business Human Relations	3
WR 121	Academic Composition	4
	Credits	17
Spring		
BA 214	Business Communications	3
BA 223	Marketing Principles I	4
BA 249	Retailing	4
CIS 131	Software Applications	4
	Credits	15
	Total Credits	43-47

Cascade Culinary Institute

COCC's Cascade Culinary Institute (CCI) offers courses and programs to prepare students for immediate employment into the baking & pastry arts, the culinary arts, or hospitality management. Students benefit from hands-on learning, small classes, and knowledgeable and accessible instructors with industry experience. CCI's Jungers Culinary Center on the COCC Bend campus brings together the latest kitchen classroom technology, multiple cooking labs, a demonstration theater, and a student-run fine-dining restaurant. Prepare for a career in food service at Cascade Culinary Institute.

<https://www.cocc.edu/departments/cascade-culinary-institute/>

Contact:

Wayne Yeatman
541-318-3780
Jungers Culinary Center, Bend Campus

Department: Cascade Culinary Institute
Department Chair: Thor Erickson

Programs

Career and Technical Education

- Baking and Pastry Arts - Associate of Applied Science (AAS) (p. 83)
- Baking and Pastry Arts - Two Year Certificate of Completion (CC2) (p. 85)
- Culinary Arts - Associate of Applied Science (AAS) (p. 86)
- Culinary Arts - Two Year Certificate of Completion (CC2) (p. 87)
- Hospitality Management - Associate of Applied Science (AAS) (p. 88)
- Hospitality Management - Two Year Certificate of Completion (CC2) (p. 90)

Courses

BAK 100 Want to be a Pastry Chef? (2 Credits)

This course serves as an introduction to the field of baking and pastry arts. It is designed for students considering declaring Baking and Pastry Arts as a major; or those taking courses to enhance your placement scores to enter the next Cascade Culinary Institute cohort start. This course will enable students to experience an introduction to baking and pastry arts with a demonstration and hands on class that covers the basics of baking techniques and flavor profiling. Students will "get a taste" of the baking industry, while learning the secrets of being a successful pastry professional.

BAK 101 Introduction to Baking & Pastry (4 Credits)

This introductory level course covers the basic theory and skill sets used throughout the field of baking and pastry. Topics covered include the use of hand tools and equipment found in a bakeshop, as well as the exploration of baking and pastry ingredients and their functions. Students will gain a working knowledge of the major methods such as creaming, blending, foaming, meringues, pre-cooked, cut-in, lamination, straight dough, custards, frozen desserts, chocolates, and sauces. Students will also taste and evaluate products they create in class to enhance their understanding of the course material.

BAK 110 Baking and Pastry Foundations I (4 Credits)

Prerequisites with concurrency: CUL 90; CUL 102; and choose either WR 121 or BA 214.

Learn about the baking industry, nomenclature, equipment, kitchen operations, knife skills, baking techniques, science, ratios, and standardized recipes. Learn about and produce fruit desserts; cookies; meringues; pate a choux and basic custards.

BAK 140 Baking and Pastry Foundations II (4 Credits)

Prerequisites: BAK 110.

Learn production of breads and yeast doughs, laminate doughs, pies, and tarts. Topics include stages of yeast dough production, product identification, wheat based flours, baker's percentage, gluten development, lean straight doughs, soft-crust breads, basic laminate doughs.

BAK 170 Baking and Pastry Foundations III (4 Credits)

Prerequisites: BAK 110.

Produce quick breads and dessert foundation sauces, make and bake cake layers, and assemble classic cakes. Topics include menu planning and balancing flavors and textures in desserts.

BAK 180 Custards and Frozen Desserts (4 Credits)

Prerequisites: CUL 110 or BAK 110.

Prepare and present a variety of custards, puddings, Bavarians, mousses, still-frozen, and churn-frozen desserts, ice creams, granitas, sorbets and sherbets.

BAK 188 Special Studies, Baking and Pastry Arts (1-6 Credits)

Special Studies in Baking and Pastry Arts.

BAK 199 Selected Topics: Baking and Pastry Arts (1-6 Credits)

Provides opportunity for students with exceptional background or need to continue beyond normal Baking and Pastry Arts program content. Content and credit(s) earned are established by mutual agreement between instructor and student and detailed in written agreement at the start of the term.

BAK 210 Modern Sugar and Chocolate Decor (4 Credits)

Prerequisites: BAK 110 or CUL 110.

Prepare a variety of chocolate and sugar decorations and develop sculpting techniques. Learn tempering chocolate, use of molds, and transfer sheets. Practice various sugar techniques including pulled sugar, blown sugar, piped sugar, and poured sugar in addition to airbrushing techniques to create a variety of showpieces.

BAK 215 Laminated Dough and Viennoiserie (4 Credits)

Prerequisites: BAK 140 or CUL 140.

Learn the basic principles of laminated dough and the art of viennoiserie. Prepare European and American enriched yeasted doughs including classic and contemporary varieties of brioche, croissants, Danish, yeasted coffee cakes, doughnuts and sweet rolls. Learn ingredient selection, product identification, retail merchandising, formulation, shaping, proofing, and baking quality laminated products.

BAK 220 Wedding Celebration and Specialty Cakes (4 Credits)

Prerequisites: BAK 110 or CUL 110.

Learn the history of making celebration cakes including baking, assembly, and decorating. Bake sponge cakes, make buttercream, gum-paste flowers, royal icing piped decorations, and rolled fondant. Produce wedding and celebration cakes incorporating all of these elements, from design, baking, assembly, covering, and decorating.

BAK 225 Entremets (4 Credits)

Prerequisites: BAK 140 or CUL 140.

Recommended preparation: BAK 180.

Learn principles and techniques of creating entremets. Lecture and lab topics include: the history of entremets, European design, technique, and assembly. Utilize a variety of techniques to create layers of flavor and texture while incorporating multiple finishing and decorating styles. Apply traditional and modern applications of glazing, and sugar and chocolate decor.

BAK 230 Plated Desserts and Presentation (4 Credits)

Prerequisites: BAK 140 or CUL 140.

Recommended preparation: BAK 180.

Learn the principles and techniques of plated, banquet, buffet, and table-side desserts. Explore history, decor, purchasing, costing, flavor, presentation, and design sweet and savory desserts. Review high-volume production, portion control, and waste management. Create a final dessert incorporating all topics, including individual design, flavor, and decor.

BAK 235S Classical French Pastries (4 Credits)

Prerequisites: CUL 140 or BAK 140.

Produce a variety of classical and modern French cakes or "entremets." Decorate using printed logos, chocolate, and sugar. Utilize updated methods of traditional French recipes using fresh ingredients. Prepare classic French tarts, practicing different types of crusts, doughs, and fillings.

BAK 240 The Craft of Artisan Breads (4 Credits)

Prerequisites: CUL 110 or BAK 110.

Learn the principles and techniques of preparing multigrain breads, sourdoughs, bagels, pretzels, holiday or seasonal, and flat breads. Emphasis placed on regional and international breads, handling grains (such as soakers) for specialty breads, mixing, shaping, finishing, and innovative baking methods.

BAK 245S Advanced Sugar Decor and Chocolate Sculpting (4 Credits)

Prerequisites: BAK 210.

Produce a variety of chocolate and sugar decorations using various techniques. Learn to apply chocolate colors with a spray gun, use molds, and make cutout decorations and silk screens. Explore various sugar techniques as pastillage, saturated sugar, pulled sugar (ribbons and flowers), blown, spun, piped, bubble, straw, and poured sugar and airbrushing techniques used to create a variety of showpieces.

BAK 250 Petit Fours, Candies and Classical Mignardise (4 Credits)

Prerequisites: CUL 110 or BAK 110.

Make individual mini French pastries and petit fours such as éclairs, fruit tartelettes, macarons, and madeleines. Practice French pastry elements such as pastry cream, buttercream, glazes, cream-based, fruit-based, and chocolate-based fillings, and doughs. Create petit fours displays; make sugar confectioneries such as pâte de fruit, guimauve, praline, caramels, nougats, lollipops, and gummies. Learn how to package and display candies.

BAK 255S Artisan Breads with Heirloom Whole Grains (4 Credits)

Prerequisites: BAK 110 or CUL 110.

Make a variety of specialty breads such as multigrain, rye, flax seed, organic baguette, and organic spelt. Make products with multiple flours, mixed fermentation techniques, and various production processes. Analyze different flours and the health and nutritional benefits of the breads made from them.

BAK 260 Advanced Wedding, Celebration, and Specialty Cakes (4 Credits)**Prerequisites:** BAK 220.

Practice advanced principles of baking, assembly, piping, and decorating of specialty cakes and wedding cakes. Learn design theory; including theme, color, texture, and flavor. Learn basic cake business practices such as selection of ingredients, equipment, tools, retail pricing, consumer trends, delivery, on site construction and client consultation. Produce several single layer and tiered cakes, incorporating advanced techniques; including buttercream, rolled fondant, pastillage, royal icing piped decorations and gum paste flowers. Utilize other techniques such as over-piping, bridgework, stringwork, smocking, painting, embossing, airbrushing, applique and stenciling.

BAK 280 Baking and Pastry Arts Industry Internship (6 Credits)**Prerequisites:** BAK 140.

Supervised work experience designed to expand career knowledge and experiential confidence while increasing knowledge, speed, timing, organization and the ability to execute industry skills on a repetitive basis. Students will receive a diverse work experience designed on a systematic rotation of different stations in the kitchen, dining room and general operations positions.

BAK 298 Independent Study: Baking (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

CUL 090 Applied Math for Culinary Arts (4 Credits)**Prerequisites:** MTH 020 or minimum placement into MTH 060.

Learn culinary mathematics including customary and metric units of measurement, decimals and fractions, unit conversions, yield percent, food and beverage costing and markup methods, kitchen ratios, baker's percent and butcher's yield percent.

CUL 100 Want to be a Chef? (2 Credits)

This course serves as an introduction to the field of culinary arts. Students considering declaring either Culinary Arts or Baking and Pastry Arts as a major, or students taking courses to enhance their placement scores to enter the next Cascade Culinary Institute cohort start, will find that this course will enable them to experience an introduction to cooking with a demonstration-based class that covers the basics of cooking technique and flavor profiling. Students will "get a taste" of the restaurant industry, while learning the secrets of being a successful culinary professional.

CUL 101 Introduction to Culinary Arts (4 Credits)

Experience the basic theory and skill sets used throughout the field of culinary arts. Topics covered include the use of hand tools and equipment found in the professional kitchen, as well as the exploration of ingredients and their functions. Students will gain a working knowledge of the fundamentals of kitchen operations, basic knife skills; an overview of stock, sauce and soup preparation; and coverage of the primary dry heat, moist heat and combination heat cooking methods. Students will also taste and evaluate products they create in class to enhance their understanding of the course material.

CUL 102 Food Safety and Sanitation (2 Credits)

Learn causes and prevention of foodborne illnesses, how to handle foodborne illness outbreaks and emergencies, good personal hygiene, time and temperature control, preventing cross-contamination, safe food preparation, receiving and storing food, methods of thawing, cooking, cooling, and reheating food and Hazard Analysis and Critical Control Points (HACCP). Take the National Restaurant Association Educational Foundation (NRAEF) ServSafe™ examination and earn a certificate with a passing grade.

CUL 105 International Exchange Preparation (2 Credits)**Prerequisites:** Instructor approval.

Explore the social and cultural aspects of various countries including their cuisine, language, music, art, celebrations, and rituals. This serves primarily as a preparatory course for the Cascade Culinary Institute's Exchange Program. P/NP grading.

CUL 110 Culinary Foundations I (4 Credits)**Prerequisites with concurrency:** CUL 090; CUL 102; and either WR 121 or BA 214.

Learn the history of the culinary industry, nomenclature, equipment, kitchen operations, basic knife skills, cooking methods, and ratios and techniques in contrast to recipe usage. Learn about and produce stocks and soups.

CUL 140 Culinary Foundations II (4 Credits)**Prerequisites:** CUL 110.

Learn about and prepare classical mother sauces, contemporary sauces, small sauces, vegetables, grains, starches, pasta, and eggs. Use food science principles related to primary cooking techniques, show station organization, workflow and overall time management. Practice proper use of commercial equipment and reinforcement of understanding of ingredients, measurement, formulas, and techniques.

CUL 170 Culinary Foundations III (4 Credits)**Prerequisites:** CUL 140.

Identify, butcher, fabricate, and cook a variety of meat, poultry and seafood products emphasizing proper technique. Practice small sauce production and the preparation of vegetables, grains, legumes and pastas as accompaniments. Apply modern composition and presentation techniques utilized in the restaurant industry.

CUL 180 Modern Garde Manger (4 Credits)

Learn about and prepare cold foods such as canapés, hors d'oeuvres, salads, sandwiches, cold soups, cheeses, forcemeat, condiments, crackers, and pickles. Learn about the role of garnishes, food preservation, and contemporary buffet presentation. Prerequisite with concurrency: CUL 140.

CUL 188 Special Studies Culinary Arts (1-6 Credits)

Explores topics of current interest in the discipline.

CUL 199 Selected Topics: Culinary Arts (1-6 Credits)

Provides opportunity for students with exceptional background or need to continue beyond normal Culinary Arts program content. Content and credit(s) earned are established by mutual agreement between instructor and student and detailed in written agreement at the start of the term.

CUL 200 Comprehensive Kitchen Operations for the Restaurant Industry (5 Credits)**Prerequisites:** CUL 140 or BAK 140.**Recommended preparation:** Culinary Arts Majors: BAK 101, Baking & Pastry Majors: CUL 101.

Learn to prepare modern and seasonal dishes in a restaurant setting putting previously learned skills into practice in the college's dining room. Emphasis on cooking techniques and ingredients used in contemporary and classical cuisines and cover planning and ordering for production, station organization, preparation and plating, timing, palate development and other production realities of a restaurant.

CUL 220 International Cuisine and Global Flavor Profiling (4 Credits)**Prerequisites:** CUL 140.

Trace common global ingredients used in many regional dishes. Explore other cultures through the understanding of global culinary heritages. Examine food in the context of culture, geography, history and the influences cuisines have had on each other. Learn how the attitudes and tastes of more global and knowledgeable customers creates the expectation of diversity in a professional culinarian's repertoire.

CUL 225 Applied Harvesting and Food Preservation Principles (4 Credits)

Learn about the importance of sourcing seasonal foods relating to pricing, flavor, and quality. Conduct harvesting techniques of plant based foods, and participate in slaughtering process of animal based foods. Process the harvested items and apply a diversity of preservation techniques including canning, smoking, pickling, freezing, freeze-drying, dehydrating, etc. Execute a final harvest event for regional farmers and ranchers to celebrate the partnership with them and the Cascade Culinary Institute.

CUL 230 Culinary Nutrition and Applied Techniques of Healthy Cooking (4 Credits)**Prerequisites:** CUL 140 or BAK 140.

Prepare flavorful food and study its impact upon the body. Learn about current dietary guidelines, along with the function of nutrients within the body. Execute modern, healthy cooking techniques in the lab portion of this course exposing students to meeting nutritional needs and requests of health conscious diners. Learn about healthful menu and recipe design and reengineer classical recipes, producing healthful and flavorful alternatives.

CUL 235S Farm-to-Table and Sustainable Cuisine Practices (4 Credits)**Prerequisites:** CUL 200.

Serves as an overview of sustainable harvesting techniques for plants and animals and the application of preservation techniques. Students will learn about the importance of sourcing seasonal foods as it relates to pricing, flavor and quality. Students will conduct harvesting techniques of plant based foods, and participate in the slaughtering process of animal based foods. Students will process the harvested items and conduct a diversity of preservation techniques to include canning, smoking, pickling, freezing, freeze-drying, dehydrating, etc. Students will execute a final harvest event for regional farmers and ranchers to celebrate the partnership with Cascade Culinary Institute and local sustainable agricultural partners.

CUL 240 Butchery (4 Credits)**Prerequisites:** CUL 170.

Learn about the muscle and bone structure of beef, veal, pork, lamb, game, poultry and specialty meats; fabricate sub-primal and foodservice cuts; and apply tying and trussing methods. Introduction to meat inspection processes, quality and yield grading, costing and yield testing, purchasing specifications, and basic information concerning the farm-to-table trail. Discuss preferred cooking methods for all meats, proper knife selection, and butchery equipment. Sanitation and safety standards are emphasized throughout.

CUL 242 Charcuterie (4 Credits)**Prerequisites:** CUL 240.

Learn professional skills in variations of hors d'oeuvres and savories, seasonings, condiments, stuffed meats and curing, pickling and smoking of meat, fish and poultry. Develop proficiency in sausage-making, pâtés, terrines, galantines, and stuffed meats. Prepare a variety of charcuterie products from fresh sausage to dry cured salamis.

CUL 245S Modernist Cuisine and the Evolution of Cooking (4 Credits)**Prerequisites:** CUL 170.

Learn about and apply techniques of spherification, thermal immersion, liquid nitrogen for flash freezing, hydrocolloids for thickening and gelling in the kitchen to a variety of foods. Review food pairing methods with the goal of inspiring new food combinations which are theoretically sound on a basis of their flavor.

CUL 255S Event Planning and Execution with Modern Banquet Cookery (4 Credits)**Prerequisites:** CUL 170.

This course examines the varied ways in which banquets and catering events may be executed. Terms relating to equipment, food preparation, service and presentation will be discussed. Students will prepare a menu each day, following the principles and techniques associated with preparing and serving food to large groups, as well as concentrating on principles of modern batch cookery. An emphasis will be placed on maintaining quality and foundational cooking methodology. Students will also learn how to organize, plan and operate a banquet kitchen. Cooking applications are at an advanced level in preparation for later work in the public restaurants.

CUL 265S Advanced Skill Development and Culinary Competition Mastery (4 Credits)**Prerequisites:** CUL 170.

Competitions play a vital role in culinary arts as they continually raise the standards of culinary excellence. There is no better way for culinarians to hone their craft than by putting their skills and knowledge to the test in a competitive format. Continually raises the standards of culinary excellence and professionalism. Nurtures the creativity of individual chefs. Provides a showcase for individual skills, techniques and styles.

CUL 270 Culinary Arts Capstone (5 Credits)**Prerequisites:** CUL 170 or BAK 170, and CUL 200.

A culmination of all the skills learned in the Culinary Arts program. Students operate a fine dining, a la carte restaurant and demonstrate back of the house skills (food safety and sanitation, knife cuts, dry heat cooking methods, moist heat cooking methods, combination cooking methods, vegetable cookery, starch cookery, sauce cookery, and final plate presentation) as well as guest interaction and dining room service.

CUL 276A Regional World Cuisines: Africa (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-Africa. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 276C Regional World Cuisines: Caribbean (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-Caribbean. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 276F Regional World Cuisines: France (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-France. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 276G Regional World Cuisines: Germany (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-Germany. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 276I Regional World Cuisines: Italy (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-Italy. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 276J Regional World Cuisines: Asia (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-Asia. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 276S Regional World Cuisines: Spain (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-Spain. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 280 Culinary Arts Industry Internship (1-6 Credits)**Prerequisites:** CUL 140.

Serves as a supervised work experience within the culinary arts industry designed to expand career knowledge and experiential confidence while increasing knowledge, speed, timing, organization and ability to execute industry skills on a repetitive basis. Students will receive a diverse work experience that is designed on a systematic rotation of different stations in the kitchen, dining room and general operations positions. Students can complete 100% of the experience in competencies that are relevant to the program curriculum, as it is outlined in the course syllabus and internship agreement. The internship is concluded by a final supervisor evaluation.

CUL 298 Independent Study: Culinary (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

HM 101 Introduction to Hospitality (4 Credits)

Provides an overview of the hospitality and tourism industry, its growth and development, industry segments and their distinguishing characteristics, trends and current concerns. Introduction to career opportunities and the employability skills needed to succeed in specific hospitality fields.

HM 130 Hospitality Industry Supervision and Principles of Leadership (4 Credits)

Learn the management/supervision/leadership responsibilities in the typical lodging and/or food service establishment. Stresses leadership, communication, morale, motivation, training, team building, and employee development and retention unique to lodging and food service operations.

HM 150 Procurement, Ingredient Identification and Food Cost Control (3 Credits)**Prerequisites:** CUL 090.

Learn the principles of cost control, product yield tests, vendor relations and procurement, and an introduction to ingredient identification and tasting. Exposure to profit and loss statements, and how to track cost as it relates to the flow of food. Place, receive and store food orders, conduct quality assurance on all food items, and execute an electronic end-of-month inventory. Issue course ingredients utilizing supply requisitions. It is also an opportunity for industry vendors to speak with students, conduct ingredient tastings, and provide updates regarding industry practices.

HM 160 Wine and Specialty Beverage Management and Service (3 Credits)

Learn the theoretical and practical information about the organization of a beverage program within the operation of a hospitality business. Included are the legal and moral responsibilities that come with the sale of alcoholic beverages, purchasing and marketing, distillation, brewing, mixology and non-alcoholic beverage service. Emphasis placed on wine and beverage knowledge, pair principles, cost control measures, inventory, and sanitation laws and practices.

HM 188 Special Studies: Hospitality Management (1-4 Credits)

Explores topics of current interest in the discipline.

HM 190 Dining Room Operations (5 Credits)

Exposure to the importance of service, sanitation and appearance in a real-life dining room setting. Learn and practice styles of service including à la carte, reception, banquet, and buffet. Additionally, learn the primary guidelines for service, guest relations, etiquette phone use, and Point Of Sale systems. Learn about different dining room staff positions, proper use of tabletop flatware, china, and glassware, and table set-up. Students will receive the following industry certifications in this course: OLCC Alcohol Service Permit, FDRP Dining Room Associate and Wine Steward Associate Certificates and Allergy Safe certificate.

HM 199 Selected Topics: Hospitality Management (1-4 Credits)

This course is in development.

HM 210 Menu Composition and Analysis (3 Credits)

Prerequisites: CUL 090.

Analyze menu design and effectiveness for a diversity of local restaurant establishments. Learn about standardized recipes and cost cards, understanding income and profit and loss statements, nutritional aspects of menu planning and design, and menu configuration. Analyze and critique industry menus and create menus from the perspective of concept, clarity, cost, price, and efficiency. Conduct an analysis of the sales mix for the Elevation Restaurant as part of a group assignment, evaluate the sales distribution of food and beverage items and give presentations to the Elevation staff as to how to make perspective design and offering improvements.

HM 230 Lodging Management (4 Credits)

Explore current operational practices of lodging operations throughout the world. Study management functions related to front office, housekeeping, marketing, reservations, maintaining customer accounts, laws affecting lodging operations and typical service problems. Go on field trips to learn about different kinds of lodging operations throughout the state.

HM 240 Hospitality Law (4 Credits)

Recommended preparation: WR 121 and HM 101.

Learn about the hotel/guest relationship, innkeeper's lien, crimes against innkeepers, overview of employment rights, policy formulation, duty to protect guests and their belongings, ejection of guests and non-guests, and an introduction to general business law dealing with torts and contracts. Issues concerning travel law will be included.

HM 275 Mixology and Beverage Operations (4 Credits)

Prerequisites: Instructor approval and Oregon Liquor Control Commission (OLCC) Server Permit.

Create a wide variety of classic and everyday mixed drinks in a standard bar setting. Learn about bar glassware and equipment identification, pouring techniques, common cocktail mixing methods, history of distilled spirits, origin and characteristics of various distilled spirit brands, distillation process, bartenders job description and responsibilities, cost control, beverage pricing and responsible alcohol service.

HM 280 Hospitality Management Industry Internship (1-6 Credits)

Prerequisites: instructor approval.

Serves as a supervised work experience within the restaurant management / hospitality industry designed to expand career knowledge and experiential confidence while increasing knowledge, speed, timing, organization and ability to execute industry skills on a repetitive basis. Students will receive a diverse work experience that is designed on a systematic rotation of different stations that related to management functions within a restaurant or hospitality industry venue. Students can complete 100% of the experience in competencies that are relevant to the program curriculum, as it is outlined in the course syllabus and internship agreement. The internship is concluded by a final supervisor evaluation. P/NP grading.

HM 290 Career Success and E-Folio Presentation (2 Credits)

Finalize your Cascade Culinary Institute eFolio including updated, effective résumés, cover letters, reference letters, and photos of prepared dishes, class projects, and certificates earned during study at CCI. Learn about career opportunities, networking, volunteerism, and interview techniques. P/NP grading. **Prerequisite:** CUL 170 or BAK 170 or instructor approval.

HM 298 Independent Study: Hospitality Management (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Baking and Pastry Arts - Associate of Applied Science (AAS)

Description

The Baking and Pastry Arts AAS is designed to expose students to the step-by-step process, from foundation to advanced skill mastery, of classical and contemporary baking and pastry techniques and to serve as a competency-based learning experience that prepares students for a successful career within the hospitality industry.

Learning Outcomes

1. Synthesize the process of classical and contemporary baking & pastry techniques and demonstrate proficiently.
2. Demonstrate a comprehension of flavor profiling, ingredient selection, nutrition, and presentation principles.
3. Demonstrate proficiency in the use of baking & pastry industry-specific equipment.
4. Apply diligent food and beverage management, leadership, customer service, and interpersonal skills.
5. Identify and apply rigorous food safety and sanitation practices.
6. Demonstrate basic measuring, conversion, food costing, and yield management practices.
7. Demonstrate proficiency in the use of baking & pastry industry-specific communication.

Entrance Requirements

Academic Entrance Requirements

- Enrollment in or completion of WR 121 Academic Composition or BA 214 Business Communications.

- Minimum placement scores resulting in MTH 060 Beginning Algebra I placement (equivalent to CUL 090 Applied Math for Culinary Arts) or completion of MTH 020 Pre-Algebra.

CUL 265S Advanced Skill Development and Culinary Competition Mastery¹

Total Credits 95-96

¹ Course carries a \$185 per credit fee for lab and consumable materials.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material costs

- \$23 OLCC Liquor Control Card.
- Additional costs for books, knives and supplies approximately \$1,500.

Enrollment fees

- Specified courses carry a \$185 per credit course fee for lab and consumable materials (estimated at \$9600).

Course Requirements

Course	Title	Credits
Core Courses		
BAK 110	Baking and Pastry Foundations I ¹	4
BAK 140	Baking & Pastry Foundations II ¹	4
BAK 170	Baking Pastry Foundations III ¹	4
BAK 180	Custards and Frozen Desserts ¹	4
BAK 210	Modern Sugar & Chocolate Deco ¹	4
BAK 220	Wedding Celebration Cakes ¹	4
BAK 240	The Craft of Artisan Breads ¹	4
BAK 250	Petit Fours Candies Mignardise ¹	4
BAK 280	Baking Industry Internship	6
CUL 090	Applied Math for Culinary Arts	4
CUL 101	Introduction to Culinary Arts ¹	4
CUL 102	Food Safety and Sanitation	2
CUL 200	Kitchen Operations/Elevation	5
CUL 230	Nutrition & Healthy Cooking ¹	4
CUL 270	Culinary Arts Capstone	5
HM 130	Supervision in Hospitality	4
HM 150	Procurement & Cost Control	3
HM 190	Dining Room Operations	5
HM 290	Career Success and E-Folio	2
WR 121	Academic Composition	3-4
or BA 214	Business Communications	
Baking & Pastry Specialization List		
Choose 16 credits from the following:		16
BAK 215	Laminated Dough & Viennoiserie ¹	
BAK 225	Entremets ¹	
BAK 230	Plated Desserts & Presentation ¹	
BAK 235S	Classical French Pastries ¹	
BAK 245S	Adv Sugar Decor & Chocolate ¹	
BAK 255S	Artisan Breads with Heirloom Whole Grains ¹	
BAK 260	Advanced Specialty Cakes ¹	
BA 101	Intro to Business	
BA 250	Entrepreneurship	
CUL 105	International Exchange Prep	
CUL 225	Applied Harvest & Preservation ¹	

Advising Notes

The Baking and Pastry AAS is designed for students planning to enter their chosen field after completion. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Year

Fall		Credits
BAK 110	Baking and Pastry Foundations I	4
CUL 090	Applied Math for Culinary Arts	4
CUL 102	Food Safety and Sanitation	2
WR 121 or BA 214	Academic Composition Business Communications	3-4
Credits		13-14

Winter

BAK 140	Baking & Pastry Foundations II	4
CUL 101	Introduction to Culinary Arts	4
HM 130	Supervision in Hospitality	4
BAK 180	Custards and Frozen Desserts	4
Credits		16

Spring

BAK 170	Baking Pastry Foundations III	4
HM 150	Procurement & Cost Control	3
HM 190	Dining Room Operations	5
Credits		12

Summer

BAK 280	Baking Industry Internship	6
Credits		6

Second Year

Fall

BAK 210	Modern Sugar & Chocolate Deco	4
CUL 230	Nutrition & Healthy Cooking	4
Choose one course from the Culinary Specialization List		4
BAK 220	Wedding Celebration Cakes	4
Credits		16

Winter

BAK 240	The Craft of Artisan Breads	4
CUL 200	Kitchen Operations/Elevation	5
Choose two course from the Culinary Specialization List		8
Credits		17

Spring

BAK 250	Petit Fours Candies Mignardise	4
CUL 270	Culinary Arts Capstone	5
Choose one course from the Culinary Specialization List		4
HM 290	Career Success and E-Folio	2
Credits		15
Total Credits		95-96

Baking and Pastry Arts - Two Year Certificate of Completion (CC2)

Description

The Baking and Pastry Two Year Certificate of Completion is designed to expose students to the step-by-step process, from foundation to advanced skill mastery, of classical and contemporary baking and pastry arts techniques and to serve as a competency-based learning experience that prepares students for a successful career within the hospitality industry.

Learning Outcomes

1. Describe and demonstrate the process of classical and contemporary baking and pastry techniques.
2. Demonstrate a comprehension of flavor profiling, ingredient selection, nutrition, and presentation principles.
3. Demonstrate the use of baking and pastry industry-specific equipment.
4. Apply food and beverage management, leadership, customer service, and interpersonal skills.
5. Identify and apply food safety and sanitation practices.
6. Demonstrate basic measuring, conversion, food costing, and yield management practices.
7. Demonstrate the use of baking and pastry industry-specific communication.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Enrollment in or completion of WR 121 Academic Composition or BA 214 Business Communications
 - Minimum placement scores resulting in MTH 060 Beginning Algebra I placement (equivalent to CUL 090 Applied Math for Culinary Arts) or completion of MTH 020 Pre-Algebra

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- \$23 OLCC Liquor Control Card
- Additional costs for books, knives and supplies approximately \$1,500

Enrollment Fees

- Specified courses carry a \$185 per credit course fee for lab and consumable materials (estimated at \$5180)

Course Requirements

Course	Title	Credits
Core Courses		
BAK 110	Baking and Pastry Foundations I ¹	4
BAK 140	Baking & Pastry Foundations II ¹	4
BAK 170	Baking Pastry Foundations III ¹	4
BAK 180	Custards and Frozen Desserts ¹	4
BAK 210	Modern Sugar & Chocolate Deco ¹	4
CUL 090	Applied Math for Culinary Arts	4
CUL 101	Introduction to Culinary Arts ¹	4
CUL 102	Food Safety and Sanitation	2
CUL 200	Kitchen Operations/Elevation	5
CUL 230	Nutrition & Healthy Cooking ¹	4
HM 130	Supervision in Hospitality	4
HM 150	Procurement & Cost Control	3
HM 190	Dining Room Operations	5
WR 121	Academic Composition	3-4
or BA 214	Business Communications	
Total Credits		54-55

¹ Course carries a \$185 per credit fee for lab and consumable materials.

Advising Notes

This certificate is designed for students planning to enter their chosen field after completion. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Term		Credits
BAK 110	Baking and Pastry Foundations I	4
CUL 090	Applied Math for Culinary Arts	4
CUL 102	Food Safety and Sanitation	2
WR 121 or BA 214	Academic Composition Business Communications	3-4
Credits		13-14
Second Term		
BAK 140	Baking & Pastry Foundations II	4
CUL 101	Introduction to Culinary Arts	4
HM 130	Supervision in Hospitality	4
HM 150	Procurement & Cost Control	3
Credits		15
Third Term		
BAK 170	Baking Pastry Foundations III	4
BAK 180	Custards and Frozen Desserts	4
HM 190	Dining Room Operations	5
Credits		13
Fourth Term		
BAK 210	Modern Sugar & Chocolate Deco	4
CUL 200	Kitchen Operations/Elevation	5
CUL 230	Nutrition & Healthy Cooking	4
Credits		13
Total Credits		54-55

Culinary Arts - Associate of Applied Science (AAS)

Description

The Culinary Arts Associate of Applied Science degree is designed to expose students to the step-by-step process, from foundation to advanced skill mastery, of classical and contemporary culinary techniques and to serve as a competency-based learning experience that prepares students for a successful career within the hospitality industry.

Learning Outcomes

1. Synthesize the process of classical and contemporary cooking techniques and demonstrate proficiently
2. Demonstrate a comprehension of flavor profiling, ingredient selection, nutrition, and presentation principles
3. Demonstrate proficiency in the use of culinary industry-specific equipment
4. Apply diligent food and beverage management, leadership, customer service, and interpersonal skills
5. Identify and apply rigorous food safety and sanitation practices
6. Demonstrate basic measuring, conversion, food costing, and yield management practices
7. Demonstrate proficiency in the use of culinary industry-specific communication

Entrance Requirements

Academic Entrance Requirements

- Enrollment in or completion of WR 121 Academic Composition or BA 214 Business Communications.
- Minimum placement scores resulting in MTH 060 Beginning Algebra I placement (equivalent to CUL 090 Applied Math for Culinary Arts) or completion of MTH 020 Pre-Algebra.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- \$23 OLCC Liquor Control Card.
- Additional costs for books, knives and supplies approximately \$1,500.

Enrollment Fees

- Specified courses carry a \$185 per credit course fee for lab and consumable materials (estimated at \$9000).

Course Requirements

Course	Title	Credits
Core Requirements		
BAK 101	Introduction to Baking & Pastry ¹	4
CUL 090	Applied Math for Culinary Arts	4
CUL 102	Food Safety and Sanitation	2
CUL 110	Culinary Foundations I ¹	4
CUL 140	Culinary Foundations II ¹	4
CUL 170	Culinary Foundations III ¹	4
CUL 180	Modern Garde Manger ¹	4
CUL 200	Kitchen Operations/Elevation	5
CUL 220	International Cuisine ¹	4
CUL 230	Nutrition & Healthy Cooking ¹	4
CUL 240	Butchery ¹	4
CUL 270	Culinary Arts Capstone	5
CUL 280	Culinary Industry Internship	6
HM 130	Supervision in Hospitality	4
HM 150	Procurement & Cost Control	3
HM 160	Wine & Beverage Management ¹	3
HM 190	Dining Room Operations	5
HM 210	Menu Composition and Analysis	3
HM 290	Career Success and E-Folio	2
WR 121 or BA 214	Academic Composition Business Communications	3-4

Culinary Specialization List

Choose 16 credits from the following:		16
BA 101	Intro to Business	
BA 206	Management Fundamentals I	
BA 223	Marketing Principles I	
BA 250	Entrepreneurship	
BAK 210	Modern Sugar & Chocolate Deco ¹	
BAK 220	Wedding Celebration Cakes ¹	
BAK 235S	Classical French Pastries ¹	

BAK 240	The Craft of Artisan Breads ¹
BAK 245S	Adv Sugar Decor & Chocolate ¹
BAK 255S	Artisan Breads with Heirloom Whole Grains ¹
CUL 105	International Exchange Prep
CUL 199	Selected Topics: Culinary Arts
CUL 225	Applied Harvest & Preservation ¹
CUL 235S	Farm-to-Table and Sustainable Cuisine Practices ¹
CUL 242	Charcuterie ¹
CUL 245S	Modernist Cuisine ¹
CUL 255S	Event Planning and Execution with Modern Banquet Cookery ¹
CUL 265S	Advanced Skill Development and Culinary Competition Mastery ¹
CUL 276A	Regional Cuisines: Africa ¹
CUL 276C	Regional Cuisines: Caribbean ¹
CUL 276F	Regional Cuisines: France ¹
CUL 276G	Regional Cuisines: Germany ¹
CUL 276I	Regional Cuisines: Italy ¹
CUL 276J	Regional Cuisines: Asia ¹
CUL 276S	Regional Cuisines: Spain ¹
<hr/>	
Total Credits	93-94

¹ Course carries a \$185 per credit fee for lab and consumable materials.

Advising Notes

The Culinary Arts AAS is designed for students planning to enter their chosen field after completion. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Year

Fall		Credits
CUL 090	Applied Math for Culinary Arts	4
CUL 102	Food Safety and Sanitation	2
CUL 110	Culinary Foundations I	4
WR 121 or BA 214	Academic Composition Business Communications	3-4
Credits		13-14

Winter

BAK 101	Introduction to Baking & Pastry	4
CUL 140	Culinary Foundations II	4
HM 130	Supervision in Hospitality	4
HM 150	Procurement & Cost Control	3
Credits		15

Spring

CUL 170	Culinary Foundations III	4
CUL 180	Modern Garde Manger	4
HM 190	Dining Room Operations	5
HM 210	Menu Composition and Analysis	3
Credits		16

Summer

CUL 280	Culinary Industry Internship	6
Credits		6

Second Year

Fall

CUL 200	Kitchen Operations/Elevation	5
CUL 220	International Cuisine	4
CUL 230	Nutrition & Healthy Cooking	4
Choose one course from the Culinary Specialization List		4
Credits		17

Winter

CUL 240	Butchery	4
HM 160	Wine & Beverage Management	3
Choose two courses from the Culinary Specialization List		8
Credits		15

Spring

CUL 270	Culinary Arts Capstone	5
HM 290	Career Success and E-Folio	2
Choose one course from the Culinary Specialization List		4
Credits		11
Total Credits		93-94

Culinary Arts - Two Year Certificate of Completion (CC2)

Description

The Culinary Arts Two Year Certificate of Completion is designed to expose students to the step-by-step process, from foundation to advanced skill mastery, of classical and contemporary culinary techniques and to serve as a competency-based learning experience that prepares students for a successful career within the hospitality industry.

Learning Outcomes

1. Describe and demonstrate the process of classical and contemporary cooking techniques.
2. Demonstrate a comprehension of flavor profiling, ingredient selection, nutrition, and presentation principles.
3. Demonstrate the use of culinary industry-specific equipment.
4. Apply food and beverage management, leadership, customer service, and interpersonal skills.
5. Identify and apply food safety and sanitation practices.
6. Demonstrate basic measuring, conversion, food costing, and yield management practices.
7. Demonstrate the use of culinary industry-specific communication.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Completion of or enrollment in WR 121 Academic Composition or BA 214 Business Communications
 - Minimum placement scores resulting in MTH 060 Beginning Algebra I placement (equivalent to CUL 090 Applied Math for Culinary Arts) or completion of MTH 020 Pre-Algebra.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- \$23 OLCC Liquor Control Card
- Additional costs for books, knives and supplies approximately \$1,500

Enrollment Fees

- Specified courses carry a \$185 per credit course fee for lab and consumable materials (estimated at \$4440).

Course Requirements

Course	Title	Credits
Core Requirements		
BAK 101	Introduction to Baking & Pastry ¹	4
CUL 090	Applied Math for Culinary Arts	4
CUL 102	Food Safety and Sanitation	2
CUL 110	Culinary Foundations I ¹	4
CUL 140	Culinary Foundations II ¹	4
CUL 170	Culinary Foundations III ¹	4
CUL 180	Modern Garde Manger ¹	4
CUL 200	Kitchen Operations/Elevation	5
CUL 230	Nutrition & Healthy Cooking ¹	4
HM 130	Supervision in Hospitality	4
HM 150	Procurement & Cost Control	3
HM 190	Dining Room Operations	5
WR 121	Academic Composition	4
or BA 214	Business Communications	
Total Credits		51

¹ Course carries a \$185 per credit fee for lab and consumable materials.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Term		Credits
CUL 090	Applied Math for Culinary Arts	4
CUL 110	Culinary Foundations I	4
CUL 102	Food Safety and Sanitation	2
WR 121	Academic Composition	4
	Credits	14
Second Term		
CUL 140	Culinary Foundations II	4
HM 130	Supervision in Hospitality	4
HM 150	Procurement & Cost Control	3
	Credits	11
Third Term		
CUL 170	Culinary Foundations III	4
CUL 180	Modern Garde Manger	4
HM 190	Dining Room Operations	5
	Credits	13
Fourth Term		
BAK 101	Introduction to Baking & Pastry	4
CUL 200	Kitchen Operations/Elevation	5
CUL 230	Nutrition & Healthy Cooking	4
	Credits	13
	Total Credits	51

Hospitality Management - Associate of Applied Science (AAS)

Description

The Associate of Applied Science (AAS) coursework prepares students for immediate employment in hospitality occupations. A Hospitality Management (HM) AAS degree will provide students with the skills the hospitality industry requires – specifically, skills in management, hospitality technology, food and beverage operations and basic business fundamentals of marketing, customer service and financial analysis.

Learning Outcomes

1. Apply diligent management, leadership, and interpersonal skills.
2. Apply thorough customer service skills.
3. Demonstrate proficiency in the use of hospitality industry-specific technologies.
4. Identify and apply rigorous food safety and sanitation practices.
5. Understand and demonstrate business and financial management.
6. Demonstrate basic measuring, conversion, food costing, and yield management practices.
7. Demonstrate proficiency in the use of hospitality industry-specific communication.

Entrance Requirements

Academic Entrance Requirements

- Required
 - Enrollment in or completion of WR 121 Academic Composition or BA 214 Business Communications.

- Minimum placement scores resulting in MTH 060 Beginning Algebra I placement (equivalent to CUL 090 Applied Math for Culinary Arts) or completion of MTH 020 Pre-Algebra.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- \$23 OLCC Liquor Control Card.
- Additional cost for supplies approximately \$150.

Enrollment Fees

- Specified courses carry a \$185 per credit course fee for lab and consumable materials (estimated at \$1295).

Course Requirements

Course	Title	Credits
Level 1 Foundation Courses		
BA 217	Accounting Fundamentals	4
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
CUL 090	Applied Math for Culinary Arts	4
CUL 101	Introduction to Culinary Arts ¹	4
CUL 102	Food Safety and Sanitation	2
HM 101	Introduction to Hospitality	4
HM 130	Supervision in Hospitality	4
LIB 100	Intro to Finding Information	1
WR 121	Academic Composition	3-4
or BA 214	Business Communications	
Level 2 Core Courses		
BA 178	Customer Service	3
BA 223	Marketing Principles I ²	4
BA 250	Entrepreneurship	4
CIS 125E	Excel	4
HM 150	Procurement & Cost Control	3
HM 160	Wine & Beverage Management ¹	3
HM 190	Dining Room Operations	5
HM 210	Menu Composition and Analysis	3
HM 230	Lodging Management	4
HM 240	Hospitality Law	4
HM 280	Hospitality Indust. Internship	6
HM 290	Career Success and E-Folio	2
Level 3		
Choose 16 credits from the following:		16
BA 101	Intro to Business ²	
BA 224	Human Resources Management	
BA 249	Retailing	
BA 261	Consumer Behavior	
CIS 178	Internet in Depth	
HHP 268	Sustainable Food and Nutrition	
HM 275	Mixology and Beverage Ops	
Total Credits		91-96

¹ Course carries a \$185 per credit fee for lab and consumable materials.

² BA 101 Intro to Business is recommended preparation for BA 223 Marketing Principles I (Level 2 core course).

Advising Notes

Foundation courses ensure that students have basic skills and basic business concepts to address further skill development. Foundation courses include math, computer and writing skills. Core courses that will allow students to begin to understand concepts in their specialization courses taken in Level 3. Students should take as many Level 1 courses as possible before attempting Level 2 courses, Level 2 courses before Level 3 courses, etc. This will enable students to approach each class with the background necessary to succeed and enjoy the course content.

This degree is designed for students planning to enter their chosen career upon graduation. Only selected credits are considered transferable to public or private baccalaureate institutions. See advisor for additional information.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Academic dishonesty will not be tolerated and can result in the offending student being dropped from the program. Students wishing reinstatement must seek endorsement from the department chair after completing a progressive review.

Sample Plan

First Year		Credits
Fall		
CIS 120	Computer Concepts (Computer Competency Test)	0-4
CUL 090	Applied Math for Culinary Arts	4
HM 101	Introduction to Hospitality	4
LIB 100	Intro to Finding Information	1
WR 121	Academic Composition	3-4
or BA 214	Business Communications	
Credits		12-17
Winter		
CUL 101	Introduction to Culinary Arts	4
CUL 102	Food Safety and Sanitation	2
HM 130	Supervision in Hospitality	4
HM 160	Wine & Beverage Management	3
Credits		13
Spring		
BA 217	Accounting Fundamentals	4
CIS 125E	Excel	4
HM 150	Procurement & Cost Control	3
HM 210	Menu Composition and Analysis	3
Credits		14

Summer		
HM 280	Hospitality Indust. Internship	6
	Credits	6
Second Year		
Fall		
CIS 131	Software Applications	4
HM 190	Dining Room Operations	5
HM 230	Lodging Management	4
Choose 4 credits from the following:		4
BA 101	Intro to Business	
BA 224	Human Resources Management	
BA 249	Retailing	
BA 261	Consumer Behavior	
CIS 178	Internet in Depth	
HHP 268	Sustainable Food and Nutrition	
HM 275	Mixology and Beverage Ops	
	Credits	17
Winter		
BA 178	Customer Service	3
BA 223	Marketing Principles I	4
BA 250	Entrepreneurship	4
HM 240	Hospitality Law	4
	Credits	15
Spring		
HM 290	Career Success and E-Folio	2
Choose 12 credits from the following:		12
BA 101	Intro to Business	
BA 224	Human Resources Management	
BA 249	Retailing	
BA 261	Consumer Behavior	
CIS 178	Internet in Depth	
HHP 268	Sustainable Food and Nutrition	
HM 275	Mixology and Beverage Ops	
	Credits	14
	Total Credits	91-96

Hospitality Management - Two Year Certificate of Completion (CC2)

Description

The Hospitality Management Two Year Certificate is designed to give students a foundation for careers in hospitality management.

Learning Outcomes

1. Apply management, leadership, and interpersonal skills.
2. Apply customer service skills.
3. Demonstrate the use of hospitality industry-specific technologies.
4. Identify and apply food safety and sanitation practices.
5. Understand business and financial management.

6. Demonstrate basic measuring, conversion, food costing, and yield management practices.
7. Demonstrate the use of hospitality industry-specific communication.

Entrance Requirements

Academic Entrance Requirements

- Required
 - Enrollment in or completion of WR 121 Academic Composition or BA 214 Business Communications.
 - Minimum placement scores resulting in MTH 060 Beginning Algebra I placement (equivalent to CUL 090 Applied Math for Culinary Arts) or completion of MTH 020 Pre-Algebra.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- \$23 OLCC Liquor Control Card
- Additional cost for supplies approximately \$150

Enrollment Fees

- Specified courses carry a \$185 per credit course fee for lab and consumable materials (estimated at \$1295).

Course Requirements

Course	Title	Credits
Level 1 Foundation Courses		
BA 217	Accounting Fundamentals	4
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
CUL 090	Applied Math for Culinary Arts	4
CUL 101	Introduction to Culinary Arts ¹	4
CUL 102	Food Safety and Sanitation	2
HM 101	Introduction to Hospitality	4
HM 130	Supervision in Hospitality	4
LIB 100	Intro to Finding Information	1
WR 121	Academic Composition	3-4
or BA 214	Business Communications	
Level 2 Core Courses		
HM 150	Procurement & Cost Control	3
HM 160	Wine & Beverage Management ¹	3
HM 190	Dining Room Operations	5
HM 210	Menu Composition and Analysis	3
HM 230	Lodging Management	4
Total Credits		48-53

¹ Course carries a \$185 per credit fee for lab and consumable materials.

Advising Notes

Students should consult their advisor if they have transfer credits, are not able to attend full time or are not at college level in reading, writing and math.

This Two Year Certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Academic dishonesty will not be tolerated and can result in the offending student being dropped from the program. Students wishing reinstatement must seek endorsement from the department chair after completing a progressive review.

Sample Plan

First Term		Credits
CIS 120	Computer Concepts (Computer Competency Test)	0-4
CUL 090	Applied Math for Culinary Arts	4
HM 101	Introduction to Hospitality	4
LIB 100	Intro to Finding Information	1
WR 121 or BA 214	Academic Composition Business Communications	3-4
Credits		12-17
Second Term		
CUL 101	Introduction to Culinary Arts	4
CUL 102	Food Safety and Sanitation	2
HM 130	Supervision in Hospitality	4
HM 160	Wine & Beverage Management	3
Credits		13
Third Term		
BA 217	Accounting Fundamentals	4
HM 150	Procurement & Cost Control	3
HM 210	Menu Composition and Analysis	3
Credits		10
Fourth Term		
CIS 131	Software Applications	4
HM 190	Dining Room Operations	5
HM 230	Lodging Management	4
Credits		13
Total Credits		48-53

Chemistry

"Research is to see what everybody else has seen, and to think what nobody else has thought."

- Albert Szent-Gyorgi 1822-1895

Chemists study the composition and transformations of matter. Chemists work in a wide variety of settings and find employment with government, academic and private institutions. Chemistry is frequently described as the "central science" because of the connections between it and all other scientific disciplines. Earning a degree in chemistry can be the first step

toward careers with chemical, materials or pharmaceutical companies, biotech firms or forensic laboratories. It can also be a stepping stone on the route to a professional medical degree, for instance in medicine, physical therapy or pharmacy. Chemists are readily employable after completion of a bachelor's degree.

<https://www.cocc.edu/programs/chemistry/>

Contact:

Carol Higginbotham
541-383-7552
Science Center, Bend Campus

Department: Science
Department Chair: Kevin Grove (Fall 2019) & Carol Higginbotham (Winter & Spring 2020)

Programs

Transfer

- Chemistry - Associate of Arts Oregon Transfer (AAOT) (p. 92)

Courses

CH 104 Introduction to Chemistry I (5 Credits)

Prerequisites: MTH 95 or MTH 105 (or higher) or minimum placement into MTH 105.

Introduces basic principles of general chemistry, including atomic theory, chemical formulas and equations, bonding, stoichiometry, acid/base chemistry, and solutions. Supporting laboratory work included. Not designed for science majors.

CH 105 Introduction to Chemistry II (5 Credits)

Prerequisites: CH 104.

Builds on concepts from CH 104 introducing basic principles of general and organic chemistry, including bonding in carbon compounds, equilibrium, stereochemistry and functional group chemistry. Supporting laboratory work included. Not designed for science majors.

CH 106 Introduction to Chemistry III (5 Credits)

Prerequisites: CH 105.

Builds on concepts from CH 105 introducing basic principles of general and biochemistry, including consideration of protein, carbohydrate and lipid structure and metabolism, bioenergetics, enzymes and nucleic acid chemistry.

CH 188 Special Studies: Chemistry (1-4 Credits)

Explores topics of current interest in the discipline.

CH 221 General Chemistry I (5 Credits)

Prerequisites: MTH 111, 112, 113, or 251 or higher, or minimum placement into MTH 112.

Explores experimental and theoretical principles of chemistry including matter, measurement, atomic structure, periodicity, stoichiometry, solutions, molecular structure, bonding, oxidation/reduction and thermochemistry. The course is algebra-based and includes supporting laboratory work. This course is appropriate for science and engineering majors. High school chemistry is recommended.

CH 222 General Chemistry II (5 Credits)**Prerequisites:** CH 221.

This course builds on concepts from CH 221, by exploring experimental and theoretical principles of chemistry including gases, liquids, solids, solutions, kinetics, equilibrium, acids and bases. The course is algebra-based and includes supporting laboratory work. This course is appropriate for science and engineering majors.

CH 223 General Chemistry III (5 Credits)**Prerequisites:** CH 222.

This course builds on concepts from CH 222 by exploring experimental and theoretical principles of chemistry including solubility equilibria, acid-base equilibria, electrochemistry, nuclear chemistry, metals and organic compounds. The course is algebra-based and includes supporting laboratory work. This course is appropriate for science and engineering majors.

CH 288 Special Studies: Chemistry (1-4 Credits)

Explores topics of current interest in the discipline.

GS 105 Physical Science: Chemistry (4 Credits)**Recommended preparation:** one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

Provides an introduction to properties and structures of matter, chemical bonding, solutions, equilibrium, electrolytes, and acids and bases. Also includes quantitative discussions of the mole, stoichiometry and solution concentration.

Chemistry - Associate of Arts Oregon Transfer (AAOT)

Description

Earning an Associate of Arts Oregon Transfer (AAOT) degree with a chemistry emphasis is excellent preparation for bachelor's degrees in chemistry and related disciplines such as toxicology, atmospheric science, environmental science or materials science.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits	¹	3
Mathematics: (p. 399)		
Choose one course		4
Recommend: MTH 251		
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		

COMM 114 Argumentation and Critical Discourse (3 Credits)

Recommended preparation: or to be taken with COMM 111 or WR 121. Explores theories of argumentation. Develops skills of inquiry and advocacy through oral and written discourse, including critical analysis and rules of evidence. Practices planning, constructing and delivering persuasive arguments in a variety of extemporaneous formats.

COMM 115 Introduction to Intercultural Communication (4 Credits)

Explores the influence of cultural differences in communication styles and social values and their impact on work, family, legal and economic systems.

COMM 188 Special Studies: Communication (1-4 Credits)

Explores topics of current interest in the discipline.

COMM 199 Selected Topics: Communication (1-4 Credits)

Course will cover relevant topics in Communication as determined by instructor.

COMM 218 Interpersonal Communication (3 Credits)

Promotes enhanced personal and work relationships by presenting the theoretical concepts and practical skills used in effective one-to-one communication.

COMM 219 Small Group Communication (4 Credits)

Provides theory and practice in teamwork, leadership, and conflict management through participation in small group situations. The emphasis will be on task-oriented, decision-making groups.

COMM 220 Gender Communication (3 Credits)

Introduces the differences of communication styles across gender identities and provides tools to manage those differences. Reviews how communication is used to create, structure and maintain gender identities in a variety of contexts.

COMM 230 Introduction to the Rhetoric of Film (3 Credits)

Recommended preparation: or to be taken with WR 121. Introduces the visual and aural languages of moving pictures (film and video) and provides the tools necessary to analyze the social impact of both overt persuasion (in propaganda and commercials) and covert persuasion (in entertainment). Films that manage audience perceptions of race, class, gender, religion politics and the environment will be discussed.

COMM 234 Introduction to Visual Rhetoric (3 Credits)

Analyzes the power of visual communication and persuasion, including composition, color and content, and how such concepts produce both overt and covert influence on the ideas, attitudes and behaviors of others.

COMM 241 Media, Communication, Society (4 Credits)

Analyzes the social and cultural impact of media, including broadcast, print, film and digital communication. Examines careers in selected areas of media.

COMM 242 Introduction to Audio Broadcasting and Podcasting (4 Credits)

Covers audio production and delivery techniques for broadcast or podcast through the creation of original PSAs and news-stories.

COMM 250 Listening (1 Credit)

Introduces practical skills in listening to increase understanding and to help others.

COMM 251 Emotional Intelligence (1 Credit)

Explores the biological roots of emotion and introduces the skills needed for the appropriate management and sharing of their feelings. This one-credit course is currently available on request.

COMM 252 Team Skills (1 Credit)

Provides an overview of the systems nature of small groups with a focus on decision-making, leadership and the communication climate of team settings.

COMM 253 Conflict Management (1 Credit)

Explores the concepts of conflict and various techniques used for successful conflict management.

COMM 255 Free Expression and Public Assembly (3 Credits)

Provides a comprehensive overview of civic rights and responsibilities under Federal and State laws pertaining to free expression and public demonstrations.

COMM 270 Communicating Love (3 Credits)

Recommended preparation: or to be taken with: WR 121.

Provides an overview of the bio-psychological roots of romantic/erotic love, a critique of media images of love and offers practical training in communication skills that maintain and enhance long-term love relationships.

COMM 280 Co-op Work Experience Communication (1-4 Credits)

Prerequisites: instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

COMM 298 Independent Study: Communication (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Provides topics of study in communication with individual research or field study. P/NP grading.

COMM 299 Selected Topics: Communication (1-4 Credits)

Prerequisites: Instructor approval.

Explores an area of communication not included in the regular curriculum. Possible topics include gender communication, media issues and relational communication.

J 188 Special Studies: Journalism (1-4 Credits)

Explores topics of current interest in the discipline.

J 199 Selected Topics: Journalism (1-4 Credits)

This course is in development.

J 215 Publications Lab (1 Credit)

Practical application of communications instruction through work on the student newspaper. Students are involved in all areas of production including reporting, photojournalism, advertising, production and distribution. P/NP grading. Recommended preparation or recommended to be taken with: J 216.

J 216 News Reporting and Writing I (3 Credits)

Recommended preparation: WR 121.

Introduces the basic process of journalistic reporting and writing used in all forms of news media. Emphasis is placed on organizing facts, observations, research, and background, in an effective narrative built on ethical, responsible journalistic practices. Students will develop a news judgment and distinguish among news, analysis and opinion.

J 217 News Reporting and Writing II (3 Credits)

Recommended preparation: J 216.

A continuation of J 216 with emphasis placed on building on basic skills to report and write more complex stories, develop investigative stories, write editorials, and achieve a broader grasp of communication law.

J 280 Journalism Practicum (1-3 Credits)

Community work experience in journalism (may include internships in local media). P/NP grading.

J 298 Independent Study: Journalism (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

J 299 Selected Topics: Journalism (1-4 Credits)

This course is in development.

TA 141 Acting I (3 Credits)

Acquaints students with fundamental principles of acting. In-class performance of memorized material required. Grading based primarily on in-class participation. Attendance is mandatory.

TA 142 Acting II (3 Credits)

Recommended preparation: TA 141.

Emphasizes in-depth character study and textual analysis through preparation of scenes from modern American plays. Attendance is mandatory. Repeatable for credit.

TA 143 Acting III (3 Credits)

Recommended preparation: TA 141 and TA 142.

Further in-depth character study and scene work. Attendance is mandatory. Repeatable for credit.

TA 153 Rehearsal/Performance (1-3 Credits)

Prerequisites: instructor approval through audition or interview.

Practical application of classroom theory through participation in Magic Circle Theatre and Magic Circle Dance Theatre productions. Credit can be earned in three areas: dance, technical theater and acting.

TA 188 Special Studies: Theater (1-4 Credits)

Explores topics of current interest in the discipline.

TA 200 Introduction to Theater (3 Credits)

Introduces student to the world of theater. Combines overview of historical facts and theory with contemporary practice. Explores career options in theatrical production.

TA 207 Readings In Theater (3 Credits)

Offers a study of selected plays, loosely grouped by country of origin, theme, era or playwrights. Emphasis placed on texts in performance rather than on literary analysis. Repeatable for credit.

TA 280 Co-op Work Experience Theater Arts (1-4 Credits)

Prerequisites: instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

TA 298 Independent Study: Theater Arts (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Communication/Journalism - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer (AAOT) with a focus in communication/journalism includes courses that are commonly required for these majors and meets lower division general education requirements at all Oregon public universities. A degree in communication/journalism can lead to a career in teaching, the

hospitality industry, broadcast and cyber media, human resources, business management, public relations, politics, law or the arts.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;

2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		2 9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		3 12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Electives		
Choose enough electives to reach the minimum of 90 credits for the AAOT		4 39
Total Credits		90-106

- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² Speech communication majors should consider courses with ART, HUM, ENG, PHL, SP or TA prefixes.
- ³ Speech communication majors interested in quantitative communication studies should consider courses with a PSY or SOC prefix. Speech communication majors interested in rhetoric and public address should consider courses with an HST or PS prefix.
- ⁴ Related courses to consider: Any course with a COMM prefix

Advising Notes

Oregon public universities offer a variety of programs for speech communication majors who seek a bachelor's or more advanced degree. Some Oregon two-year and four-year colleges have required speech courses that are 4 credits, so students transferring to those colleges may find it helpful to take one of the 1 credit courses, such as COMM 250 Listening, COMM 252 Team Skills, COMM 253 Conflict Management or

COMM 255 Free Expression and Public Assembly to supplement one of the 3 credit speech courses.

Oregon State University – Cascades offers a speech communication minor; contact its Admissions office for more information. OSU's (Corvallis) department of Speech Communication offers undergraduate programs leading to BA or BS degrees, with concentrations in communication or theatre arts. Additionally, students at OSU can complete a minor either in communication or theatre arts, as well as one in the multimedia minors. At the graduate level they participate in the Master of Arts in Interdisciplinary Studies program.

Oregon Tech's Communications Department offers a BS in Communication Studies, with an optional certificate in Dispute Resolution. They also offer minors in Human Communication or Technical Communication.

Southern Oregon University's Department of Communication provides students the opportunity to develop verbal and nonverbal communication knowledge and skills through exploration of human communication, mass media studies and journalism. In addition to these three degree programs, the department offers four minor options to support a variety of goals: human communication, journalism, media studies and public relations.

The University of Oregon's School of Journalism and Communication offers majors in six areas: advertising, electronic media, communication studies, magazine journalism, news-editorial or public relations.

Western Oregon University's Speech Communication Department offers a 57-hour major and a 27-hour minor in speech communication. In the liberal arts tradition, their program emphasizes classic texts of rhetoric, modern communication theory and the latest developments in mass media and communication technology.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
Discipline Studies Arts & Letters		2 3-4
MTH 105	Math in Society (higher)	4
Oral Communication: (p. 399)		3-4
WR 121	Academic Composition	4
Credits		14-16
Second Term		Credits
Elective (recommend COMM 115)		4
Discipline Studies Social Science		3 3-4
Discipline Studies Arts & Letters		2 3-4
Health (3 credits with HHP or HHPA prefix)		1 3
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		17-19

Third Term

Discipline Studies Social Science ³	3-4
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Arts & Letters ²	3-4
Elective (recommend COMM 218)	3
Elective (recommend COMM 219)	4
Credits	16-20

Fourth Term

Discipline Studies Social Science ³	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective (recommend COMM 220)	3
Elective (recommend COMM 230)	3
Elective (recommend COMM 234)	3
Credits	15-18

Fifth Term

Discipline Studies Social Science ³	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective (recommend COMM 241)	4
Elective (recommend COMM 242)	4
Elective (recommend COMM 250)	1
Credits	15-18

Sixth Term

Discipline Studies Science/Math/Computer Science	3-5
Elective (recommend COMM 270)	3
Elective (recommend COMM 252)	1
Elective (recommend COMM 253)	1
Elective (recommend COMM 255)	3
Elective	2-4
Credits	13-17
Total Credits	90-108

Computer & Information Systems

Jobs related to computer technology, information systems, network, and security are on the rise. COCC's Computer and Information Systems programs are designed around a basic core curriculum that provides an introduction to computer concepts, software applications, operating systems, networking, database, computer servicing, internet, math, human relations, and writing. Specialized options are available in computer-aided drafting (CAD), networking, web development, and cybersecurity.

Graduates work in information technology (IT) for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing, and real estate. CIS careers typically include positions such as PC technician, desktop support, network administrator, web developer, draftsman, database administrator, system administrator, and related managerial and administrative roles.

CIS Department Website: [cocc.edu/programs/cis/](https://www.cocc.edu/programs/cis/) (<https://www.cocc.edu/programs/cis/default.aspx>)

CIS Program Course/Advising Schedules: [cocc.edu/programs/cis/cis-program-schedules.aspx](https://www.cocc.edu/programs/cis/cis-program-schedules.aspx) (<https://www.cocc.edu/programs/cis/cis-program-schedules.aspx>)

Contact:

Computer and Information Systems
Ken Swartwout (kswartwout@cocc.edu)
Department Chair
Pioneer Hall, Bend Campus
541-383-7415

Programs

Career and Technical Education

- Computer & Information Systems - Associate of Applied Science (AAS) (p. 101)
- Computer & Information Systems - One Year Certificate of Completion (CC1) (p. 103)
- Computer & Information Systems: Computer Aided Drafting (CAD) - Associate of Applied Science Option (AASO) (p. 104)
- Computer & Information Systems: Networking - Associate of Applied Science Option (AASO) (p. 106)
- Computer & Information Systems: Web Development - Associate of Applied Science Option (AASO) (p. 107)
- Computer Aided Drafting (CAD) - One Year Certificate of Completion (CC1) (p. 109)
- Cybersecurity - Career Pathway Certificate of Completion (CPC) (p. 112)

Transfer

- Computer Science - Associate of Science Oregon Transfer (ASOT) (p. 110)

Courses

CIS 010 Computer Keyboarding (1 Credit)

Develops touch keystroking skills for persons who will be using computer terminals for information processing. Emphasis on proper techniques, speed and accuracy development on alphabetic keyboard and numeric keypad. For non-office administration majors. P/NP grading.

CIS 070 Introduction to Computers: Windows (2 Credits)

Students will gain confidence in the use of personal computers and the Windows operating system. Topics include fundamental computer terminology, introductory use of a graphic user interface including mouse usage, windows, menus, icons and dialog boxes. Also included are file management and an introduction to word processing, Web browsing and email. P/NP grading.

CIS 099 Selected Topics: Computer and Information Systems (1-4 Credits)

This course is in development.

CIS 101 Information Technology Orientation (3 Credits)

Provides an understanding of the computer-related programs available to students and their pathways to further education and employment. Students will explore the training and productivity habits essential for work in IT-related fields. Students will research, plan, and document knowledge and skills used in both academic and professional IT work.

CIS 120 Computer Concepts (4 Credits)

Recommended preparation: CIS 010 and CIS 070 or equivalent computer skills.

Follows the Internet and Computing Core Certificate (IC3) national standard for digital literacy used at numerous colleges and universities across the country as well as industry. The course objectives are broken down into three modules: Computer Fundamentals, Key Applications, and Living Online. This class provides students with the knowledge and skills needed to use computers successfully at the college level.

CIS 122 Introduction to Programming (4 Credits)

Recommended preparation: (CIS 120 or CIS 124) and CIS 131.

Introduction to computer programming for those with little or no programming experience. Provides a strong, fundamental understanding of programming. Introduces students to elementary programming concepts of algorithm design, control structures, and user interface. Students will use the basic constructs of programming including constants, variables, expressions and control structures for sequential, iterative and decision processing to solve a variety of problems.

CIS 124 IT Fundamentals (4 Credits)

Prerequisites: CIS 120 or COCC Computer Competency.

Explores the skills and knowledge required to identify and explain the basics of computing, IT infrastructure, software development, and database use. Identify and explain computer components, install software, establish network connectivity, and prevent security risks.

CIS 125A Access (4 Credits)

Recommended preparation: CIS 131.

Introduction to the most popular desktop database software, Microsoft Access. This course will help students prepare for the latest Microsoft Office certification for Access (#77-885) which helps students validate the skills industries require. The course teaches users how to create and modify database tables, forms, queries and reports. The focus is on optimizing the databases for efficient data entry and generating comprehensive reports. Database design issues are discussed but not emphasized in this course.

CIS 125A1 AutoCAD 1 (4 Credits)

Recommended preparation: or to be taken with CIS 120 or CIS 124.

First course in a two-term sequence introducing AutoCAD software as a drafting tool. Includes file handling, basic command function, drafting techniques, presentation and plotting. Uses architectural and mechanical applications in lab exercises to demonstrate AutoCAD commands. Work will be completed with AutoCAD.

CIS 125A2 AutoCAD 2 (4 Credits)

Recommended preparation: CIS 125A1.

Second course in a two-term sequence covering intermediate AutoCAD commands including dimension styles, templates, CAD standards, attribute blocks, attribute extraction, external references, object linking/embedding, advanced drawing set-up and plotting, and the program parameter file. Work will be completed with AutoCAD.

CIS 125DV Digital Video Productions (4 Credits)

Recommended preparation: CIS 120 or CIS 124.

Uses Adobe Premiere video editing software and the tools and techniques of camera setup, lighting, audio optimization, and developing creative content for distribution on the Web.

CIS 125E Excel (4 Credits)

Recommended preparation: (CIS 120 or CIS 124) and CIS 131.

Covers intermediate and advanced features of Excel 2010 such as lists, pivot tables, working with multiple worksheets, templates, what-if-analysis, data tables, advanced formulas and functions, goal seek, solver, consolidating and importing data. Students will apply these Excel features to create and revise business worksheets.

CIS 125G Photoshop (4 Credits)

Recommended preparation: CIS 120 or CIS 124.

Covers the learning objectives as outlined by Adobe to become an Adobe Certified Associate (ACA) in visual communication using Adobe Photoshop. Outcomes include an overall understanding of Photoshop as well as setting project requirements, identifying design elements, manipulating images, and evaluating digital images.

CIS 125I Adobe Illustrator (4 Credits)

Recommended preparation: CIS 120 or CIS 124.

Consistent with objectives for the Adobe Certified Associate (ACA) in Graphic Design & Illustration and provides instruction in drawing, editing and layout techniques using Adobe Illustrator. Introduces the basic illustrator tools, composition rules, and complete vector-based projects such as simple illustrations, logotype, posters, and postcards.

CIS 125V Visio (4 Credits)

Recommended preparation: CIS 120 or CIS 124.

Introduces Microsoft Visio, a vector-based illustration tool. Learn fundamental skills while creating several types of basic diagrams including workflows, flowcharts, organizational charts, directional maps, network and floor plans.

CIS 125WA Web Animation (4 Credits)

Recommended preparation: CIS 124.

Explores the tools and technologies used to create vector and bitmap web animations, as well as interactivity in rich web content. Class topics include: keyframe and path-based motion graphics, vector vs. bitmap images, programming interactivity for rollover buttons, special effects, and sound. Covers the principles of two dimension animation and its uses on the web. Students make effective computer animations that can be marketed and delivered through the web.

CIS 131 Software Applications (4 Credits)

Prerequisites: CIS 120 or CIS 124 or COCC Computer Competency.

Recommended preparation: MTH 060 or MTH 085 or BA 104.

Explore features and techniques of both Microsoft Word and Microsoft Excel, focusing on skills that are common to IT and business users. Practice skills to prepare for the Microsoft Office Certification.

CIS 133JS Introduction to JavaScript (4 Credits)

Prerequisites: CIS 122.

Recommended preparation: CIS 195.

Expands on existing Web development skills by introducing JavaScript for client-side scripting. Students will learn JavaScript language/syntax, functions, objects, arrays and event handling as they are used for dynamic page content form validation, user interaction and navigation menus.

CIS 133P Introduction to PHP (4 Credits)

Prerequisites: CIS 122.

Recommended preparation: CIS 195 and CIS135DB.

Covers programming PHP with MySQL. Examines basic techniques of problem-solving, PHP language syntax, using PHP with MySQL, and designing dynamic web pages. Students learn basic program design and construction techniques.

CIS 135A1 AutoDESK Revit 1 (4 Credits)**Recommended preparation:** CIS 125A1.

Introduces fundamental aspects of architectural drafting with AutoDESK Revit software. Covers drafting of residential and light commercial buildings, sections and elevations, schedules, design layouts, details and working drawings.

CIS 135A2 AutoDESK Revit 2 (4 Credits)**Recommended preparation:** CIS 135A1.

Continues with AutoDESK Revit, covering construction drawing sets, commercial planning, residential remodeling, drawing details and drawing production. Term culminates with targeted project covering aspects studied in Revit.

CIS 135C1 AutoCAD Civil 3D (4 Credits)**Recommended preparation:** CIS 125A2.

Students will learn basic civil drafting theory along with developing drawings that include plats, related civil infrastructure, public utilities, contours and roads. Work will be completed with AutoCAD Civil 3D.

CIS 135DB Database Theory/SQL (4 Credits)**Recommended preparation:** (CIS 120 or CIS 124 or IC3 certification) and CIS 131.

Introduces database concepts. Includes the parts of a database and database management systems as well as database design theory, the concept of normalization, and data models. Introduces SQL and several of the most popular database management systems such as Access, Microsoft SQL Server and MySQL.

CIS 135S1 SolidWorks 1 (4 Credits)

Introduces engineering graphics used in design and manufacturing. Includes practical applications using solid modeling software to capture design intent through part development and to create assemblies using these parts. Adheres to industrial standards and formats.

CIS 135S2 SolidWorks 2 (4 Credits)**Recommended preparation:** CIS 135S1.

Continues the study of engineering graphics used in design and manufacturing. Includes practical applications using solid modeling software for detailed drawings, working drawing sets, sheet metal modeling, content reuse and functional design. Adheres to industrial standards and formats.

CIS 140 A+ Essentials I (4 Credits)**Corequisites:** CIS 145.**Recommended preparation:** CIS 120 or CIS 124.

A+ Essentials is the starting point for a career in IT. Covers the fundamentals of computer technology, installation and configuration of PCs, laptops and related hardware, and basic networking concepts. Prepare for the vendor neutral CompTIA A+ Essentials certification exam (220-901). CIS 140 and 145 utilize one textbook. To become A+ certified requires you to pass both certification exams.

CIS 145 A+ Essentials II (4 Credits)**Corequisites:** CIS 140.**Recommended preparation:** CIS 120 or CIS 124.

Prepares students with the skills and knowledge associated with the CompTIAs A+ 220-902 outcomes. Covers the skills required to install and configure PC operating systems, as well as configuring common features (e.g. network connectivity and email) for mobile operating systems Android and Apple iOS. CIS 140 and CIS 145 utilize one textbook. To become A+ certified requires you to pass both certification exams.

CIS 151C Cisco Internetworking (4 Credits)**Prerequisites:** CIS 179 or Comptia Network + certification.

2First of a three-course sequence to prepare the student to take the Cisco Certified Network Associate (CCNA) certification exam. The class uses the Cisco Academy online curriculum, CCNA 5.0, Introduction to Networks. Students explore the TCP/IP and Open Systems Interconnect (OSI) models, local area networks (LANs), Ethernet, cabling, topologies, configuring routers and switches, IPv4 and IPv6 addressing, subnetting, network standards and protocols. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term.

CIS 152C Cisco Router Configuration (4 Credits)**Prerequisites:** CIS 151C.

Second of a three-course sequence to prepare the student to take the Cisco Certified Network Associate (CCNA) certification exam. Cisco Routing and Switching implements the Cisco Academy online curriculum, CCNA 5.0, Routing and Switching Essentials, developed by Cisco Systems experts. Explores switch VLANs, trunks and Inter-VLAN routing, 1Pv4 and 1Pv6 static and dynamic routing, OSPFv2 and OSPFv3, DHCP and DNS for 1Pv4 and 1Pv6, NAT, and access-lists for 1Pv4 and 1Pv6. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term.

CIS 154C Cisco VLAN and WAN Technologies (4 Credits)**Prerequisites:** CIS 152C.

Third of a three-course sequence to prepare the student to take the Cisco Certified Network Associate (CCNA) certification exam. Cisco Scaling and Connecting Networks implements the Cisco Academy online curricula, CCNA 5.0, Scaling Networks and Connecting Networks. Students explore WAN technologies such as FrameRelay, PPP, and PPPoE, enhanced switching technologies, Etherchannel, multi-area OSPF and EIGRP, and network monitoring with Syslog, SNMP, and NetFlow. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term.

CIS 178 Internet in Depth (4 Credits)**Recommended preparation:** CIS 120 or CIS 124.

Introduces the concepts and technologies of the Internet. Explores a wide variety of Internet protocols and examines the history and infrastructure of the Internet. Learn about web applications, E-commerce, social media, and how to create and publish a Web site with common design tools. Topics include World Wide Web, secure use of the Internet, web browser and e-mail basics, searching the Web, E-learning resources, mass communication and real-time communication on the Internet.

CIS 179 Networking Essentials (4 Credits)**Prerequisites:** CIS 140 and CIS 145.

The course covers network technologies, installation and configuration, media and topologies, management, and security. The outcomes prepare students for job roles, which include network administrator, network technician, network installer, help desk technician and IT cable installer and the CompTIA N10-005 certification exam.

CIS 179CL Cloud Essentials (4 Credits)

Covers cloud services from a business perspective. Topics include the business value of cloud computing, cloud types, steps to a successful adoption of the cloud, impact and changes on IT service management, as well as risks and consequences.

CIS 179L Linux Essentials (4 Credits)

Prerequisites: CIS 120 or CIS 124 or COCC Computer Competency. Introduces Linux and helps students to 1) understand Linux and the open source industry while providing knowledge of the most popular open source applications; 2) understand the major components of the Linux operating system and have the technical proficiency to work on the Linux command line; and, 3) understand the basics of security and administration related topics such as user/group management, working on the command line, and permissions.

CIS 188 Special Studies I (1-4 Credits)

Explores topics of current interest in the discipline. P/NP grading.

CIS 195 Web Development I (4 Credits)

Recommended preparation: CIS 120 or CIS 124.

Explores the use of development tools, HTML and CSS to create valid websites for a variety of topics. Practice site planning, design, navigation, usability and publishing.

CIS 197 CMS Web Development: WordPress (4 Credits)

Recommended preparation: CIS 195 Web Development I.

Examines the basics of database-driven websites created using WordPress content management system (CMS), an extremely flexible and scalable technology used for making websites that need database functionality and regular content updates. Students learn through hands-on projects how to install, configure, and manage websites connected to a database. Students will learn how to create rich content for websites that offer both functionality and scalability using WordPress. Other content management systems will be explored.

CIS 198 Computer and Information Systems Projects (3 Credits)

Recommended preparation: (CIS 120 or CIS 124) and CIS 131.

Students are placed in local businesses working on small projects that a local business might need. Student is responsible for project, documentation and users' manuals, if necessary. Student is sponsored by a CIS instructor.

CIS 199 Selected Topics: Computer and Information Systems (1-7 Credits)

Prerequisites: instructor approval.

This course is in development.

CIS 233P Web Programming (4 Credits)

Prerequisites: CIS 133P.

Recommended preparation: CIS 133JS.

Introduces students to techniques used to create interactive, dynamic content. Students will design interactive user interfaces (using JavaScript and XML) which will interact with custom databases residing on a server (using PHP and MySQL). The course will explore the concepts of event-driven programming to create interactive interfaces using dynamic content. Students will write server-side scripts, design custom databases to both store and provide access to content. The course will conclude with a final project where students will design their own dynamic websites.

CIS 235 IT in Business (4 Credits)

Recommended preparation: (CIS 120 or CIS 124) and CIS 131.

Uses advanced software features in Word, Excel, PowerPoint and Access to solve and analyze business problems using integration of the applications in a business environment.

CIS 244 Information Systems Analysis (4 Credits)

Recommended preparation: (CIS 120 or CIS 124) and CIS 131.

Provides broad overview of the skills necessary for a systems analyst, consultant or project manager to work as an independent contractor or as part of an IT department. Topics include information systems concepts and tools, goal setting, project management, working in teams, documentation and communication.

CIS 276 Advanced SQL (4 Credits)

Recommended preparation: CIS 122 and CIS 135DB.

Focuses on design, development and implementation of SQL programming for all types of relational database applications including client/server and Internet databases. The course introduces students to the procedural language used to extend SQL in a programmatic manner. Students will learn to write complicated interactive and embedded SQL statements. Emphasis will be on using Microsoft SQL server.

CIS 279L Linux+ (4 Credits)

Recommended preparation: CIS 179 or CIS 179L.

Follows the CompTIA Linux+ exam outcomes and competencies and is therefore 'vendor neutral'. While previous experience with other PC operating systems is expected, this course will prepare you to work as a Linux administrator, network support, network technician, and more. Students will understand the fundamentals of Linux technology, learn all areas of the Linux infrastructure, and demonstrate how to use vendor products and software.

CIS 279OP Cybersecurity Operations (4 Credits)

Prepares students for the work and requirements of creating and managing a security operations center. Prepares students for the Cisco 210-250 exam - Understanding Cisco Cybersecurity Fundamentals and includes responsibilities in establishing teams to monitor and respond to information security incidents.

CIS 279SC Windows Server Configuration (4 Credits)

Prerequisites: CIS 179 or Comptia Network+ certification.

Prepares the student to plan and begin implementing the Microsoft server operating system in an enterprise environment. It includes the outcomes and hands-on experience required to build the knowledge and skills needed to pass the associated Microsoft IT professional certification.

CIS 279SE Security+ (4 Credits)

Prerequisites: CIS 179.

Recommended preparation: CIS 279L.

The course outcomes cover: network security; compliance and operational security; threats and vulnerabilities; application, data and host security; access control and identity management and cryptography. The material prepares students to pass the CompTIA Security+ certification. Security+ is an international, vendor-neutral certification.

CIS 279SM Windows Server Management (4 Credits)

Prerequisites: CIS 279SC.

Prepares the student to manage, maintain, and troubleshoot the Microsoft server operating system in an enterprise environment. It includes the outcomes and hands-on experience required to build the knowledge and skills needed to pass the associated Microsoft IT professional certification.

CIS 279SS Windows Server Services (4 Credits)

Prerequisites: CIS279SM.

Prepares the student to plan, implement, maintain and troubleshoot Microsoft server operating system advanced services in an enterprise environment. It includes the outcomes and hands-on experience required to build the knowledge and skills needed to pass the associated Microsoft IT professional certification.

CIS 279WC Windows Client (4 Credits)**Recommended preparation:** CIS 179.

This course prepares the student to plan, implement and manage the Microsoft Windows operating system in an enterprise environment. It includes the outcomes and hands-on experience required to build the knowledge and skills needed to pass the associated Microsoft IT professional certification.

CIS 280 Co-op Work Experience CIS (1-3 Credits)**Prerequisites:** instructor approval.

A learning strategy designed to enhance students' knowledge, personal development, professional development and professional preparation by integrating academic study with practical experience. Students complete on-the-job training in a computer environment (requires a minimum of 33 clock hours of work for each credit hour earned). P/NP grading.

CIS 284 Cisco CCNA Security (4 Credits)**Prerequisites:** CIS 154C or CCNA certification.

Introduces security related issues and provides essential skills network administrators need in order to provide security for a computer network. Covers protective security technologies including TCP packet analysis, network device hardening, advanced firewall techniques, cryptography, intrusion prevention systems, LAN security, virtual private networks, network attacks and mitigation techniques, and security policy planning.

CIS 284EH Ethical Hacking (4 Credits)**Prerequisites:** CIS 279L.**Recommended preparation:** CIS 151C, CIS 152C.

Preparation in network penetration testing methodologies in order to help businesses discover and mitigate security weaknesses, using the Linux and Windows operating systems. Learn security related topics such as: firewalls, intrusion detection systems, vulnerability scanners, packet sniffing, port scanning, cryptography, log analysis, web application attacks, exploitation tools, scripting languages, the Metasploit framework, VPNs, SSL, port redirection, security policies, compliance regulations, and professional code of conduct.

CIS 288 Special Studies II (1-4 Credits)

Explores topics of current interest in the discipline. P/NP grading.

CIS 295 Web Development II (4 Credits)**Recommended preparation:** CIS 195.

Expands on existing HTML/CSS skills and explores the process of making websites, particularly e-commerce sites for clients. Students will practice site planning, development, content management and client relations as they create, document and present a web site project and portfolio.

Topics include web site design, search engine optimization, web page usability, and responsive mobile web design.

CIS 297 CIS Professional Capstone (4 Credits)

This course addresses knowledge, skills and outcomes useful to IT professionals in a variety of disciplines. Students will explore and acquire job exploration skills, including interview skills, search skills, and resume-building skills to optimize job market opportunities. An integrated approach is used to combine project design components relative to job goals and capstone activities to assist in entering the job market with an array of job and technical analysis and design skills. The CIS capstone course is expected to be taken in a degree-seeking student's last term. Prerequisite with concurrency: CIS 244.

CIS 298 Independent Study: CIS (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

CIS 299 Selected Topics: CIS (1-7 Credits)

This course is in development.

CS 160 Computer Science Orientation (4 Credits)**Prerequisites with concurrency:** MTH 111 or higher.**Recommended preparation:** CIS 120 or CIS 124.

Provides a broad overview of the discipline of computer science.

Learn the foundations of computer science such as problem solving and algorithms, programming concepts, and computer hardware.

Research careers available in computer science, pathways to computer careers, and reflect on some of the influences computers have had and continue to have on society. Write programs in a variety of programming languages.

CS 161 Computer Science I (4 Credits)**Prerequisites:** MTH 112 or MTH 251.**Recommended preparation:** CS 160.

Examines the nature of computer programming; includes discussion of a computer model, methods of problem solving and programming structures; information representation; algorithm construction; object-oriented design using Java.

CS 162 Computer Science II (4 Credits)**Prerequisites:** CS 161.**Prerequisites with concurrency:** MTH231.

CS 162 emphasizes the development of data structures, algorithm analysis, recursion, and sorting. However we will also explore/review several basic programming constructs, Inheritance, Interfaces, Exceptions, and Files/Streams. A strict emphasis will be placed on software engineering methods; proper program development and attention to program planning and documentation.

CS 260 Data Structures (4 Credits)**Prerequisites:** CS 162 and MTH 231.

Covers general-purpose data structures and algorithms, software engineering of these structures, and the application of these engineering concepts to real world problems. Topics covered include managing complexity, complexity analysis, stacks, queues, lists, trees, heaps, hash tables, sets, maps, and graphs.

Computer & Information Systems - Associate of Applied Science (AAS) Description

The Computer and Information Systems (CIS) degree program is designed around a core curriculum and three distinct options. The program's core provides an introduction to computer concepts, software applications, operating systems, networking, database, computer servicing, internet, math, human relations, and writing. Graduates work in information technology (IT) for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing, and real estate. CIS careers typically include positions such as technician/customer support, network administrator, web developer, draftsman, database administrator, systems administrator, and related managerial and administrative roles.

Learning Outcomes

1. Describe the methods for solving both hardware and software IT problems.
2. Communicate, via speech and writing, with end-users about a broad spectrum of IT concepts.

3. Maintain currency in IT knowledge and skills through continuous education and research.
4. Manage the acquisition and setup of computer hardware, including mobile devices.
5. Design and secure networks for homes and businesses.
6. Diagram IT processes as part of the systems development life cycle.
7. Present an IT plan, with specific examples of solutions, for a small business.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED.
- Minimum placement scores resulting in WR 121 Academic Composition plus WR 098 Writing Seminar placement or completion of WR 065 Rhetoric and Critical Thinking II.
- Minimum placement scores resulting in MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra and/or MTH 060 Beginning Algebra I equivalent.
- Basic computer competency (or CIS 010 Computer Keyboarding and CIS 070 Introduction to Computers: Windows).

Other Entrance Requirements

- All COCC students enrolled in the Computer and Information Systems program (which includes options for Cooperative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the Program Director or Department Chair.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

Recommended:

- 16-64GB portable storage (USB drive or SSD drive), \$20 - \$100
- A home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$800
- Reliable high-speed internet access

Course Requirements

Course	Title	Credits
Core Courses		
CIS 101	IT Orientation	3
CIS 122	Introduction to Programming	4
CIS 124	IT Fundamentals	4
CIS 131	Software Applications	4
CIS 135DB	Database Theory/SQL	4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178	Internet in Depth	4

or CIS 179CL	Cloud Essentials	
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
CIS 244	Information Systems Analysis	4
CIS 279WC	Windows Client	4
or CIS 179L	Linux Essentials	
CIS 297	CIS Professional Capstone	4

General CIS AAS Degree

Select 27 credits with a CS or CIS prefix numbered 100 or higher 27

Other Required Courses

BA 214	Business Communications	3-4
or WR 227	Technical Writing	
COMM 111	Fundamentals Public Speaking	3-4
or COMM 218	Interpersonal Communication	
or COMM 219	Small Group Communication	
Human Relations approved course		3-4
MTH 085	Technical Mathematics I (or higher)	3-4
or BA 104	Business Math	
WR 121	Academic Composition	4

Total Credits 94-98

Advising Notes

Core courses are generally offered two quarters each academic year. All CIS option courses are offered one to two quarters each academic year. Planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

This degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
CIS 101	IT Orientation	3
CIS 124	IT Fundamentals	4
MTH 085	Technical Mathematics I	3-4
or BA 104	Business Math	
WR 121	Academic Composition	4
		Credits 14-15
Second Term		
BA 214	Business Communications	3-4
or WR 227	Technical Writing	
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4

CIS 178 or CIS 179CL	Internet in Depth Cloud Essentials	4
Credits		15-16
Third Term		
CIS 131	Software Applications	4
CIS 195	Web Development I	4
CIS Elective (must have CIS/CS prefix numbered 100 or higher)		4
COMM 111 or COMM 218 or COMM 219	Fundamentals Public Speaking Interpersonal Communication Small Group Communication	3-4
Human Relations course		3-4
Credits		18-20
Fourth Term		
CIS 135DB	Database Theory/SQL	4
CIS 179	Networking Essentials	4
CIS 279WC or CIS 179L	Windows Client Linux Essentials	4
CIS Elective (must have CIS/CS prefix numbered 100 or higher)		4
Credits		16
Fifth Term		
CIS 122	Introduction to Programming	4
CIS 244	Information Systems Analysis	4
CIS Elective (must have CIS/CS prefix numbered 100 or higher)		4
CIS Elective (must have CIS/CS prefix numbered 100 or higher)		4
Credits		16
Sixth Term		
CIS 297	CIS Professional Capstone	4
CIS Elective (must have CIS/CS prefix numbered 100 or higher)		4
CIS Elective (must have CIS/CS prefix numbered 100 or higher)		4
CIS Elective (must have CIS/CS prefix numbered 100 or higher)		4
Credits		16
Total Credits		95-99

Computer & Information Systems - One Year Certificate of Completion (CC1)

Description

The Computer and Information Systems (CIS) One Year certificate of Completion provides a foundation of skills in computer concepts, software applications, networking, and the internet. Students can apply all the credits of this program towards the AAS degree if desired.

Learning Outcomes

1. Identify and resolve IT problems.
2. Communicate effectively with peers, end-users, and management about a broad spectrum of IT concepts.
3. Illustrate currency in IT knowledge and skills through continuous education and research.
4. Apply best practices in the acquisition and use of hardware and software.
5. Produce web-based solutions for individuals and small businesses.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED.
- Minimum placement scores resulting in WR 121 Academic Composition plus WR 098 Writing Seminar placement or completion of WR 065 Rhetoric and Critical Thinking II.
- Minimum placement scores resulting in MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra and/or MTH 060 Beginning Algebra I equivalent.
- Basic computer competency (or CIS 010 Computer Keyboarding and CIS 070 Introduction to Computers: Windows).

Other Entrance Requirements

- All COCC students enrolled in the Computer and Information Systems program (which includes options for Cooperative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the Program Director or Department Chair.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Recommended:

- 16-64GB portable storage (USB drive or SSD drive), \$20 - \$100
- A home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$800
- Reliable high-speed internet access

Course Requirements

Course	Title	Credits
Core Courses		
CIS 122	Introduction to Programming	4
CIS 124	IT Fundamentals	4
CIS 131	Software Applications	4
CIS 135DB	Database Theory/SQL	4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178 or CIS 179CL	Internet in Depth Cloud Essentials	4
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
Other Required Courses		
Human Relations approved course		3-4
MTH 085 or BA 104	Technical Mathematics I (or higher) Business Math	3-4
WR 121	Academic Composition	4
Total Credits		46-48

Advising Notes

Core Computer and Information Systems program courses (CIS) are offered two to three quarters each academic year. All CIS elective courses are offered one to two quarters an academic year. Planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Term		Credits
CIS 124	IT Fundamentals	4
Human Relations course		3-4
MTH 085 or BA 104	Technical Mathematics I (higher) Business Math	3-4
WR 121	Academic Composition	4
Credits		14-16
Second Term		
CIS 131	Software Applications	4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178 or CIS 179CL	Internet in Depth Cloud Essentials	4
Credits		16
Third Term		
CIS 122	Introduction to Programming	4
CIS 135DB	Database Theory/SQL	4
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
Credits		16
Total Credits		46-48

Computer & Information Systems: Computer Aided Drafting (CAD) - Associate of Applied Science Option (AASO)

Description

The Computer Aided Drafting AAS option prepares students for entry-level employment in the drafting field. The AAS also integrates focused computer information systems skills in networking, web-development

and hardware. Together, these courses provide a foundation for design software usage and computer management.

Learning Outcomes

1. Integrate fundamental theoretical and conceptual considerations in design process and problem solving.
2. Present professional demeanor and attitude individually and collectively as a team member.
3. Recognize and follow professional protocol for industry standards appropriate to course level.
4. Demonstrate cogent oral, written, drafting and computational skills appropriate to the course content and course level.
5. Demonstrate the ability to communicate effectively with peers, end-users and management about a broad spectrum of IT concepts.
6. Demonstrate currency in IT knowledge and skills through continuous education and research.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition plus WR 098 Writing Seminar placement or completion of WR 065 Rhetoric and Critical Thinking II.
 - Minimum placement scores resulting in MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra and/or MTH 060 Beginning Algebra I equivalent.
 - Basic computer competency (or CIS 010 Computer Keyboarding and CIS 070 Introduction to Computers: Windows).

Other Entrance Requirements

- All COCC students enrolled in the Computer and Information Systems program (which includes options for Cooperative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the Program Director or Department Chair.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Recommended:
 - 32+ GB portable storage (USB drive or SSD drive), \$20 - \$100
 - A home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$800
 - Reliable high-speed internet access

Course Requirements

Course	Title	Credits
Core Courses		
CIS 101	IT Orientation	3
CIS 122	Introduction to Programming	4
CIS 124	IT Fundamentals	4
CIS 131	Software Applications	4
CIS 135DB	Database Theory/SQL	4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178	Internet in Depth	4
or CIS 179CL	Cloud Essentials	
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
CIS 244	Information Systems Analysis	4
CIS 279WC	Windows Client	4
or CIS 179L	Linux Essentials	
CIS 297	CIS Professional Capstone	4
Computer Aided Drafting Option		
CIS 125A1	AutoCAD 1	4
CIS 125A2	AutoCAD 2	4
CIS 135A1	AutoDESK Revit 1	4
CIS 135A2	AutoDESK Revit 2	4
CIS 135C1	AutoCAD Civil 3D	4
CIS 135S1	SolidWorks 1	4
CIS 135S2	SolidWorks 2	4
Other Required Courses		
BA 214	Business Communications	3-4
or WR 227	Technical Writing	
COMM 111	Fundamentals Public Speaking	3-4
or COMM 218	Interpersonal Communication	
or COMM 219	Small Group Communication	
Human Relations approved course		3-4
MTH 085	Technical Mathematics I (or higher)	3-4
or BA 104	Business Math	
WR 121	Academic Composition	4
Total Credits		95-99

Advising Notes

Core courses are all offered two to three quarters each academic year. All CIS option courses are offered one to two quarters an academic year. Planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

This degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.

- All courses in the program must be completed with a grade of C or higher.

Additional Requirements:

- All COCC students enrolled in the Computer Information Systems program (which includes requirements for Cooperative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the program director.

Sample Plan

First Term		Credits
CIS 101	IT Orientation	3
CIS 124	IT Fundamentals	4
CIS 125A1	AutoCAD 1	4
MTH 085	Technical Mathematics I (higher)	3-4
or BA 104	Business Math	
	Credits	14-15

Second Term		Credits
CIS 125A2	AutoCAD 2	4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178	Internet in Depth	4
or CIS 179CL	Cloud Essentials	
	Credits	16

Third Term		Credits
CIS 131	Software Applications	4
CIS 135C1	AutoCAD Civil 3D	4
CIS 195	Web Development I	4
WR 121	Academic Composition	4
	Credits	16

Fourth Term		Credits
CIS 135DB	Database Theory/SQL	4
CIS 135S1	SolidWorks 1	4
CIS 179	Networking Essentials	4
COMM 111	Fundamentals Public Speaking	3-4
or COMM 218	Interpersonal Communication	
or COMM 219	Small Group Communication	
	Credits	15-16

Fifth Term		Credits
CIS 135A1	AutoDESK Revit 1	4
CIS 135S2	SolidWorks 2	4
CIS 244	Information Systems Analysis	4
CIS 279WC	Windows Client	4
or CIS 179L	Linux Essentials	
	Credits	16

Sixth Term		Credits
BA 214	Business Communications	3-4
or WR 227	Technical Writing	
CIS 122	Introduction to Programming	4

CIS 135A2	AutoDESK Revit 2	4
CIS 297	CIS Professional Capstone	4
Human Relations course		3-4
	Credits	18-20
	Total Credits	95-99

- Basic computer competency (or CIS 010 Computer Keyboarding and CIS 070 Introduction to Computers: Windows).

Computer & Information Systems: Networking - Associate of Applied Science Option (AASO)

Description

The Computer Information Systems (CIS) degree program is designed around a core curriculum and three distinct options. The program's core provides an introduction to computer concepts, software applications, operating systems, networking, database, computer servicing, internet, math, human relations and writing. Graduates work in information technology (IT) for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing and real estate. CIS careers typically include positions such as PC technician, desktop support, network administrator, web developer, draftsman, database administrator, system administrator and related managerial and administrative roles.

The Networking option prepares students for entry-level positions in network administration and network security. Network specialists have the ability to design, create, manage, secure, and maintain computer networks for small businesses. Courses cover both hardware and software and closely follow major industry certification requirements.

Learning Outcomes

1. Demonstrate the ability to plan, execute, and manage the most current version of both the Windows server and Windows clients operating systems for small to mid-sized businesses.
2. Develop Cisco solutions for use in routing, analyzing, and securing data over local, wide and wireless networks.
3. Demonstrate currency in IT knowledge and skills through continuous education and research.
4. Apply best practices in the acquisition and use of hardware and software for targeted scenarios.
5. Implement and secure small to medium sized networks.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition plus WR 098 Writing Seminar placement or completion of WR 065 Rhetoric and Critical Thinking II
 - Minimum placement scores resulting in MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra and/or MTH 060 Beginning Algebra I equivalent.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required:
 - 16-64 GB usb/flash drive, basic office supplies, notebooks, \$25
- Recommended:
 - A home or laptop computer capable of running the latest version of the Windows 10 operating system and the latest version of Microsoft Office, \$600. Contact program instructors for specifics.

Course Requirements

Course	Title	Credits
Core Courses		
CIS 101	IT Orientation	3
CIS 122	Introduction to Programming	4
CIS 124	IT Fundamentals	4
CIS 131	Software Applications	4
CIS 135DB	Database Theory/SQL	4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178	Internet in Depth	4
or CIS 179CL	Cloud Essentials	
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
CIS 244	Information Systems Analysis	4
CIS 279WC	Windows Client	4
or CIS 179L	Linux Essentials	
CIS 297	CIS Professional Capstone	4
Networking Option		
Choose a minimum of 27 credits from the following:		27
CIS 151C	Cisco Internetworking	
CIS 152C	Cisco Router Configuration	
CIS 279SC	Windows Server Configuration	
CIS 279L	Linux+	
CIS 279SE	Security+	
CIS 284EH	Ethical Hacking	
CIS 279OP	Cybersecurity Operations	
CIS 280	Co-op Work Experience CIS	
Other Required Courses		
BA 214	Business Communications	3-4
or WR 227	Technical Writing	
COMM 111	Fundamentals Public Speaking	3-4
or COMM 218	Interpersonal Communication	
or COMM 219	Small Group Communication	
Human Relations approved course		3-4
MTH 085	Technical Mathematics I (or higher)	3-4

or BA 104	Business Math	
WR 121	Academic Composition	4
Total Credits		94-98

Advising Notes

Core courses are all offered two to three quarters each academic year. All CIS option courses are offered one to two quarters an academic year. Planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

This degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - All COCC students enrolled in the Computer Information Systems program (which includes requirements for Cooperative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the program director.

Sample Plan

First Term		Credits
CIS 101	IT Orientation	3
CIS 124	IT Fundamentals	4
MTH 085 or BA 104	Technical Mathematics I Business Math	3-4
WR 121	Academic Composition	4
Credits		14-15
Second Term		
BA 214 or WR 227	Business Communications Technical Writing	3-4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178 or CIS 179CL	Internet in Depth Cloud Essentials	4
Credits		15-16
Third Term		
CIS 122	Introduction to Programming	4
CIS 131	Software Applications	4
CIS 195	Web Development I	4

COMM 111 or COMM 218 or COMM 219	Fundamentals Public Speaking Interpersonal Communication Small Group Communication	3-4
Human Relations course		3-4
Credits		18-20

Fourth Term

CIS 135DB	Database Theory/SQL	4
CIS 151C	Cisco Internetworking	4
CIS 179	Networking Essentials	4
CIS 279WC or CIS 179L	Windows Client Linux Essentials	4
Credits		16

Fifth Term

CIS 152C	Cisco Router Configuration	4
CIS 244	Information Systems Analysis	4
CIS 279L	Linux+	4
CIS 279SC	Windows Server Configuration	4
Credits		16

Sixth Term

CIS 297	CIS Professional Capstone	4
CIS 279OP	Cybersecurity Operations	4
CIS 279SE	Security+	4
CIS 284EH	Ethical Hacking	4
Credits		16
Total Credits		95-99

Computer & Information Systems: Web Development - Associate of Applied Science Option (AASO)

Description

The Computer Information Systems (CIS) degree program is designed around a core curriculum and three distinct options. The program's core provides an introduction to computer concepts, software applications, operating systems, networking, database, computer servicing, internet, math, human relations and writing. Graduates work in information technology (IT) for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing and real estate. CIS careers typically include positions such as PC technician, desktop support, network administrator, web developer, draftsman, database administrator, system administrator and related managerial and administrative roles.

The Web Development option prepares students for a career as a web developer or website administrator. These professionals are responsible for creating standards-based websites and web/database applications. In addition to programming skills in common markup, scripting and SQL languages, these types of professions require project management and communication skills.

Learning Outcomes

1. Demonstrate the ability to identify the purpose, audience, and needs for a website/database solution.
2. Successfully design and create a database based on business requirements.

3. Demonstrate an ability to implement solutions using PHP, SQL, HTML5, CSS, and JavaScript.
4. Demonstrate the ability to communicate effectively with peers, end-users and management about a broad spectrum of IT concepts.
5. Demonstrate currency in IT knowledge and skills through continuous education and research.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition plus WR 098 Writing Seminar placement or completion of WR 065 Rhetoric and Critical Thinking II.
 - Minimum placement scores resulting in MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra and/or MTH 060 Beginning Algebra I equivalent.
 - Basic computer competency (or CIS 010 Computer Keyboarding and CIS 070 Introduction to Computers: Windows).

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Recommended:
 - A home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$600. Contact program instructors for specifics.

Course Requirements

Course	Title	Credits
Core Courses		
CIS 101	IT Orientation	3
CIS 122	Introduction to Programming	4
CIS 124	IT Fundamentals	4
CIS 131	Software Applications	4
CIS 135DB	Database Theory/SQL	4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178	Internet in Depth	4
or CIS 179CL	Cloud Essentials	
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
CIS 244	Information Systems Analysis	4
CIS 279WC	Windows Client	4
or CIS 179L	Linux Essentials	
CIS 297	CIS Professional Capstone	4
Web Development Option		
Choose a minimum of 27 credits from the following:		27-28
CIS 125G	Photoshop	
or CIS 125I	Adobe Illustrator	

CIS 125DV	Digital Video Productions	
or CIS 125W	Web Animation	
CIS 133JS	Introduction to JavaScript	
CIS 133P	Introduction to PHP	
CIS 197	CMS Web Development: WordPress	
CIS 233P	Web Programming	
CIS 280	Co-op Work Experience CIS	
CIS 295	Web Development II	

Other Required Courses

BA 214	Business Communications	3-4
or WR 227	Technical Writing	
COMM 111	Fundamentals Public Speaking	3-4
or COMM 218	Interpersonal Communication	
or COMM 219	Small Group Communication	
Human Relations approved course		3-4
MTH 085	Technical Mathematics I (or higher)	3-4
or BA 104	Business Math	
WR 121	Academic Composition	4
Total Credits		94-99

Advising Notes

Core courses are all offered two to three quarters each academic year. All CIS option courses are offered one to two quarters an academic year. Planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

This degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - All COCC students enrolled in the Computer Information Systems program (which includes requirements for Cooperative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the program director.

Sample Plan

First Term		Credits
CIS 101	IT Orientation	3
CIS 124	IT Fundamentals	4

MTH 085 or BA 104	Technical Mathematics I Business Math	3-4
WR 121	Academic Composition	4
Credits		14-15
Second Term		
BA 214 or WR 227	Business Communications Technical Writing	3-4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178 or CIS 179CL	Internet in Depth Cloud Essentials	4
Credits		15-16
Third Term		
CIS 122	Introduction to Programming	4
CIS 131	Software Applications	4
CIS 195	Web Development I	4
Human Relations course		3-4
COMM 111 or COMM 218 or COMM 219	Fundamentals Public Speaking Interpersonal Communication Small Group Communication	3-4
Credits		18-20
Fourth Term		
CIS 133JS	Introduction to JavaScript	4
CIS 135DB	Database Theory/SQL	4
CIS 179	Networking Essentials	4
CIS 279WC or CIS 179L	Windows Client Linux Essentials	4
Credits		16
Fifth Term		
CIS 125G or CIS 125I	Photoshop Adobe Illustrator	4
CIS 133P	Introduction to PHP	4
CIS 197	CMS Web Development: WordPress	4
CIS 244	Information Systems Analysis	4
Credits		16
Sixth Term		
CIS 125WA or CIS 125DV	Web Animation Digital Video Productions	4
CIS 233P	Web Programming	4
CIS 295	Web Development II	4
CIS 297	CIS Professional Capstone	4
Credits		16
Total Credits		95-99

Computer Aided Drafting (CAD) - One Year Certificate of Completion (CC1)

Description

The one-year certificate of completion in Computer Aided Drafting (CAD) prepares students for entry-level employment in the drafting field. Students prepare for advanced CAD applications through an introductory set of CAD-based curriculum. Students will gain experience using dedicated architectural, civil and mechanical software.

Learning Outcomes

1. Integrate fundamental theoretical and conceptual considerations in design process and problem solving.
2. Present professional demeanor and attitude individually and collectively as a team member.
3. Recognize and follow professional protocol for industry standards appropriate to course level.
4. Demonstrate cogent oral, written, drafting and computational skills appropriate to the course content and course level.

Entrance Requirements

Academic Entrance Requirements

- Recommended: High school diploma or GED.
- Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II.
- Minimum placement scores resulting in MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra and/or MTH 060 Beginning Algebra I equivalent.
- Basic computer competency (or CIS 010 Computer Keyboarding and CIS 070 Introduction to Computers: Windows).

Other Entrance Requirements

- All COCC students enrolled in the Computer and Information Systems program (which includes options for Cooperative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the Program Director or Department Chair.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Recommended:
 - 32+ GB portable storage (USB drive or SSD drive), \$20 - \$100
 - A home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$800
 - Reliable high-speed internet access

Course Requirements

Course	Title	Credits
Core Requirements		
CIS 120	Computer Concepts	4
CIS 125A1	AutoCAD 1	4
CIS 125A2	AutoCAD 2	4
CIS 125V	Visio	4
CIS 135A1	AutoDESK Revit 1	4
CIS 135A2	AutoDESK Revit 2	4
CIS 135C1	AutoCAD Civil 3D	4

CIS 135S1	SolidWorks 1	4
CIS 135S2	SolidWorks 2	4
Other Required Courses		
Human Relations Courses		3-4
MTH 085	Technical Mathematics I (or higher)	3-4
or BA 104	Business Math	
WR 121	Academic Composition	4
Total Credits		46-48

Advising Notes

Core Computer and Information Systems program courses (CIS) are all offered two to three quarters each academic year. All CIS elective courses are offered one to two quarters an academic year. Planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

Fall		Credits
CIS 120	Computer Concepts	4
CIS 125A1	AutoCAD 1	4
CIS 135S1	SolidWorks 1	4
MTH 085	Technical Mathematics I	3-4
or BA 104	Business Math	
Credits		15-16

Winter

CIS 125A2	AutoCAD 2	4
CIS 135S2	SolidWorks 2	4
CIS 135A1	AutoDESK Revit 1	4
CIS 125V	Visio	4
Credits		16

Spring

CIS 135A2	AutoDESK Revit 2	4
CIS 135C1	AutoCAD Civil 3D	4
Human Relations approved course		3-4
WR 121	Academic Composition	4
Credits		15-16
Total Credits		46-48

Computer Science - Associate of Science Oregon Transfer (ASOT)

Description

Any student who earns the Associate of Science/Oregon Transfer-Computer Science degree on their official Oregon college transcript

meets the lower division general education requirements of baccalaureate degree programs of any Oregon public university. Students transferring under the ASOT/CS agreement will have junior status for registration purposes. The ASOT/CS degree was created through collaboration between members of the Oregon Council of Computer Chairs (OCCC) which includes Oregon community college faculty and administration and Oregon public university computer science chairs and faculty. The degree provides general guidelines for a computer science major, however, GPA and course requirements are **NOT** guaranteed to have been satisfied with this degree. Students are encouraged to refer to the catalog of the specific university to which they plan to transfer to ensure accuracy of academic planning. Students are also encouraged to contact an adviser at the transfer school as early as possible before or after starting COCC classes.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirement, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
MTH 251	Calculus I (or higher)	4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
Recommend: WR 227		
General Education/Discipline studies		
Cultural Literacy:		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose at least three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose at least four courses from at least two prefixes		12-16
Science/Math/Computer Science: (p. 403)		
MTH 252	Calculus II	4
Choose three science courses designated as lab science courses from the Discipline Studies list		9-15
Program Requirements		
CS 160	Computer Science Orientation	4
CS 161	Computer Science I	4
CS 162	Computer Science II	4
CS 260	Data Structures	4
Electives		

Choose enough electives to reach a minimum total of 90 overall degree credits ²	22
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Total Credits	90-104
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¹ HHPA activity courses (1 credit each) are not to be duplicated.

² Elective credits must number 100 or above with a maximum of 12 CTE credits. Students are encouraged to plan these credits carefully in consultation with university-specific CS program requirements.

Advising Notes

Oregon State University Cascades campus offers a major in Computer Science, Applied Option: Web & Mobile Software Development (osucascades.edu (<http://osucascades.edu>)). Students are recommended to reference current degree requirements including required courses and GPA. At the time of this publication, the following courses are recommended in the first 90 credits: COCC courses MTH 231 Discrete Mathematics Elements of Discrete Math; BA 250 Entrepreneurship Entrepreneurship; BA 217 Accounting Fundamentals Accounting Fundamentals; OSU courses CS 271, CS 275.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Term		Credits
CS 160	Computer Science Orientation	4
Health (3 credits with HHP prefix) ¹		3
MTH 251	Calculus I	4
WR 121	Academic Composition	4
Credits		15
Second Term		
CS 161	Computer Science I	4
MTH 252	Calculus II	4
Oral Communication (choose one course)		3-4
Writing (recommend WR 227)		4
Credits		15-16
Third Term		
CS 162	Computer Science II	4
Discipline Studies Arts & Letters		3-4
Discipline Studies Social Science		3-4
Discipline Studies Science/Math/Computer Science		3-5
Credits		13-17
Fourth Term		
CS 260	Data Structures	4

Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Elective ²	3-4
Elective ²	3-4
Credits	16-20

Fifth Term

Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective ²	3-4
Elective ²	3-4
Credits	15-21

Sixth Term

Discipline Studies Science/Math/Computer Science	3-5
Elective ²	4
Elective ²	3-4
Elective ²	3-4
Elective ²	3-4
Credits	16-21
Total Credits	90-110

Cybersecurity - Career Pathway Certificate of Completion (CPCC)

Description

The Cybersecurity Career Pathway Certificate of Completion extends knowledge and skills beyond entry-level computer networking and administration. Students will learn concepts and techniques essential for securing data and networks in both a vendor-neutral and Cisco environment.

Learning Outcomes

1. Describe the function of the network layers as specified by the OSI and the TCP/IP network models.
2. Describe the operation of network services such as ARP, DNS, and DHCP.
3. Describe the basic operation of these network device types: Router, Switch, Hub, Bridge, WAP, WLC.
4. Describe the functions of these network security systems as deployed on the host, network, or the cloud: Firewall, Intrusion Prevention System (IPS), Advanced Malware Protection (AMP), Web Security Appliance (WSA), Email Security Appliance (ESA).
5. Describe IP subnets and communication within an IP subnet and between IP subnets.
6. Describe the relationship between VLANs and data visibility.
7. Describe the operation of ACLs applied as packet filters on the interfaces of network devices.
8. Compare and contrast deep packet inspection with packet filtering and stateful firewall operation.
9. Compare and contrast inline traffic interrogation and taps or traffic mirroring.

10. Compare and contrast the characteristics of data obtained from taps or traffic mirroring and NetFlow in the analysis of network traffic.
11. Identify potential data loss from provided traffic profiles.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - CIS 140 A+ Essentials I, CIS 145 A+ Essentials II, CIS 179 Networking Essentials
- Recommended:
 - CIS 120 or equivalent skills
 - High school diploma or GED
 - Minimum placement in WR 121 Academic Composition or completion of WR 065 Rhetoric and Critical Thinking II or higher
 - Minimum placement in MTH 085 Technical Mathematics I or completion of MTH 020 Pre-Algebra or higher

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required:
 - 16-64 GB usb/flash drive, basic office supplies, notebooks), \$25
- Recommended
 - A home or laptop computer capable of running the latest version of the Windows operating system and virtual machines, \$900. Contact program instructors for specifics.
 - Industry certifications for each class range in price from \$200 - \$350 (Students may sit for certification testing at the conclusion of each course)
 - CCNA Cyber Ops approximately \$200 - \$350
 - Certified Ethical Hacker (CEH) approximately \$200 - \$350
 - CompTIA Linux+ approximately \$150
 - CompTIA Security+ approximately \$200

Course Requirements

Course	Title	Credits
Core Courses		
CIS 279L	Linux+	4
CIS 279SE	Security+	4
CIS 279OP	Cybersecurity Operations	4
CIS 284EH	Ethical Hacking	4
Total Credits		16

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

First Term		Credits
CIS 279L	Linux+	4
CIS 279OP	Cybersecurity Operations	4
	Credits	8
Second Term		
CIS 279SE	Security+	4
CIS 284EH	Ethical Hacking	4
	Credits	8
	Total Credits	16

Criminal Justice

Criminal justice involves the study of crime from a systems perspective. Topics covered in the study of criminal justice include: law and due process, investigation, evidence, corrections, ethics, crime in society, and others. COCC offers courses and programs in criminal justice to serve both students who are preparing to transfer for a bachelor's degree as well as students who seek immediate employment. Careers in the field include law enforcement officers, corrections officers, security officers, lab workers, paralegals, private investigators, and social workers.

<https://www.cocc.edu/programs/criminal-justice/>

Contact:

Professor Kathleen McCabe
 kmccabe@cocc.edu
 541-383-7566
 Modoc Hall, #210, Bend Campus

Department: Social Science
 Department Chair: Sara Henson

Programs

Career and Technical Education

- Criminal Justice - Associate of Applied Science (AAS) (p. 114)

Transfer

- Criminal Justice - Associate of Arts Oregon Transfer (AAOT) (p. 116)

Courses

CJ 100 Survey of the Criminal Justice System (3 Credits)

Introductory survey of the functional components of the U.S. criminal justice system. Includes law enforcement, the courts and corrections.

CJ 101 Introduction to Criminology (4 Credits)

Interdisciplinary approach to theoretical perspectives on the causes, treatment and prevention of crime.

CJ 110 Law Enforcement (3 Credits)

Surveys the roles and responsibilities of local, state and federal law enforcement agencies in American society. Looks at historical development, role concept and conflicts, professionalization, current enforcement practices and career opportunities.

CJ 120 Judicial Process (3 Credits)

Examines the history and development of court systems and processes in the American justice system. Organization, administration and roles of the federal and state courts are examined, as well as distinctions between civil, criminal and appellate courts.

CJ 123 Spanish for Law Enforcement Personnel (2 Credits)

Recommended preparation: SPAN 101.

Designed for students who are interested or are currently enrolled in the Criminal Justice program as well as current criminal justice employees. Emphasizes important daily phrases that someone in the criminal justice fields may encounter. Students' basic skills in listening, reading, writing and speaking are developed as well as exposure to the culture of Spanish-speaking citizens and their customs that directly affect interaction with criminal justice professionals.

CJ 152 Rape Aggression Defense (RAD) for Women (1 Credit)

Prerequisites: instructor approval.

Introduces women to the program of realistic self-defense tactics and techniques called the Rape Aggression Defense (RAD) System. Topics include: awareness, prevention, risk reduction and avoidance, and basic hands-on defense training. P/NP grading.

CJ 153 Ethical Issues in Criminal Justice (3 Credits)

This course outlines various ethical systems and applies them to the individual's analysis and evaluation of ethical dilemmas, duties and responsibilities in the field of criminal justice. The students will explore his/her own ethical framework and decision making while learning to integrate the obligations to society and the codes of conduct prescribed by professional criminal justice organizations and agencies. An emphasis will be placed on the ethical and responsible use of discretion, authority and power as endowed by society.

CJ 188 Special Studies: Criminal Justice (1-4 Credits)

Prerequisites: instructor approval.

Explores topics of current interest in the discipline.

CJ 199 Special Topics: Criminal Justice (1-4 Credits)

Presents selected topics of study in criminal justice offered on a temporary or experimental basis.

CJ 201 Introduction to Juvenile Justice (3 Credits)

Introduces the historical reason for establishment of juvenile courts in the United States, current juvenile justice process, and functions of various components within the system. Prevention, intervention and rehabilitation aspects are covered in terms of Oregon's juvenile court law, as well as potential alternatives for change.

CJ 204 Controversies in Criminal Justice (3 Credits)

This course defines, describes and evaluates the crises and conflicts which face law enforcement agencies today. Topics include: use of force, police pursuits, recruitment and the death penalty.

CJ 207 Seminar In Criminal Justice (3 Credits)

Examines current controversial issues, questions and procedures within the criminal justice system.

CJ 210 Criminal Investigation I (3 Credits)

Examines history, fundamentals and scientific resources involved in criminal investigation. Emphasizes practical aspects of the investigator's approach to criminal acts, crime scene, gathering facts and information, seizing evidence, reporting the total investigation and presenting evidence within court.

CJ 211 Criminal Investigation II (3 Credits)

Reviews fundamental and scientific resources involved in criminal investigations. Examines in depth criminal investigation techniques and skills necessary to conduct investigations into the more serious and complex crimes.

CJ 214 Crime, Justice and Diversity (4 Credits)

Takes an in-depth look at current research and theories of racial and ethnic discrimination within the United States' criminal justice system. This course examines the best and most recent research on patterns of criminal behavior and victimization, police practices, court processing and sentencing, the death penalty, and correctional programs, while making every effort to incorporate discussion of all major race groups found in the U.S.. Additionally, this course will outline the current federal regulations regarding cultural competence in professional practice.

CJ 220 Introduction to Substantive Law (3 Credits)

Examines basic concepts of substantive law and criminal procedural law. Explores effects of substantive laws upon the lives of American citizens through topics such as crimes involving property, fraud and deception, or against persons, state and public order.

CJ 222 Search And Seizure (3 Credits)

Study of procedural aspects of criminal law, i.e., how criminal law is enforced and administered by agents of the criminal justice system. Emphasis on examining the law of arrest, searches and seizures, and interrogation of suspects.

CJ 230 Juvenile Corrections (3 Credits)

Studies historical and contemporary perspectives on juvenile offenders, juvenile code and juvenile court procedures. Describes treatment programs and differences between adult and juvenile court procedures.

CJ 234 The World of Violent Criminals (3 Credits)

The World of Violent Criminals takes a scholarly, comprehensive and empirical examination of serial murder in the United States. This course is intended for students interested in understanding multiple homicide, the nature of serial killing, the offenders and their victims. Students will be exposed to concepts and information that will help prepare them to understand society's most dangerous criminals.

CJ 243 Drugs and Crime in Society (3 Credits)

Introduction to problems of substance abuse, including alcohol, in our society. Equips criminal justice, social service and other human service workers with increased awareness of today's drug technology and options for dealing with substance abusers.

CJ 250 Domestic Terrorism and Emergency Management (4 Credits)

Recommended preparation: WR 121.

Defines domestic terrorism, considers the motivations of terrorists, considers policy proposals, emergency management and law enforcement techniques in response to terrorism and terrorist threats while investigating tensions inherent in democracies between civil liberties and national security. Partners with the Department of Homeland Security's Emergency Management Institute to offer students basic FEMA certifications relevant to law enforcement.

CJ 253 Corrections (4 Credits)

Focuses on historical background, current practices and contemporary issues within correctional processes, institutions and policies pertaining to offenders. Emphasizes the goals of corrections, including deterrence and rehabilitation and the role of local, state and federal corrections in the criminal justice system, including community corrections.

CJ 280 Co-op Work Experience Criminal Justice (1-3 Credits)

Prerequisites: instructor approval.

Recommended preparation: sophomore standing and a minimum of 12 credit hours completed in criminal justice courses.

Provides an opportunity to work for a local agency in a field of criminal justice applying classroom theory with on-the-job experience. Learning experience will be coordinated with student's supervisor. Students must pass a criminal history check. P/NP grading.

CJ 281 CWE Criminal Justice II (2 Credits)

Prerequisites: CJ 280 and instructor approval.

CJ 281 provides a continuing opportunity to work for a local agency in a field of criminal justice with on the job experience (see CJ 280). P/NP grading.

CJ 282 CWE Criminal Justice III (2 Credits)

Prerequisites: CJ 281 and instructor approval.

Provides a continuing opportunity to work for a local agency in a field of criminal justice with on the job experience (see CJ 280). P/NP grading.

CJ 298 Independent Study: Criminal Justice (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study in criminal justice to focus on outcomes not addressed in existing courses or of special interest to a student. P/ NP grading.

Criminal Justice - Associate of Applied Science (AAS)

Description

Criminal Justice is a growing profession in Oregon and is expected to grow faster than the labor market on average into the foreseeable future. Job openings may call for a high school diploma, an associate degree or a bachelor's degree. COCC's AAS in Criminal Justice program prepares students to begin a criminal justice career upon graduation.

Learning Outcomes

1. Express a thorough knowledge of the Criminal Justice System including police, courts and corrections.
2. Identify the characteristics of professional integrity and ethical standards for Criminal Justice Professionals.
3. Describe and relate the constitutional rights and responsibilities of citizens, offenders and victims as they apply to state, federal and procedural laws.
4. Identify legal and moral responsibilities of criminal justice professionals as they relate to cultural diversity and establishing positive community relationships.
5. Apply sociological and psychological theories to better understand criminal behavior.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
Support Courses		
COMM 218	Interpersonal Communication	3

MTH 020	Pre-Algebra (or higher)	4
WR 121	Academic Composition	4

Core Courses

CJ 100	Survey of the Criminal Justice System	3
CJ 101	Introduction to Criminology	4
CJ 120	Judicial Process	3
CJ 153	Ethical Issues in Criminal Justice	3
CJ 201	Introduction to Juvenile Justice	3
CJ 243	Drugs and Crime in Society	3
CJ 253	Corrections	4
CJ 280	CWE Criminal Justice ¹	2
CJ Electives		15-18

Choose from: CJ 110, CJ 123, CJ 153, CJ 188, CJ 199, CJ 204, CJ 207, CJ 210, CJ 211, CJ 214, CJ 220, CJ 222, CJ 230, CJ 234, CJ 243, CJ 280, CJ 281, CJ 282, EMT 195

Other Required Courses

ED 265	Children at Risk	3
Discipline Studies Social Science (no CJ prefix)		4
Discipline Studies (no CJ prefix)		3-5
Health (3-4 credits with HHP or HHPA prefix)		3-4
Recommend: HHP 252A, HHP 231, HHP 242, HHP 258, HHP 266, HHP 295. ²		
PSY 233	Psych of Violence & Aggression	4
SOC 201	Introduction to Sociology	4
Two Additional Psychology Courses		8
General electives: Choose enough credits to reach degree minimum 93 credits. ³		13
Total Credits		93-99

¹ CJ 281 CWE Criminal Justice II and CJ 282 CWE Criminal Justice III may be taken as electives after successful completion of CJ 280 CWE Criminal Justice.

² HHPA activity courses (1 credit each) are not to be duplicated.

³ Any class from the Discipline Studies list or any 100-level or higher class from the following subject areas, or with approval from the CJ program director:

- Addictions Studies (HS prefix)
- ART 161, ART 162, ART 163, ART 261, ART 265
- Computer and Information Systems
- Criminal Justice
- Emergency Medical Services (EMT)
- World Languages
- Geographic Information Systems
- Health and Human Performance (no repeats of activity courses)
- Military Science
- Speech
- Study Skills (HD prefix)

Advising Notes

This degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

Performance Standards

• Academic Requirements:

- Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
CJ 100 Survey of the Criminal Justice System	3
WR 121 Academic Composition	4
MTH 020 Pre-Algebra (higher)	4
CJ 101 Introduction to Criminology	4
Credits	15
Second Term	
CJ 153 Ethical Issues in Criminal Justice	3
CJ 120 Judicial Process	3
COMM 218 Interpersonal Communication	3
Psychology Course	4
Credits	13
Third Term	
CJ 201 Introduction to Juvenile Justice	3
CJ Elective	3-4
ED 265 Children at Risk	3
Health (3-4 credits with HHP prefix) ²	3
General Elective ³	3-4
Credits	15-17
Fourth Term	
CJ 243 Drugs and Crime in Society	3
CJ Elective	3-4
SOC 201 Introduction to Sociology	4
Discipline Studies (no CJ prefix)	4
General Elective ³	3-4
Credits	17-19
Fifth Term	
CJ 253 Corrections	4
CJ Elective	3-4
CJ Elective	3-4
PSY 233 Psych of Violence & Aggression	4
General Elective ³	3-4
Credits	17-20
Sixth Term	
CJ 280 CWE Criminal Justice ¹	2
CJ Elective	3-4
Discipline Studies Social Science (no CJ prefix)	4
Psychology Course	4
General Elective ³	3
Credits	16-17
Total Credits	93-101

Criminal Justice - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer (AAOT) program with an emphasis in criminal justice prepares students to transfer into bachelor's programs at the junior level.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and

3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline Studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Recommend: CJ 100, 101, 110		
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Electives		
Choose any college-level course that brings the total credits to 90 quarter hours. ²		39
Recommend: CJ 210, CJ 253 ³		
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

² This may include up to 12 credits of Career and Technical Education (CTE) courses designated by COCC as acceptable.

³ See advising notes. Related courses to consider: CJ prefix courses

Advising Notes

- If transferring to Oregon State University: HHP 295 Health and Fitness and WR 227 Technical Writing are recommended.

- If transferring to Portland State University: CJ 101 Introduction to Criminology, CJ 110 Law Enforcement and CJ 253 Corrections are recommended.
- If transferring to Southern Oregon University: CJ 210 Criminal Investigation I and CJ 211 Criminal Investigation II are recommended.
- If transferring to Western Oregon University: CJ 100 Survey of the Criminal Justice System is recommended.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
Health (3 credits with HHP or HHPA prefix) ¹		3
Elective (recommend CJ 100) ²		3
Elective (recommend CJ 101) ²		4
WR 121	Academic Composition	4
Credits		14

Second Term		Credits
Discipline Studies Arts & Letters		3-4
MTH 105	Math in Society (higher)	4
Elective ²		3-4
Elective (recommend CJ 120) ²		3
Oral Communication: (p. 399)		3-4
Credits		16-19

Third Term		Credits
Elective ²		3-4
Elective (recommend CJ 201) ²		3
Discipline Studies Arts & Letters		3-4
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Credits		15-20

Fourth Term		Credits
Elective ²		3-4
Elective (recommend CJ 253) ²		4
Discipline Studies Arts & Letters		3-4
Discipline Studies Social Science		3-4
Discipline Studies Science/Math/Computer Science		3-5
Credits		16-21

Fifth Term		Credits
Elective ²		3-4
Elective ²		3-4
Elective (recommend CJ 280) ²		2
Discipline Studies Social Science		3-4
Discipline Studies Science/Math/Computer Science		3-5
Credits		14-19

Sixth Term

Elective ²	3-4
Elective ²	3-4
Elective ²	3-4
Discipline Studies Social Science	3-4
Discipline Studies Science/Math/Computer Science	3-5
Credits	15-21
Total Credits	90-114

Dental Assisting

Dental assistants perform many tasks, ranging from direct patient care during dental procedures and taking x-rays, to record-keeping and scheduling appointments. COCC's Dental Assisting program trains students in the broad range of clinical skills including assisting the dentist during a variety of procedures, performing radiographic imaging, fabricating temporary crowns, maintaining medical records, patient scheduling, disinfection and instrument processing procedures, and many others. Since the Dental Assisting program at COCC is accredited by the Commission on Dental Accreditation of the American Dental Association, graduates obtain the Expanded Functions Dental Assistant certification. Graduates are also prepared for the Dental Assisting National Board examinations to become Certified Dental Assistants. The Dental Assisting program prepares graduates for the rewarding profession of dental assisting.

<https://www.cocc.edu/programs/dental-assisting/> (<https://www.cocc.edu/programs/dental-assisting/default.aspx>)

Contact:

Lynn Murray
541-383-7574
Health Careers Center, Bend Campus

Department: Allied Health
Department Chair: Deborah Malone

Programs

Career and Technical Education

- Dental Assisting - One Year Certificate of Completion (CC1) (p. 119)

Courses

DA 110 Basic Dental Assisting (4 Credits)

Corequisites: DA 115, DA 125, DA 134, DA 145.

General overview of the Dental Assisting profession through lecture, discussions, demonstrations, laboratory activities and on-site clinic visitation. Includes examining dentistry as a profession, charting and data collection, taking and recording vital signs, four-handed dentistry and equipment use and maintenance. Laboratory portion gives students initial skills for the clinical experience in the areas of instrument identification and transfer, oral-evacuation and use of the air-water syringe. Infection control protocols established by OSHA, the Oregon Board of Dentistry and the Centers for Disease Control and Prevention will be implemented. See DA 115 for Dental Assisting program prerequisites.

DA 115 Dental Science (5 Credits)

Prerequisites: CIS 010; CIS 120 or Computer Competency Test; HHP 252; MTH 095 or higher; Choose one of the following Psychology Courses: PSY 101, PSY 201, PSY 215 or PSY 216; COMM 218, and WR 121.

Corequisites: DA 110, DA 125, DA 134, DA 145.

Explores the following areas of study: basic anatomy and physiology, head and neck anatomy, dental embryology, oral histology, anatomy of the face and oral cavity and tooth morphology.

DA 120 Advanced Dental Assisting (4 Credits)

Prerequisites: DA 110.

Corequisites: DA 130, DA 135, DA 151, DA 181, DA 190.

Continuation of DA 110 and furthers student's knowledge of the dental assisting profession. Includes lecture, power point presentations, videos, discussions, demonstrations and lab participation. Covers the advanced dental assisting skills of dental dam placement and procedures involved with the dental specialties of endodontics, periodontics and oral surgery. Also covers expanded functions such as coronal polishing, suture removal and pit and fissure sealants in accordance with the Oregon Board of Dentistry.

DA 125 Dental Infection Control (3 Credits)

Corequisites: DA 110, DA 115, DA 134, DA 145.

Covers the principles of infection control related to the dental office, including an introduction to microbiology, along with cross-contamination and hazard control. The course covers OSHA Standards of Hazard Communication and Blood-borne Pathogens. Aseptic techniques and infection control procedures will be applied in the laboratory setting and assessed through competencies. The management of Safety Data Sheets and labeling of hazardous material will be addressed. See DA 115 for Dental Assisting program prerequisites.

DA 130 Dental Materials I (4 Credits)

Corequisites: DA 120, DA 135, DA 151, DA 181, DA 190.

Examines the properties of amalgam and composite materials. Provides skills in chairside assisting during the placement of Tofflemire matrices, amalgam restorations, and composite restorations on a dexter. Offers lecture and laboratory experiences manipulating materials such as, alginate impression materials to take impressions, and gypsum products to pour casts. Includes the fabrication of custom methylmethacrylate impression trays, light cured trays, and vacuum formed bleach trays. Covers pouring models, trimming for diagnostic casts, and taking bite registrations. See DA 120 for second term Dental Assisting program prerequisites.

DA 131 Dental Materials II (4 Credits)

Prerequisites: DA 130.

Corequisites: DA 150, DA 160, DA 182, DA 191.

Provides a fundamental knowledge of the materials commonly used in dental practice, including the physical, chemical, and manipulative characteristics of cements, bases, cavity liners, cavity varnishes, composites, and resins. The laboratory component offers experience in the correct manipulation of these materials. Covers the skills of cleaning and polishing removable prostheses, and the fabrication of several types of provisional restorations. The didactic portion examines restorative options such as crowns, bridges, inlays, onlays, full dentures, and partial dentures.

DA 134 Dental Radiology I (3 Credits)

Corequisites: DA 110, DA 115, DA 125, DA 145.

Explores the basic principles of radiography, the history of radiation and an introduction to the physics of radiation. Also covers the biological effects of radiation for both the safety and comfort of the patient and the operator. Introduces the radiographic unit and dental x-ray film. See DA 115 for Dental Assisting program prerequisites.

DA 135 Dental Radiology II (4 Credits)

Prerequisites: DA 134.

Corequisites: DA 120, DA 130, DA 151, DA 181, DA 190.

Focuses on the integration of knowledge and skills acquired during DA 134 – Dental Radiology I as the student transitions from the didactic study of radiography to the lab and clinical application. Performance of diagnostic exposure techniques using a variety of image receptors to a predetermined level of competency on both lab manikins and clinical patients. Interpretation of radiographic images for exposure and technique errors, anatomic landmarks, restorations, dental materials and diseases. Focuses on clinical patient management, using interpersonal skills and patient education, while adhering to appropriate infection control protocols.

DA 145 Preventive Dentistry (3 Credits)

Corequisites: DA 110, DA 115, DA 125, DA 134.

Covers the components of preventive dentistry including oral hygiene instruction, plaque control, fluoride therapy, dental sealants and dietary considerations for the dental patient. Clinical skills include the completion of a coronal polish sequence and fluoride tray therapy on both a manikin and a fellow student patient. Identifies the pros and cons of Fluoride Varnish and Silver Nitrate therapies used in dental practices. Includes a discussion of the operation and procedures associated with Pediatric Dentistry. A capstone Service Learning project, related to the topic of Preventive Dentistry, will be selected, completed and presented to the class. See DA 115 for Dental Assisting program prerequisites.

DA 150 Intro to Dental Office Management (3 Credits)

Corequisites: DA 131, DA 160, DA 182, DA 191.

Covers key competencies related to office practices and administrative responsibilities of the dental assistant as identified by the American Dental Association. Covers dental record preparation and maintenance, applicable computer applications, legal issues, general office management principles and professionalism in the dental office. Provides related instruction in computation. Teaches cover letter and resume writing, interviewing skills and HIPAA regulations. See DA 131 for third term Dental Assisting program prerequisites.

DA 151 Dental Computing (2 Credits)

Corequisites: DA 120, DA 130, DA 135, DA 181, DA 190.

Computers are an integral part of today's dental offices. They have become the method of choice for managing patient dental records, appointment scheduling, charting, processing insurance claims and establishing financial arrangements. Computer systems allow for the generation of reports, patient statements, professional and patient correspondence, treatment plans, and fees for service. This course is designed to give students the training necessary to successfully complete these front-office tasks. See DA 120 for second term Dental Assisting program prerequisites.

DA 160 Oral Medicine (3 Credits)

Corequisites: DA 131, DA 150, DA 182, DA 191.

Part one is an introduction to the study of Oral Pathology and Dental Pharmacology. Part two focuses on the role of the dental assistant when caring for compromised patients and in dealing with dental/medical emergencies in the dental office. See DA 131 for third term Dental Assisting program prerequisites.

DA 180 Co-op Work Experience Dental Assisting (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

DA 181 Dental Seminar I (1 Credit)**Corequisites:** DA 120, DA 130, DA 135, DA 151, DA 190.

Discusses the various aspect of practicum I. Guest speakers representing dental specialties and alternative dental employment possibilities will be scheduled. Students will share work-related experiences with the instructor and their peers. Addresses employment opportunities, completing job applications, and interviewing skills. See DA 120 for second term Dental Assisting prerequisites. P/NP grading.

DA 182 Dental Seminar II (1 Credit)**Corequisites:** DA 131, DA 150, DA 160, DA 191.

Seminar discussions on various aspects of spring term practicums in local dental offices. Guest speakers representing dental specialties and alternative dental employment possibilities will be scheduled. Students will share work-related experiences with the instructor and their peers. Covers employment opportunities, resume writing, completing job applications, and interviewing skills. Student will also prepare for the Dental Assisting National Board (DANB) General Chairside Exam. See DA 131 for third term Dental Assisting program prerequisites. P/NP grading.

DA 188 Special Studies: Dental Assisting (1-4 Credits)

Explores topics of current interest in the discipline.

DA 190 Dental Assisting Practicum I (1-5 Credits)**Corequisites:** DA 120, DA 130, DA 135, DA 151, DA 181.

A supervised, unpaid learning experience which takes place on-site at the COCC Dental and Radiology Clinics and at various community outreach facilities. Provides students with the opportunity to perform clearly identified competencies within the clinical setting. Each credit is equivalent to 30 hours in the clinical setting. See DA 120 for second term Dental Assisting program prerequisites. P/NP grading.

DA 191 Dental Assisting Practicum II (1-8 Credits)**Prerequisites:** DA 190.**Corequisites:** DA 131, DA 150, DA 160, DA 182.

A supervised, unpaid learning experience which takes place on site at a minimum of two prearranged clinical facilities. Provides students with the opportunity to perform clearly identified competencies within the clinical setting. Each credit is equivalent to 30 hours in the clinical setting. P/NP grading.

DA 199 Selected Topics: Dental Assisting (1-4 Credits)

This course is in development.

DA 298 Independent Study: Dental Assisting (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Dental Assisting - One Year Certificate of Completion (CC1)

Description

The Dental Assisting program trains individuals in a broad range of clinical and administrative skills such as preparing patients for dental exams and treatment, assisting a dentist with dental procedures, taking dental radiographs, scheduling and appointment procedures, maintenance of medical records, performing basic front office skills, professional, communication and public relations skills. Graduates are prepared for the Dental Assisting National Board examinations and the Oregon Certification in Expanded Functions.

Learning Outcomes

1. Apply the principles of dental sciences to ensure quality patient care.
2. Perform a comprehensive set of dental assisting skills for optimal and safe patient care.
3. Perform duties within existing ethical and legal parameters of clinical dental practice.
4. Accurately document the delivery of dental treatment to facilitate continuity of care, and maintain records in compliance with state, federal, and Oregon Board of Dentistry (OBD) laws.
5. Apply current concepts of infection control and occupational safety.
6. Demonstrate professional behavior in every aspect of patient care and interpersonal relations.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - A high school diploma, a high school transcript noting successful graduation, or a GED
 - MTH 095 Intermediate Algebra or higher
 - WR 121 Academic Composition or higher
 - CIS 010 Computer Keyboarding or test out option
 - CIS 120 Computer Concepts or computer competency test
 - COMM 218 Interpersonal Communication
 - HHP 252 First Aid & AHA Basic Life Support Provider CPR
 - Choose one of: PSY 101 Applied Psychology, PSY 201 Mind and Brain, PSY 215 Developmental Psychology, or PSY 216 Social Psychology
 - Other Entrance Requirements
- Required:
 - Must be 18 years of age, or Program Director approval
 - Criminal History Check, and 10-Panel Drug Screen with vendor chosen by COCC as a condition of acceptance into the program. For more information see the COCC dental assisting website (<https://www.cocc.edu/programs/dental-assisting/immunizations-background-check-drug-testing-and-cpr-requirements.aspx>).
 - Documentation of current immunizations: TB Blood Titer, MMR, Hep B (series of 3 vaccines), Varicella, Tdap, Flu
 - AHA Basic Life Support (BLS) for Healthcare Providers CPR card must remain current throughout the Dental Assisting Program. For CPR class options see COCC's Continuing Education website (<https://www.enrole.com/cocc/jsp/index.jsp?categoryId=10228/>).

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Materials (scrubs with COCC Dental Assisting patch, goggles), \$50
- National Board exams, \$1,000 total
- Fees associated with immunizations, \$220 and CPR card, \$20-\$60
- Criminal History Check, \$65
- Drug Screen, \$45
- Immunization Tracking, \$10

Enrollment Fees

- Fee of \$167 per term (or \$501 total for the year) while enrolled in the DA cohort

Course Requirements

Course	Title	Credits
Prerequisites Courses		
CIS 010	Computer Keyboarding	1
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
HHP 252	First Aid & BLS Provider CPR	3
MTH 095	Intermediate Algebra (or higher)	4
Choose one from the following:		3-4
PSY 101	Applied Psychology	
PSY 201	Mind and Brain	
PSY 215	Developmental Psychology	
PSY 216	Social Psychology	
COMM 218	Interpersonal Communication	3
WR 121	Academic Composition	4
Core Courses		
DA 110	Basic Dental Assisting	4
DA 115	Dental Science	5
DA 120	Advanced Dental Assisting	4
DA 125	Dental Infection Control	3
DA 130	Dental Materials I	4
DA 131	Dental Materials II	4
DA 134	Dental Radiology I	3
DA 135	Dental Radiology II	4
DA 145	Preventive Dentistry	3
DA 150	Intro to Dental Office Management	3
DA 151	Dental Computing	2
DA 160	Oral Medicine	3
DA 181	Dental Seminar I	1
DA 182	Dental Seminar II	1
DA 190	Dental Assisting Practicum I	2
DA 191	Dental Assisting Practicum II	8
Total Credits		72-77

Advising Notes

Documents required for entry into the Dental Assisting program must be submitted after students register for the program. A letter of instruction is emailed to all registered and waitlisted students at the end of Spring term with an assigned documentation due date prior to Fall term. Failure to submit the required paperwork by the assigned date will result in administrative withdrawal from the program.

Program (DA) courses begin once per year in Fall term. Students wishing to register in the Fall Dental Assisting cohort must meet the basic prerequisite competencies and may register according to seat availability on a first-come, first-served basis, determined by the priority registration schedule (<https://www.cocc.edu/departments/admissions/register-for-classes/default.aspx>). After successful registration into the Dental Assisting program, DA courses must be taken together and sequentially. Please see the dental assisting program website (<https://www.cocc.edu/>

[programs/dental-assisting/default.aspx](https://www.cocc.edu/departments/dental-assisting/default.aspx)) for more information or contact the program director and/or the CAP Center.

This one year certificate of completion is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Once a student begins the DA cohort they must enroll in all DA courses offered each term. In order to progress to the next term, the student must complete all DA courses with a "C" or better.

Sample Plan

First Year		Credits
Summer		
CIS 010	Computer Keyboarding	1
CIS 120	Computer Concepts	0-4
HHP 252	First Aid & BLS Provider CPR	3
COMM 218	Interpersonal Communication	3
MTH 095 or MTH 098	Intermediate Algebra (higher) Math Literacy II	4
Choose one of the following:		3-4
PSY 101	Applied Psychology	
PSY 201	Mind and Brain	
PSY 215	Developmental Psychology	
PSY 216	Social Psychology	
WR 121	Academic Composition	4
Credits		18-23
Second Year		
Fall		
DA 110	Basic Dental Assisting	4
DA 115	Dental Science	5
DA 125	Dental Infection Control	3
DA 134	Dental Radiology I	3
DA 145	Preventive Dentistry	3
Credits		18
Winter		
DA 120	Advanced Dental Assisting	4
DA 130	Dental Materials I	4
DA 135	Dental Radiology II	4
DA 151	Dental Computing	2
DA 181	Dental Seminar I	1
DA 190	Dental Assisting Practicum I	2
Credits		17
Spring		
DA 131	Dental Materials II	4
DA 150	Intro to Dental Office Management	3

DA 160	Oral Medicine	3
DA 182	Dental Seminar II	1
DA 191	Dental Assisting Practicum II	8
	Credits	19
	Total Credits	72-77

Economics

Economics is the study of choices. How does a society choose to disperse its scarce resources to satisfy its many needs and wants? How does an a college student choose to spend his/her scarce money and time and what opportunities are given up when those choices are made? How should a nation choose to allocate its scarce resources to deliver the best and most efficient healthcare system? These are some of the questions asked and answered in economics.

There are two general fields of study: microeconomics and macroeconomics.

Macroeconomics studies the role of government in the economy, both in promoting social objectives and in keeping the economy healthy. When should the government be involved in the economy and when will the free choices of individuals yield the best result? Macroeconomics will provide students the basic understanding of how an economy is measured and how fiscal policies enacted by the federal government and monetary policies enacted by the Federal Reserve impact the daily lives of Americans.

Microeconomics centers around the forces of supply and demand. Through this lens, students will explore the concepts of individual consumption, business production and the distribution of goods, capital allocations and markets.

Additional courses within the economics program expand upon these ideas. International economics provides an introductory survey of economic, political, social and cultural dimensions of globalization. Political economy covers various micro and macro topics related to the United States economy from a systems and institutional perspective

Economics is a great choice for any student seeking an Associate of Arts Oregon Transfer (AAOT) degree or ASOT-Business degree to meet the state of Oregon transfer degree requirements.

<https://www.cocc.edu/programs/economics/> (<https://www.cocc.edu/programs/economics/default.aspx>)

Contact:

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541-383-7234
Modoc Hall, Bend Campus

Department: Social Sciences
Department Chair: Sara Henson

Programs

Transfer

- Economics - Associate of Arts Oregon Transfer (AAOT) (p. 122)

Courses

EC 188 Special Studies: Economics (1-4 Credits)

Explores topics of current interest in the discipline.

EC 199 Selected Topics: Economics (4 Credits)

This course is in development.

EC 201 Microeconomics (4 Credits)

Recommended preparation: or to be taken with WR 121 and MTH 065.

Microeconomics is the study of how individuals and firms make choices in the face of scarcity. This course will build economic intuition about the consequences of our consumption and production decisions. We consider how goods and services are allocated and how market forces such as technology, market power and government intervention shape the setting in which these decisions are made.

EC 202 Macroeconomics (4 Credits)

Recommended preparation: or to be taken with WR 121 and MTH 065.

Macroeconomics is the study of how economic health is measured and the fiscal and monetary policies used by government to maintain it. This class examines money, banking and the story of the Federal Reserve; how the government uses taxes and spending to achieve economic growth and stability; and the role of international monetary policies including trade deficits, surpluses and exchange rates. The course uncovers the theory of business cycles and teaches students how to model economic growth and the effects of inflation.

EC 230 Contemporary World Economic Issues: International Economics (4 Credits)

Prerequisites: EC 201 or EC 202.

Recommended preparation: MTH 095 and WR 121.

Provides an introductory survey of economic, political, social, and cultural dimensions of globalization. Covers issues and problems related to international economics and international economic institutions. Includes trade and the balance of payments; trade competition between the U.S. and other nations; reform and restructure of global economies; economic development and problems of developing nations.

EC 280 Co-op Work Experience Economics (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

EC 285 Introduction to Political Economy (4 Credits)

Prerequisites: EC 201 or EC 202.

Recommended preparation: MTH 95 and WR 121.

Covers specific topics related to the United States economy from a systems/institutional perspective. Includes key institutions that make up the U.S. economy such as, corporations, government, the market system, labor unions, monetary and financial institutions, and others. Examines three problem areas: environmental degradation and resource depletion; social and political inequality; and economic instability. Introduces possible solutions based on institutional change and develops viable economic alternatives based on principles of environmental sustainability, equity and economic stability.

EC 298 Independent Study: Economics (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study in economics to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Economics - Associate of Arts Oregon Transfer (AAOT)

Description

The AAOT with a focus area in economics provides the lower division general education and major courses to prepare for a bachelor's degree in economics. Courses in this program are a good preparation for careers in economics, business analytics, engineering, public health, resource management, or public policy. A bachelor's degree in economics can either be policy-based or quantitative. In either case it is a diverse field which could lead a student to graduate or law school.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits	¹	3
Mathematics: (p. 399)		
Choose one course		4
Recommend: MTH 111		
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Recommend: PHL 203, 200-level language courses		
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Recommend: EC 201, EC 202		
Choose two additional courses with at least one different prefix		
Science/Math/Computer Science: (p. 403)		
Choose four laboratory courses in biological and/or physical science		
Additional math as transfer university requires		
Recommend: MTH 112		
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39

Recommend: EC 230, EC 285, HD 100CS, MTH 243, MTH 244, MTH 241 or MTH 251, 100/200-level language courses

Total Credits 90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

Students should check with each school to ensure that the latest transfer information is used when designing their program.

Students pursuing a BA should consider completing three terms of 200-level language courses at COCC. The 100-level language courses will count as electives. The 200-level language courses will partially fulfill the Arts and Letters requirement.

Students pursuing a BS should consider taking more math, social science and science courses. Language is not necessary for the BS degree, but would be valuable for students with a major or emphasis in international economics. For specific details, speak with an advisor.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
Elective (recommend 100-level language)		4
Elective (recommend HD 100CS)		3
Health (HHP or HHPA prefix) ¹		1
Mathematics (recommend MTH 111)		4
WR 121	Academic Composition	4
Credits		16

Second Term		Credits
Discipline Studies Science/Math/Computer Science (recommend MTH 112)		4
Discipline Studies Social Science (recommend EC 201)		4
Elective (recommend 100-level language)		4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		16

Third Term		Credits
Elective (recommend MTH 241 or MTH 251)		4
Discipline Studies Social Science (recommend EC 202)		4
Elective (recommend 100-level language)		4
Health (HHP or HHPA prefix) ¹		1
Oral Communication: (p. 399)		3-4
Credits		16-17

Fourth Term		Credits
Discipline Studies Arts & Letters (recommend 200-level language)		4
Discipline Studies Science/Math/Computer Science - Lab Science		4
Discipline Studies Social Science (no EC prefix)		4

Elective (recommend MTH 243)	4
Credits	16

Fifth Term

Discipline Studies Arts & Letters (recommend 200-level language)	4
Discipline Studies Science/Math/Computer Science - Lab Science	4
Elective (recommend EC 285)	4
Elective (recommend MTH 244)	4
Health (HHP or HHPA prefix) ¹	1
Credits	17

Sixth Term

Discipline Studies Arts & Letters (recommend PHL 203)	4
Discipline Studies Science/Math/Computer Science - Lab Science	4
Elective (recommend EC 230)	4
Elective (recommend 200-level language)	4
Credits	16
Total Credits	97-98

Education

At Central Oregon Community College, the Early Childhood Education (ECE) program provides students with an interest in early childhood, including the early primary elementary years, with a foundation in the theoretical, social, historical, and legal aspects of early childhood programming. Our education programs prepare students for direct work with young children in classroom settings and learning environments outside of schools. Degree-seeking students may have additional professional goals, which may require further education.

<https://www.cocc.edu/programs/education/>

Contact:

Dr. Amy Howell
541-383-7784
Modoc Hall

Department: Social Sciences
Department Chair: Sara Henson

Programs

Career and Technical Education

- Child, Family and Community Studies - Career Pathway Certificate of Completion (CPCC) (p. 126)
- Developmentally Appropriate Learning Environments - Career Pathway Certificate of Completion (CPCC) (p. 127)
- Early Childhood Education - Associate of Applied Science (AAS) (p. 127)
- Equity in Education - One Year Certificate of Completion (CC1) (p. 135)

Transfer

- Early Childhood Education - Associate of Arts Oregon Transfer (AAOT) (p. 129)
- Education - Elementary - Associate of Arts Oregon Transfer (AAOT) (p. 131)
- Education - Secondary - Associate of Arts Oregon Transfer (AAOT) (p. 133)

Courses

ED 112 Children's Lit & Curriculum (3 Credits)

This course provides an overview of children's literature across the early childhood curriculum (preschool-primary grades) from a curricular perspective. Different genres of children's literature will be examined as it relates to curricular areas: literacy, math, science, history, health, movement, music, and the arts. This course is recommended for early childhood and education majors. This course will address the importance of literacy acquisition of young children (preschool through the primary grades) and how children's literature can support co-curricular standards, goal, and objectives.

ED 140 Introduction to Early Childhood Education (4 Credits)

Beginning course in early childhood education which focuses on the teacher as a professional (advocacy, ethical practices, work-force issues, associations); provides strategies to manage an effective program operation; how to plan a safe, healthy learning environment; and gives an overview of the philosophy and history of ECE. Three hours of supervised weekly field placement required.

ED 141 Youth Mentoring and Advocacy (3 Credits)

Recommended preparation: Prior experience volunteering or working with youth.

Provides the opportunity to develop leadership, supervisory, and mentoring skills by participating in youth advocacy civic engagement through community service projects and volunteer roles (field placement). Topics include creating safe, engaging, and developmentally appropriate activities, team work, communication techniques, group dynamics, project management, organization and evaluation. Appropriate for those interested in supporting youth both in and out school settings, including after-school programs and specialized areas of focus, including: creative arts, recreation, academic support, and enrichment.

ED 150 Environments & Curriculum in Early Childhood Education (4 Credits)

Recommended preparation: ED 140.

Utilizes knowledge in child development to design, implement and evaluate activities in the major domains of development for children ages birth to 8 years. Three hours of supervised weekly field placement required.

ED 151 Observation & Guidance in Early Childhood Education Learning (4 Credits)

Recommended preparation: ED 140.

Introduces observation techniques and tools to accurately collect data on children and how to use assessments to make appropriate decisions about the child's needs regarding programming and the early childhood education environment. Three hours of supervised weekly field placement required.

ED 152 Family, School and Community Relationships in ECE (3 Credits)

Introduces communication skills needed to enhance partnerships between families, schools and communities in early childhood education. Three hours of supervised weekly field placement required.

ED 172 Language and Literacy in Early Childhood Education (3 Credits)

Recommended preparation: ED 140.

Covers language and literacy development as it relates to early childhood education. Also covers the history of literacy development, the family's role, how young children learn to read and write, using books with children, concepts of print, comprehension, differing abilities in literacy development, and the role of observation and assessment. Three hours of supervised weekly field placement required.

ED 173 Movement, Music and the Arts in Early Childhood Education (3 Credits)

Recommended preparation: ED 140.

Introduces physical education, rhythmic activities, visual arts, and performing arts in the early childhood years. Covers basic motor skills and artistic processes, from a developmental perspective. Three hours of supervised weekly field placement required.

ED 174 Math, Science, and Technology in Early Childhood Education (3 Credits)

Recommended preparation: ED 140.

Introduces program and curricular activities that enhance a child's development of math, science, and technology understanding and skills. Processes explored are constructivist in nature, with a focus on interdisciplinary approaches. Three hours of supervised weekly field placement required.

ED 176 Supporting Social, Emotional, and Mental Health in Early Childhood (3 Credits)

This course provides the student with knowledge about common social, emotional and mental health concerns in early childhood and explores developmentally appropriate classroom guidance strategies for supporting children's social and emotional skills.

ED 188 Special Studies: Practicum (1-4 Credits)

Explores topics of current interest in the discipline.

ED 199 Selected Topics: Early Childhood Education (1-4 Credits)

This course is in development.

ED 200 Introduction to Education (3 Credits)

Recommended preparation: WR 121.

Survey of the field and foundations of education, especially the teaching profession and the role of education in society. Explores philosophical, economic, legal, ethical, historical, psychological and social foundations of teaching and learning, and includes an overview of educational methods and approaches. Specializations within the field and training requirements for prospective teachers will also be addressed.

ED 210 Practicum in Teaching (3 Credits)

Recommended preparation: WR 121 and ED 200 or instructor approval.

Acquaints potential educators with roles and responsibilities of teachers at elementary and secondary levels. The student will observe and work as an instructional assistant in a local classroom to assess interests and potential for making teaching a career. ED 210 includes six hours field placement per week.

ED 216 Purpose, Structure and Function of Education in a Democracy (3 Credits)

Recommended preparation: WR 121.

Analyzes the system of education in a democratic society. This course introduces the historical, social, philosophical, political, legal and economic foundations of education to provide a framework from which to analyze contemporary educational issues.

ED 219 Multicultural Issues in Education Settings (3 Credits)

Recommended preparation: WR 121.

Examines the context of working with students, school, communities and workplaces. Explores the diversity of learners, learning cultures (urban, suburban, and rural) and the diversity among learners within those different cultures. Considers the influence of culture on one's learning.

ED 224 Anti-Bias Curriculum in Education (4 Credits)**Recommended preparation:** ED 140.

Early Childhood comprises a critical timeframe in human development for building a foundation for identity and meaningful engagement in an increasingly diverse world. Future educators and early learning advocates will develop awareness of cultural consciousness in early childhood and elementary classrooms. Focuses on identity development, ethnocentrism, racism, stereotype threat, and discrimination. Includes techniques for developing multi-cultural, anti-bias curriculum specific to early childhood and elementary classrooms.

ED 235 Teaching and Learning in a Digital Age (3 Credits)

This course will explore the integration and application of technology into the early childhood and primary elementary years curricula. Students will investigate, discuss and apply the theories and practices of educational technology specifically within the context of early childhood education. Additionally, students will develop skills and knowledge that will enable them to use responsibly various technologies to create and assess technology-enriched learning environments that reflect developmentally appropriate practices while being engaging and safe.

ED 240 Purposeful Learning and Active Exploration through Play (4 Credits)**Recommended preparation:** ED 140.

Explores why open-exploration, discovery, and play are fundamentally important parts of children's development, the role of play in learning, and ways that adults can support and promote play. Considers current research and implications of play, as an important vehicle for developing self-regulation as well as for promoting language, cognition, and social competence, in an era of standards-driven curriculum. Prospective early childhood and elementary educators will grow in their understanding of their role in facilitating children's learning. Focuses on the role of purposeful learning and active exploration through play through the elementary grades.

ED 243 Nutrition, Health and Safety for Young Children (3 Credits)**Recommended preparation:** ED 140.

Provides an understanding of the essential elements of health, safety, and nutrition for young children. Methods and materials for enhancing motor development will be examined.

ED 245 Trauma Sensitive Classrooms (3 Credits)**Recommended preparation:** ED 140, ED 200, or ED 265.

Addresses the role of the education environment in supporting lifelong coping mechanisms. Addresses the impact of stress on children's overall development. Explores Adverse Childhood Experiences (ACEs) and the role of mindfulness and resiliency-based programs to address and mitigate the effects of early trauma. Addresses the impact of stressors on children's participation, relationships, and overall success in learning environments. Explores strategies and resources for designing and leading Trauma Sensitive Classrooms.

ED 250 Advanced Curriculum Development & Teaching Methods in Early Childhood Education (4 Credits)**Recommended preparation:** WR 121, ED 140, ED 150, and ED 151.

Compares and contrasts various teaching methods for children ages 3 to 8 years. Focuses on constructivist teaching methodology and strategies, based on best practices in early childhood education. Three hours of supervised weekly field placement required.

ED 253 Learning Across the Lifespan (3 Credits)**Recommended preparation:** WR 121.

Explores how learning occurs at all ages from early childhood through adulthood, major and emerging learning theories, individual learning styles including one's own learning styles, self-reflection on implications of how learning occurs, and the impact of these issues on the development and delivery of instruction.

ED 261 Early Childhood Education Practicum I (3 Credits)

Students participate in weekly online discussions and six hours of practicum work in an ECE setting. Students select, with their COCC practicum supervisor, an appropriate early learning practicum placement. All ECE courses required for an Early Childhood Education AAS degree need to be successfully completed before taking ED 261. P/NP grading.

ED 262 Early Childhood Education Practicum II (3 Credits)**Recommended preparation:** ED 261.

Students participate in weekly online discussions and six hours of practicum work in an ECE setting. Students select, with their COCC practicum supervisor, an appropriate early learning practicum placement. P/NP grading.

ED 265 Children at Risk (3 Credits)

Issues of child abuse are presented from the multidisciplinary perspectives of education, criminal justice and psychology. Topics covered include definition and prevalence of child abuse, lifelong effects, prevention, identification and intervention. The course will focus on biopsychosocial outcomes and education concerns, as well as legal processes and implications from criminal justice.

ED 269 Exceptional Children in Early Childhood Education (3 Credits)**Recommended preparation:** ED 140, ED 151.

Acquaints students with the exceptional child and his/her family. Local resources are explored to understand the referral process for children, birth to 5 years of age. Explores typical and atypical development and common delays and disabilities in all domains of child development. Includes discussion about teaching methods and strategies that are adapted or modified to meet individual child needs. Three hours of supervised weekly field placement required.

ED 290 English Language Development in the Primary Classroom (4 Credits)

This is an introductory course that will explore how to best meet the needs of English Language Learners in early childhood and elementary classrooms. We will examine how language skills are acquired and how to assess what stage of language acquisition students are in. We will also explore a variety of effective teaching strategies and materials that can be used in the classroom to help students develop both social and academic language proficiency. Three hours of field placement is required.

ED 298 Independent Study: Education (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study in education to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

ED 299 Selected Topics: Education (1-4 Credits)

This course is in development.

Child, Family and Community Studies - Career Pathway Certificate of Completion (CPCC)

Description

The Child, Family and Community Studies Career Pathway Certificate of Completion is designed to support students seeking careers in school and human service settings. The CFC Studies program is a step along the pathway to the AAS in Early Childhood Education. It invites students to apply theories and applications toward a broader perspective, including settings outside of school.

Learning Outcomes

1. Support early learning by understanding primary theories used in early childhood development and education.
2. Demonstrate knowledge of the complexities which influence children's learning and development, including social, culture, psychological, historical, and economic considerations.
3. Apply assessment and observation tools to understand children's behavior, demonstration of understanding, and to then inform classroom practices such as curricular, environmental, and socioemotional considerations.
4. Build family and community relationships with specific focus to integrating knowledge of cultural diversity and equity in learning environments in and out of school settings.

Entrance Requirements

Academic Entrance Requirements

- None

Other Entrance Requirements

- Required:
 - The ECE program requires a background check through the Oregon Employment Office-Child Care Division.
 - Some field placement sites may require documentation of current immunizations.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Background check (\$3-\$70)
- Cost of mileage to and from field placement/practicum sites.

Course Requirements

Course	Title	Credits
Core Courses		
ED 140	Introduction to ECE	4
ED 151	Observ & Guidance in ECE Learn	4
ED 152	Family, School, Com. Relations	3
ED 176	Supporting Social, Emotional, and Mental Health in Early Childhood	3
or ED 245	Trauma Sensitive Classrooms	
ED 219	Multicultural Issues in Education Settings	3-4
or ED 224	AntiBias Curric in Education	

ED 265	Children at Risk	3
Other Required Courses		
FN 225	Human Nutrition	3-4
or HHP 266	Nutrition for Health	
PSY 201	Mind and Brain	4
or PSY 215	Developmental Psychology	
SOC 201	Introduction to Sociology	4
Total Credits		31-33

Advising Notes

Students with intentions to seek higher degrees or career opportunities in settings serving children and families may use the CFC Studies Certificate to demonstrate coursework and field placement experience. Credits will apply toward the Head Start Reauthorization Act for highly qualified lead and assistant teachers and family advocates. Students considering the HDFS program through OSU may use several courses (ED 140, PSY 202, SOC 201, FN 225) to HDFS program requirements.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Adhere to the field placement contract.
 - Adhere to confidentiality, health-related and no-smoking policies as they pertain to field placement settings.
 - Refer to the COCC Early Childhood Student Handbook (<https://www.cocc.edu/early-childhood-education/>) for an explanation of each of the above policies.

Sample Plan

First Term		Credits
ED 140	Introduction to ECE	4
FN 225	Human Nutrition	3-4
or HHP 266	Nutrition for Health	
PSY 201	Mind and Brain	4
or PSY 215	Developmental Psychology	
Credits		11-12
Second Term		Credits
ED 151	Observ & Guidance in ECE Learn	4
ED 176	Supporting Social, Emotional, and Mental Health in Early Childhood	3
or ED 245	Trauma Sensitive Classrooms	
ED 265	Children at Risk	3
Credits		10
Third Term		Credits
ED 152	Family, School, Com. Relations	3
ED 219	Multicultural Issues in Education Settings	3-4
or ED 224	AntiBias Curric in Education	
SOC 201	Introduction to Sociology	4
Credits		10-11
Total Credits		31-33

Developmentally Appropriate Learning Environments - Career Pathway Certificate of Completion (CPCC)

Description

The Developmentally Appropriate Learning Environments (DALE) Career Pathway Certificate of Completion is designed to support students seeking careers in early learning settings.

Learning Outcomes

1. Support early learning by understanding primary theories used in early childhood development and education.
2. Apply assessment and observation tools to understand children's behavior, demonstration of understanding, and to then inform classroom practices such as curricular, environmental, and socioemotional considerations.
3. Demonstrate knowledge of curricular models and positive guidance strategies which support young children's learning and development.
4. Build developmentally appropriate curriculum and classroom resources, which are based on knowledge of children's developmental needs across domains, including cognitive, physical, emotional, and social.

Academic Entrance Requirements

- While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Other Entrance Requirements

- Required:
 - The ECE program requires a background check through the Oregon Employment Office-Child Care Division.
 - Some field placement sites may require documentation of current immunizations.

Course Requirements

Course	Title	Credits
Core Courses		
ED 140	Introduction to ECE	4
ED 150	Enviro & Curric in ECE	4
ED 151	Observ & Guidance in ECE Learn	4
ED 152	Family, School, Com. Relations	3
Choose two courses from the following:		6
ED 112	Children's Lit & Curriculum	
ED 172	Language & Literacy in ECE	
ED 173	Movement, Music & Arts in ECE	
ED 174	Math, Science, and Technology in Early Childhood Education	
ED 176	Supporting Social, Emotional, and Mental Health in Early Childhood	
Total Credits		21

Advising Notes

Credits will apply toward the Head Start Reauthorization Act for highly qualified lead and assistant teachers and family advocates. Students considering the Early Childhood Development program at Southern Oregon University or the Human Development and Family Sciences (HDFS) program through OSU may apply many of the DALE courses to HDFS program requirements and recommended coursework. The DALE certificate is a step along the pathway to the AAS in Early Childhood Education and it invites students to apply theories and applications toward early learning environments.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher

Sample Plan

First Term		Credits
ED 140	Introduction to ECE	4
ED 150	Enviro & Curric in ECE	4
Choose one course from the following:		3
ED 112	Children's Lit & Curriculum	
ED 172	Language & Literacy in ECE	
ED 173	Movement, Music & Arts in ECE	
ED 174	Math, Science, and Technology in Early Childhood Education	
ED 176	Supporting Social, Emotional, and Mental Health in Early Childhood	
Credits		11
Second Term		
ED 151	Observ & Guidance in ECE Learn	4
ED 152	Family, School, Com. Relations	3
Choose one course from the following:		3
ED 112	Children's Lit & Curriculum	
ED 172	Language & Literacy in ECE	
ED 173	Movement, Music & Arts in ECE	
ED 174	Math, Science, and Technology in Early Childhood Education	
ED 176	Supporting Social, Emotional, and Mental Health in Early Childhood	
Credits		10
Total Credits		21

Early Childhood Education - Associate of Applied Science (AAS) Description

At COCC, the Early Childhood Education (ECE) program provides students who have an interest in early childhood, including the early primary elementary years, with a foundation in the theoretical, social, historical and legal aspects of early childhood programming. The COCC associate degree programs in early childhood education provide the foundational

knowledge, field experiences and common skills and strategies to prepare students for multiple roles within the field of early childhood education.

The Associate of Applied Science (AAS) degree prepares students with a strong emphasis in the theories, curriculum goals and developmentally appropriate teaching and guidance strategies necessary to lead an early childhood classroom program or work as a paraprofessional in the public schools.

Learning Outcomes

1. Support child development and learning by understanding primary theories used in early childhood development and education.
2. Demonstrate knowledge of children's patterns of learning specific to developmental domains;
3. Build family and community relationships with particular attention to integrating knowledge of cultural diversity in educational learning environments and settings.
4. Observe, document, and assess to support young children and families through program and curriculum planning.
5. Apply developmentally appropriate approaches to build meaningful curriculum and positive guidance strategies.
6. Apply knowledge of health and safety issues affecting child development within learning environments.
7. Prepare for professional expectations for the early childhood field by developing effective communication skills and demonstrating knowledge of professional standards, associations, licensures, and related laws governing early childhood education.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - Complete ED 140 Introduction to Early Childhood Education before taking other Early Childhood Education courses.

Other Entrance Requirements

- Required:
 - The ECE program requires a background check through the Oregon Employment Office-Child Care Division.
 - Some field placement sites may require documentation of current immunizations.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Background check (\$30-\$70)
- Cost of mileage to and from field placement/practicum sites.

Course Requirements

Course	Title	Credits
Core Courses		
ED 140	Introduction to ECE	4
ED 150	Enviro & Curric in ECE	4
ED 151	Observ & Guidance in ECE Learn	4
ED 152	Family, School, Com. Relations	3
ED 172	Language & Literacy in ECE	3
ED 173	Movement, Music & Arts in ECE	3

ED 174	Math, Science, and Technology in Early Childhood Education	3
ED 219 or ED 224	Multicultural Issues in Education Settings AntiBias Curric in Education	3-4
ED 250	Advanced Curriculum Development & Teaching Methods in Early Childhood Education	4
ED 261 & ED 262	ECE Practicum I and ECE Practicum II	6
ED 265	Children at Risk	3
ED 269	Exceptional Children in Early Childhood Education	3

Early Childhood Electives:

Choose a minimum of 11 credits from the following list.		11
ED 141	Youth Mentoring & Advocacy	
ED 176	Supporting Social, Emotional, and Mental Health in Early Childhood	
ED 216	Purpose, Structure and Function of Education in a Democracy	
ED 235	Teaching and Learning in a Digital Age	
ED 240	Learning through Play	
ED 245	Trauma Sensitive Classrooms	
ED 253	Learning Across the Lifespan	
ED 290	Eng Lang Dev in Prim Classroom	
GEOG 272	Geography for Teachers	

Other Required Courses

Discipline Studies (choose 2 courses)		6-10
ED 112 or ENG 221	Children's Lit & Curriculum Introduction to Children's Literature	3-4
ED 243 or FN 225 or HHP 266	Nutri., Health & Safety ECE Human Nutrition Nutrition for Health	3-4
MTH 060	Beginning Algebra I (or higher)	4
PSY 201	Mind and Brain	4
PSY 215	Developmental Psychology	4
SOC 201	Introduction to Sociology	4
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4

Total Credits 90-97

¹ Students who may eventually complete a bachelor's degree should take FN 225.

Advising Notes

This degree is designed for students planning to enter their chosen career upon graduation. Often, only selected credits are considered transferable to public or private baccalaureate institutions.

COCC's ECE program works closely with four year programs to prepare students for transfer opportunities in early learning, elementary education, and human service-related programs. In addition to working closely with programs, including OSU-C, and George Fox, the AAS degree is fully articulated with Southern Oregon University's Early Childhood Development program and allows students to transfer directly as juniors and to become admitted into the Early Childhood Development program at Southern Oregon University (SOU) with no loss of credits to pursue

a bachelor's degree. The program offers an excellent balance of early childhood and general education courses that support advanced study in the field of early childhood development.

Students should contact the SOU School of Education early in the beginning of their AAS in Early Childhood Education program to be advised about additional requirements and procedures for admission to the school or program. Students should be aware that if they transfer before completing this degree, their courses will be evaluated individually toward the general education requirements in effect at SOU. For more information, visit sou.edu and search "COCC" to access the articulation agreement.

Students wishing to use the AAS in ECE as a foundation for future licensure in K-12 classrooms should work closely with academic advisors in the education program to ensure appropriate transfer preparation.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Adhere to the field placement contract; and
 - Adhere to confidentiality, health-related and no-smoking policies as they pertain to field placement settings.
 - Refer to the COCC Early Childhood Student Handbook (<https://www.cocc.edu/early-childhood-education/>) for an explanation of each of the above policies.

Sample Plan

First Term		Credits
ED 140	Introduction to ECE	4
MTH 060	Beginning Algebra I	4
WR 121	Academic Composition	4
Credits		12
Second Term		Credits
ED 150	Enviro & Curric in ECE	4
ED 243 or FN 225 or HHP 266	Nutri., Health & Safety ECE Human Nutrition Nutrition for Health	3-4
ED 152	Family, School, Com. Relations	3
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		14-15
Third Term		Credits
ED 173	Movement, Music & Arts in ECE	3
ED 174	Math, Science, and Technology in Early Childhood Education	3
ED 219 or ED 224	Multicultural Issues in Education Settings AntiBias Curric in Education	3-4
PSY 201	Mind and Brain	4
Credits		13-14

Fourth Term

ED 151	Observ & Guidance in ECE Learn	4
ED 265	Children at Risk	3
ED elective		3-4
SOC 201	Introduction to Sociology	4
Credits		14-15

Fifth Term

ED 112 or ENG 221	Children's Lit & Curriculum Introduction to Children's Literature	3-4
ED 269	Exceptional Children in Early Childhood Education	3
ED 172	Language & Literacy in ECE	3
PSY 215	Developmental Psychology	4
Credits		13-14

Sixth Term

Discipline Studies course		3-5
ED 250	Advanced Curriculum Development & Teaching Methods in Early Childhood Education	4
ED 261	ECE Practicum I	3
ED elective		3-4
Credits		13-16

Seventh Term

Discipline Studies Course		3-5
ED 262	ECE Practicum II	3
ED elective		3-4
ED elective		3-4
Credits		12-16
Total Credits		91-102

Early Childhood Education - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer (AAOT) degree prepares students to transfer to a four-year college or university to achieve additional professional goals in Early Childhood Education and Elementary Education, which may require further education.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits	¹	3
Mathematics: (p. 399)		
Choose one course		4

Recommend: MTH 211, MTH 212, MTH 213	
Oral Communication: (p. 399)	
Choose one course	3-4
Writing: (p. 399)	
WR 121	Academic Composition 4
WR 122	Argument, Research, and Multimodal Composition 4
or WR 227	Technical Writing
General Education/Discipline studies	
Cultural Literacy: (p. 401)	
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).	
Arts and Letters: (p. 399)	
Choose three courses from at least two prefixes	9-12
Social Science: (p. 404)	
Choose four courses from at least two prefixes	12-16
Science/Math/Computer Science: (p. 403)	
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science	12-20
Electives	
Choose enough electives to reach 90 credits.	39
Recommend: ED 140, ED 150, ED 151, ED 152, ED 172, ED 173, ED 174, ED 216, ED 219, ED 250, ED 253, ED 265, ED 290, ENG 221, HHP 100, PSY 215	
Total Credits	90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

ED 216 Purpose, Structure and Function of Education in a Democracy, ED 219 Multicultural Issues in Education Settings and ED 253 Learning Across the Lifespan count toward the recommended courses for students pursuing the MAT at OSU-Cascades.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

For students intending to transfer to Oregon State University-Cascades program in Human Development and Family Sciences (HDFS), please meet with an advisor in Early Childhood Education early in your course of study.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Elective	3-4
Health (3 credits with HHP or HHPA prefix) ¹	3
Mathematics: (p. 399)	4
WR 121	Academic Composition 4
Credits	14-15

Second Term

Discipline Studies Science/Math/Computer Science	3-5
Elective	3-4
Elective	3-4
Oral Communication: (p. 399)	3-4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing
	4
Credits	16-21

Third Term

Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective	3-4
Elective	3-4
Credits	15-21

Fourth Term

Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Elective	3-4
Elective	3-4
Elective	3-4
Credits	15-20

Fifth Term

Discipline Studies Arts & Letters	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective	3-4
Elective	3-4
Elective	3-4
Credits	15-21

Sixth Term

Discipline Studies Social Science	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective	3-4
Elective	3-4
Elective	3-4
Credits	15-21

Total Credits	90-119
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Education - Elementary - Associate of Arts Oregon Transfer (AAOT)

Description

If you are interested in becoming an elementary teacher or pursuing a career in the field of education, COCC can give you a strong foundation for your goals. The courses recommended in this pathway will help you to explore key topics related to student learning, teaching strategies and what is required to become a professional educator. If you are passionate about working with young learners and making a difference in the lives of future students, this could be a great path for you! The suggested courses are engaging and offer students many hands-on learning opportunities. Instructors work closely with students and seek to connect them early on with transfer partners to ensure an efficient

pathway to potential licensure. The following is a suggested course of study for students interested in pursuing a bachelor's degree in education designed for elementary licensure.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;

2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Recommend: HHP 295		
Mathematics: (p. 399)		
Choose one course		4
Recommend: MTH 211		
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Recommend: ED 112		
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Recommend: ED 152 or SOC 222, ED 219, PSY 201, SOC 201		
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Recommend: FN 225		
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39
Recommend: CIS 120, ED 172, ED 174, ED 176, ED 216, ED 235, ED 253, ED265, ED 269, ED 290, HST 201, HST 202, HST 203, MTH 212, MTH 213		
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

- In Oregon, students may achieve an initial license to teach through a bachelor's program, a post-baccalaureate program or a master's-level program. Students prepare to teach at different grade levels of authorization, depending on their background, interests and

the requirements of specific programs of study. It is important to work closely with an advisor to ensure that the degree contains the necessary prerequisite coursework for the desired licensure program.

- Students should check with each school to ensure that the latest transfer information is used when designing their program.
- There are several options for completing a teaching licensure program in Central Oregon.
- Students should consult with an education advisor as early as possible to discuss program options and determine which courses fulfill transfer requirements to different institutions and different levels of licensure.
- For more information on teacher preparation programs in Oregon, see the Oregon Teacher Standard and Practices Commission website at oregon.gov/TSPC/ (<https://oregon.gov/TSPC/>). Students may also wish to review COCC's link for teacher education at [cocc.edu/programs/education/](https://www.cocc.edu/programs/education/) (<https://www.cocc.edu/programs/education/>).
- Students pursuing a BA should consider completing three terms of 200-level language courses at COCC. The 100-level language courses will count as electives. The 200-level language courses will partially fulfill the Arts and Letters requirement.
- Students pursuing a BS should consider taking more math, social science and science courses. For specific details, speak with an advisor.
- HHP 295 Health and Fitness, MTH 112 Trigonometry, MTH 113 Topics in Precalculus, SOC 201 Introduction to Sociology and WR 121 Academic Composition are intended to align with requirements for OSU's Education major. Students should confirm current major requirements at OSU.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Elective	3-4
Health (recommend HHP 295) ¹	3
Mathematics (recommend MTH 211)	4
WR 121 Academic Composition	4
Credits	14-15
Second Term	
Discipline Studies Science/Math/Computer Science (recommend FN 225)	4
Elective	3-4
Oral Communication: (p. 399)	3-4
WR 122 Argument, Research, and Multimodal Composition	4
or WR 227 Technical Writing	
Credits	14-16
Third Term	
Discipline Studies Arts & Letters (recommend ED 112)	3

Discipline Studies Social Science (recommend ED 152 or SOC 222)	3
Discipline Studies Science/Math/Computer Science	3-5
Elective	3-4
Elective	3-4
Credits	15-19
Fourth Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science (recommend ED 219)	3
Elective	3-4
Elective	3-4
Elective	3-4
Credits	15-19
Fifth Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective	3-4
Elective	3-4
Discipline Studies Social Science (recommend SOC 201)	4
Credits	16-21
Sixth Term	
Discipline Studies Social Science (recommend PSY 201)	4
Discipline Studies Science/Math/Computer Science	3-5
Elective	3-4
Elective	3-4
Elective	3-4
Credits	16-21
Total Credits	90-111

Education - Secondary - Associate of Arts Oregon Transfer (AAOT)

Description

If you are interested in teaching students at the middle school or high school level then a pathway into secondary education could be a great fit for you! A career as a teacher offers students a great opportunity to share their passion for a subject as well as the chance to make a difference in the lives of future students. This pathway will include courses related to the field of education as well as courses related to a specific subject area that a student will ultimately want to teach. Students will want to work closely with a COCC education advisor as well as potential transfer universities to select appropriate courses for an efficient transfer process. To teach at the secondary level in the state of Oregon students will ultimately need to pursue a masters degree.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Recommend: HHP 295		
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes ²		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes ²		12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science ²		12-20
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39
Recommend: ED 210, ED 216, ED 219, ED 253		
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

² Dependent on subject area student intends to teach.

Advising Notes

- In Oregon, students are eligible to apply for a preliminary teaching license after completing an approved teacher preparation program, passing the Oregon Educator Licensure Assessments (ORELA) and completing student teaching. Students interested in teaching a high school subject area will need to be experts in the content area they intend to teach and will be required to pass a subject matter exam. Passing the exam allows for the necessary "endorsement" (the subject/s which a teacher is approved to teach). Commonly a student will complete a bachelor's degree in the subject area they intend to teach to build foundational knowledge, followed by or in conjunction with an approved teacher education program.
- Students should check with each school to ensure that the latest transfer information is used when designing their program.
- There are several options for completing a teaching licensure program in Central Oregon.
- Students should consult with an education advisor as early as possible to discuss program options and determine which courses

fulfill transfer requirements to different institutions and different levels of licensure.

- For more information on teacher preparation programs in Oregon, see the Oregon Teacher Standard and Practices Commission website at [oregon.gov/TSPC](https://www.oregon.gov/TSPC/) (<https://www.oregon.gov/TSPC/>). Students may also wish to review COCC's advising guide for teacher education at www.cocc.edu/programs/education/. (<https://www.cocc.edu/programs/education/>)
- Students who plan to major in the subject area they intend to teach should refer to the page in the catalog that aligns with that subject area (Example: Math, Biology, Literature, History, etc.).
- Students pursuing a BA should consider completing three terms of 200-level language courses at COCC. The 100-level language courses will count as electives. The 200-level language courses will partially fulfill the Arts and Letters requirement.
- Students pursuing a BS should consider taking more math, social science and science courses. Language is not necessary for the BS degree, but would be valuable for students with a major or emphasis in international economics. For specific details, speak with an advisor.

Helpful Resources:

Oregon Department of Education
teachin.oregon.gov/en/become-a-teacher-in-oregon (<http://teachin.oregon.gov/en/become-a-teacher-in-oregon/>)

Oregon Teacher Standards and Practices Commission (TSPC)
[oregon.gov/TSPC/Pages/index.aspx](http://www.oregon.gov/TSPC/Pages/index.aspx) (<http://www.oregon.gov/TSPC/Pages/>)

Oregon Educator Licensure Assessments (ORELA)
[orela.nesinc.com](http://www.orela.nesinc.com/) (<http://www.orela.nesinc.com/>)

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Elective	3-4
Health (recommend HHP 295) ¹	3
Mathematics: (p. 399)	4
WR 121	Academic Composition
	Credits
	14-15
Second Term	
Discipline Studies Science/Math/Computer Science	4
Elective	3-4
Elective	2
Oral Communication: (p. 399)	3-4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing
	Credits
	16-18
Third Term	
Discipline Studies Arts & Letters	3-4

Discipline Studies Social Science	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective (recommend ED 216)	3
Elective (recommend ED 219)	3
Credits	15-19

Fourth Term

Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Elective (recommend ED 253)	3
Elective	3-4
Elective	3-4
Credits	15-19

Fifth Term

Discipline Studies Arts & Letters	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective (recommend ED 210)	3
Elective	3
Discipline Studies Social Science	3-4
Credits	15-19

Sixth Term

Discipline Studies Social Science	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective	3
Elective	3
Elective	3
Credits	15-18
Total Credits	90-108

Equity in Education - One Year Certificate of Completion (CC1)

Description

The Equity in Education one year certificate helps students develop skills and dispositions necessary to recognize and develop inclusive and culturally conscious practices, which align with recommendations and guidelines from numerous professional organizations, such as Rise Up-Oregon's Early Learning System Plan, the National Association for the Education of Young Children, the Oregon Department of Education-Early Learning Division, and Teaching Tolerance, which are dedicated to developmentally appropriate and culturally conscious practices in educational settings. The intended audience includes early childhood educators who wish to work in settings within diverse communities, such as Head Start; students who are working toward the AAS degree in Early Childhood Education and who seek a specific focus in equity in education; early learning advocates and professionals who already have degrees and certificates and are seeking additional expertise; and early childhood and elementary pre-service teachers who intend to transfer to additional programs in higher education with a focus on equity and inclusive practices in educational institutions. In addition, this one year certificate may be used as "continuing education" for licensed teachers.

Learning Outcomes

1. Examine and challenge systems of oppression that can exist within educational institutions.

2. Explain the implications of bias on children's learning and development.
3. Assess curriculum and programming for bias and evidence of inclusive practices and access.
4. Observe and document learning environments and programming components for developmentally appropriate and culturally responsive pedagogy.
5. Prepare for increasingly diverse classrooms by evaluating self and society for equitable practices that support children and families participating in education systems.
6. Apply effective communication skills and knowledge of professional standards, associations, licensures, and related laws governing early childhood education.

Entrance Requirements

Academic Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Other Entrance Requirements

Required:

- Students enrolled in early childhood education classes must pass the Oregon Online Criminal Background Check Registry as well as an immunization verification form. In order to maintain good standing in the ECE program and related courses, students must have a current background check and satisfactory evaluations from field placement supervisors.

Course Requirements

Course	Title	Credits
Core Courses		
ED 140 or ED 216	Introduction to ECE Purpose, Structure and Function of Education in a Democracy	3-4
ED 152	Family, School, Com. Relations	3
ED 219 or ED 224	Multicultural Issues in Education Settings AntiBias Curric in Education	3-4
ED 269	Exceptional Children in Early Childhood Education	3
Choose three courses from the core electives below:		9-10
ED 176	Supporting Social, Emotional, and Mental Health in Early Childhood	
ED 245	Trauma Sensitive Classrooms	
ED 253	Learning Across the Lifespan	
ED 290	Eng Lang Dev in Prim Classroom	
Support Courses		
MTH 060	Beginning Algebra I (or higher)	4
WR 121	Academic Composition	4
Other Required Courses		
Choose two courses from the following discipline studies electives:		8
ANTH 103	Cultural Anthropology	
CHN 140	Contemporary Chinese Cultures	
CHN 141	Chinese Culture Through Film	
CHN 201	2nd Yr Mandarin Chinese I	
CHN 202	2nd Yr Mandarin Chinese II	

CHN 203	2nd Yr Mandarin Chinese III
ED 112	Children's Lit & Curriculum
FR 201	Second Year French I
FR 202	Second Year French II
FR 203	Second Year French III
GEOG 107	Cultural Geography
HUM 230	Immigrant Experience American Literature
HUM 240	Native American Literature and Culture
HUM 255	Cultural Diversity in Contemporary American Literature
KIK 201	Second Year Kiksht I
KIK 202	Second Year Kiksht II
KIK 203	Second Year Kiksht III
SOC 212	Race, Class, and Gender
SOC 222	Soc Family/Intimate Relations
SPAN 201	Second Year Spanish I
SPAN 202	Second Year Spanish II
SPAN 203	Second Year Spanish III
WS 101	Introduction to Women's and Gender Studies
<hr/>	
Total Credits	37-40

Advising Notes

Students pursuing the EIE certificate should work closely with their academic advisor to align courses with additional certificate and degree goals, including the AAS, AAOT and transfer goals.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

First Term		Credits
ED 140 or ED 216	Introduction to ECE Purpose, Structure and Function of Education in a Democracy	3-4
ED 152	Family, School, Com. Relations	3
MTH 060	Beginning Algebra I	4
WR 121	Academic Composition	4
Credits		14-15

Second Term

Discipline Studies Elective		4
Discipline Studies Elective		4
Core elective		3-4
Credits		11-12

Third Term

ED 219 or ED 224	Multicultural Issues in Education Settings AntiBias Curric in Education	3-4
ED 269	Exceptional Children in Early Childhood Education	3
Core elective		3-4

Core elective	3-4
Credits	12-15
Total Credits	37-42

Emergency Medical Services

COCC's emergency medical services (EMS) discipline provides comprehensive training for students interested in working in the health care field of emergency first responder, ranging from EMT to Paramedic. EMS graduates work in a variety of settings including fire departments, private and public ambulance services, hospitals (emergency departments), emergency communication systems, law enforcement agencies, search and rescue, recreation industry, forest service/smokejumpers and some rural clinical environments. Paramedics provide many services to their communities, often working in teams where communication and technical skills are expected.

<https://www.cocc.edu/programs/ems/> (<https://www.cocc.edu/programs/ems/default.aspx>)

Contact:

David Schappe
541-383-7751
Cascades Hall, Bend Campus

Department: Natural and Industrial Resources
Department Chair: Paula Simone

Programs

Career and Technical Education

- Emergency Medical Technician - One Year Certificate of Completion (CC1) - Pending Approval (p. 138)
- Paramedicine - Associate of Applied Science (AAS) (p. 140)

Courses

EMT 151 Emergency Medical Technician Part A (5 Credits)

Prerequisites: Department approval, WR 065 or higher or placement into WR 121, MTH 020 or higher or placement into MTH 060.

Develops skills in pre-hospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Part 1 of 2-part National EMS Standards Curriculum course. Students must complete an eight (8) hour "shift" hospital field experience. Required prior to first class: documentation of cleared criminal background check, current immunizations, current American Heart Association BLS for the Healthcare Provider (CPR) certification.

EMT 152 Emergency Medical Technician Part B (5 Credits)

Prerequisites: Department approval and EMT 151 (completed at COCC within one academic year).

Develops skills in pre-hospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Part 2 of 2-part National EMS Standards Curriculum course. Students must complete an eight (8) hour "shift" EMS agency ride-a-long.

EMT 163 Advanced EMT Part I (5 Credits)

Prerequisites: students must have a Valid Oregon EMT license, HealthCare provider CPR card, pass a criminal history check, and complete clinical site required immunizations to attend this course. This is part 1 of a 2-part course. The Advanced Emergency Medical Technician course prepares the AEMT student to provide prehospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Areas of study include an introduction to emergency medical services systems, roles and responsibilities of AEMT's, anatomy and physiology, medical emergencies, trauma, special considerations for working in the prehospital setting and providing patient transportation.

EMT 164 Advanced EMT Part II (5 Credits)

Prerequisites: EMT163 (within the current or previous academic year at COCC); students must have a valid Oregon EMT license, HealthCare provider CPR card, pass a criminal history check, and complete clinical site required immunizations to attend this course. This is part 2 of a 2-part course. The Advanced Emergency Medical Technician course prepares the AEMT student to provide prehospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Areas of study include an introduction to emergency medical services systems, roles and responsibilities of AEMT's, anatomy and physiology, medical emergencies, trauma, special considerations for working in the pre hospital setting and providing patient transportation.

EMT 170 Emergency Response Communication/Documentation (2 Credits)

Covers principles of therapeutic communication, verbal, written, and electronic communications in the provision of EMS, documentation of elements of patient assessment, care and transport, communication systems, radio types, reports, codes and correct techniques.

EMT 171 Emergency Response Patient Transport (2 Credits)

Covers ambulance operations, laws, maintenance, safety, emergency response driving, and route planning. Includes mandatory ten-hour field-driving course. Required prior to first class: valid Oregon driver's license.

EMT 188 Special Studies: Emergency Medical Technician (1-5 Credits)

Explores topics of current interest in the discipline.

EMT 195 Crisis Intervention (3 Credits)

Prepares the student to deal with situations facing both the patient and caregiver. Included are all facets of crisis intervention techniques and recent advances in critical incident stress debriefing intervention.

EMT 199 Selected Topics: Emergency Medical Technician (1-5 Credits)

This course is in development.

EMT 280 Paramedic Co-op Work Experience (4 Credits)

Prerequisites: students will have needed to pass all didactic and clinical requirements EMT 290, EMT 291, EMT 292, EMT 293, EMT 294, EMT 295, EMT 296, EMT 297, and EMT 298; department approval.

Provides the educational field internship experience on an Advanced Life Support (ALS) transporting ambulance required to prepare the student to achieve licensure as a Paramedic. The field internship allows the paramedic student to apply previously learned theory and skills while under the direct observation and guidance of a preceptor. Student must have successfully completed all paramedic Lecture/Lab clinical requirements in order to register for this course. Student must pass a terminal competency exam at the completion of all CWE requirements. This course will meet the 4 credits of CWE required for completion of the paramedic program.

EMT 280A Paramedic Co-op Work Experience (1 Credit)

Prerequisites: EMT 290, EMT 291, EMT 296 and department approval. This is a 1 credit elective CWE offering available only to students affiliated with an agency that is a 911 Advanced Life Support (ALS) transporting agency. Provides the educational field internship experience required to prepare the student to achieve licensure as a Paramedic. The filed internship allows the paramedic student to apply previously learned theory and skills while under the direct observation and guidance of a preceptor.

EMT 280B Paramedic Co-op Work Experience (2 Credits)

Prerequisites: EMT 294, EMT 295 and department approval. If a student has taken two 1-credit CWEs during the academic year, this 2-credit CWE must be taken in order to reach 4 credits of CWE required by the program. The CWE will provide the educational field internship experience on an Advanced Life Support Ambulance, required to prepare the student to achieve licensure as a Paramedic. The field internship allows the paramedic student to apply learned theory and skills in the internship setting while under the direct observation and guidance of a preceptor. Students must pass a terminal competency exam at the completion of all CWE requirements. Students will need 4 credits of CWE for completion of the Paramedicine degree. This course is meant to be taken during the Summer Term, if the student completed two 1-credit EMT 280A courses in the Winter and Spring Terms.

EMT 280C Paramedic Co-op Work Experience (3 Credits)

Prerequisites: EMT 294, EMT 295 and department approval. If a student has taken a 1-credit CWE during the academic year, this 3-credit CWE must be taken in order to reach 4 credits of CWE required by the program. The CWE will provide the educational field internship experience on an Advanced Life Support Ambulance, required to prepare the student to achieve licensure as a Paramedic. The field internship allows the paramedic student to apply learned theory and skills in the internship setting while under the direct observation and guidance of a preceptor. Students must pass a terminal competency exam at the completion of all CWE requirements. Students will need 4 credits of CWE for completion of the Paramedicine degree. This course is meant to be taken if the student completed one 1-credit EMT 280A courses during either the Winter or Spring Terms.

EMT 288 Special Studies: Emergency Medical Technician (1-5 Credits)

Explores topics of current interest in the discipline.

EMT 290 Paramedic Part I (8 Credits)

Corequisites: EMT 291.

First term of a three-term Didactic Series, including EMT 292 and EMT 294. Focuses on patient assessment; airway/ventilation; pathophysiology of shock; general pharmacology; and respiratory, cardiovascular, neurological, behavioral, and acute abdominal emergencies. Lab setting will begin the process of students' learning of required skills needed of a paramedic, such as IV establishment, medication administration, and patient assessments for a variety of patient presentations.

EMT 291 Paramedic Part I Clinical (3 Credits)

Corequisites: EMT 290.

This is a competency-based clinical experience, which emphasizes patient assessment, formulation of presumptive diagnoses and treatment plans. The clinical experiences are performed at local hospitals. This is the first of three courses in the clinical setting for a paramedic student. Student must have been accepted into the second year paramedic program.

EMT 292 Paramedic Part II (8 Credits)**Prerequisites:** EMT 290 and EMT 291.**Corequisites:** EMT 293.

Offers second term of a three-term course, which includes EMT 290 and EMT 294. Focuses on anaphylactic, toxicological, environmental, geriatric, pediatric, neonatal, and endocrine emergencies; infectious diseases; capnography; special patient populations; hematology; psychiatric care; crime scene preservation; genitourinary care; and trauma care. Applies didactic knowledge to campus-based laboratory skills practice.

EMT 293 Paramedic Clinical Part II (3 Credits)**Prerequisites:** EMT 290 and EMT 291.**Corequisites:** EMT 292.

This is a competency-based clinical experience, which emphasizes patient assessment, formulation of presumptive diagnoses and treatment plans. The clinical experiences are performed at local hospitals. This is the second of three courses in the clinical setting for a paramedic student. Student must have been accepted into the second year paramedic program.

EMT 294 Paramedic Part III (8 Credits)**Prerequisites:** EMT 292 and EMT 293.**Corequisites:** EMT 295.

Offers third term of a three-term course, which includes EMT 290 and EMT 292. Continues on anaphylactic, toxicological, environmental, geriatric, pediatric, neonatal, and endocrine emergencies; infectious diseases; capnography; special patient populations; hematology; psychiatric care; crime scene preservation; genitourinary care; and trauma care. Applies didactic knowledge to campus-based laboratory skills practice.

EMT 295 Paramedic Clinical Part III (3 Credits)**Prerequisites:** EMT 292 and EMT 293.**Corequisites:** EMT 294.

This is a competency-based clinical experience, which emphasizes patient assessment, formulation of presumptive diagnoses and treatment plans. The clinical experiences are performed at local hospitals. This is the third of three courses in the clinical setting for a paramedic student. Student must have been accepted into the second year paramedic program.

EMT 296 Advanced Cardiac Life Support (ACLS) (1 Credit)

The Advanced Cardiovascular Life Support (ACLS) Provider course is designed for healthcare providers who either direct or participate in the management of cardiopulmonary arrest or other cardiovascular emergencies. Through didactic instruction and active participation in simulated cases, the students will enhance their skills and clinical decision-making abilities for the diagnosis and treatment of cardiopulmonary arrest, acute arrhythmia, Stroke, and acute coronary syndromes. At successful completion, students will receive an AHA ACLS card. Department approval is required.

EMT 297 Pediatric Advanced Life Support (PALS) (1 Credit)**Prerequisites:** department approval.

In the Pediatric Advanced Life Support (PALS) course, you will reinforce and enhance your skills in the treatment of pediatric arrest and periarrest through active participation in a series of simulated pediatric emergencies. These simulations are designed to reinforce the important concepts of systematic approach to pediatric assessment, basic life support, PALS treatment algorithms, and effective resuscitation team dynamics. After successful completion of course, students will receive an AHA PALS card. The goal of the PALS course is to improve the quality of care provided to seriously ill or injured children, resulting in improved outcomes.

EMT 298 Prehospital Trauma Life Support (PHTLS) (1 Credit)**Prerequisites:** department approval.

In the Prehospital Trauma Life Support (PHTLS) course, you will reinforce and enhance your skills in the treatment of trauma-associated patients through active participation in a series of simulated traumatic emergencies. These simulations are designed to reinforce the important concepts of systematic approach to recognition, assessment, and treatment of a multitude of multisystem trauma patients. After successful completion, students will receive an NAEMT PHTLS card.

EMT 299 Selected Topics: Emergency Medical Technician (1-5 Credits)

This course is in development.

Emergency Medical Technician - One Year Certificate of Completion (CC1) - Pending Approval

Description

The Emergency Medical Technician one year certificate of completion is designed for students seeking entry-level jobs as emergency medical technicians (EMTs). The program provides students with the courses to be eligible to take the EMT license exam as well as required training for graduates to legally operate an ambulance. In addition, this program is contained within the AAS in Paramedicine so students who wish can continue seamlessly to paramedicine. Jobs for EMT graduates include positions in all of the municipal paid departments as well as the wildland fire community for the U.S. Forest Service, BLM, ODF and BIA.

Learning Outcomes

1. Act in accordance with the ethical and professional medical standards of the entry-level EMT.
2. Meet the academic eligibility requirements for taking both cognitive and practical State and National Certification examinations at the EMT level.
3. Demonstrate communication skills of the medical environment in order to develop and maintain professional client relationships at the EMT level.
4. Demonstrate the professional and technical skill set necessary to meet the EMT standard of care in a safe manner under diverse conditions. (OAR Chapter 847)

Entrance Requirements

Academic Entrance Requirements

- Recommended
 - The following guidelines are recommended for students to complete the certificate in one year.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or WR 121 Academic Composition plus WR 098 Writing Seminar or completion of WR 065 Rhetoric and Critical Thinking II or higher.
 - Minimum placement score into MTH 060 Beginning Algebra I or completion of MTH 020 Pre-Algebra or higher.

Other Entrance Requirements

- Required:
 - High school diploma or GED.
 - Students must be 18 years old or older to test for state and national exams.

- A current Health Care Provider CPR card is required prior to placement into EMT courses.
- Uploaded and verified, required immunizations as set forth in clinical agreement with St. Charles hospital system.
- All COCC students enrolled in an EMT program will have to pass a background check as a condition of their acceptance into a medical, fire or other facility for training. Students who do not pass the background check may not be eligible to complete training at affiliated sites, to sit for licensure or certification exams, or to be hired for some professional positions. Students who believe their personal history may interfere with their ability to complete the program of study or to obtain licensure or certification in their chosen field should contact the appropriate state board and the program director.
- Prior to entry into a health profession program, students must complete a 10 panel urine drug screen with Verified Credentials, Inc. With the exception of certain prescribed medications, students with a positive drug screen, which prevents them from attending clinical, will be disqualified from entering the program.

Course Requirements

Course	Title	Credits
Support Courses		
Choose one from the following:		3-4
COMM 111	Fundamentals Public Speaking	
COMM 114	Argumentation & Discourse	
COMM 115	Intro Intercultural Comm.	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
HHP 242	Stress Management	3
or HHP 266	Nutrition for Health	
or HHP 295	Health and Fitness	
MTH 065	Beginning Algebra II (or higher)	4
WR 121	Academic Composition	4
Core Courses		
AH 111	Medical Terminology I	3
BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4
EMT 151	EMT Basic Part A	5
EMT 152	EMT Basic Part B	5
EMT 170	Emergency Response Communication/ Documentation	2
EMT 171	Emerg Response Pt Transport	2
EMT 195	Crisis Intervention	3
SFS 101	Introduction to Emergency Services	4
SFS 230	Rescue Practices	3
EMS Elective: ANTH 103, BI 234, CJ 100, EMT 163, EMT 164, OL 244, PSY 101, PSY 201, PSY 202, PSY 216, SOC 201		3-5
Other Required Courses		
FOR 211	Supervision and Leadership	3
or BA 285	Business Human Relations	
Total Credits		59-62

Advising Notes

- Speak with the program director or an advisor to make sure students understand the state and national testing process for EMT.
- Program may take longer than a year depending on support courses necessary to meet minimum course requirements.

Performance Standards

- Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- All courses in the program must be completed with a grade of C or higher.

Sample Plan

	Credits
First Year	
Summer	
Choose one from the following:	
COMM 111	Fundamentals Public Speaking
COMM 114	Argumentation & Discourse
COMM 115	Intro Intercultural Comm.
COMM 218	Interpersonal Communication
COMM 219	Small Group Communication
HHP 242	Stress Management
or HHP 266	Nutrition for Health
or HHP 295	Health and Fitness
MTH 065	Beginning Algebra II
WR 121	Academic Composition
<hr/>	
	Credits
	14-15
Second Year	
Fall	
BI 231	Human Anatomy and Physiology I
EMT 151	EMT Basic Part A
EMT 170	Emergency Response Communication/ Documentation
SFS 101	Introduction to Emergency Services
<hr/>	
	Credits
	15
Winter	
BI 232	Human Anatomy and Physiology II
EMS Elective	
EMT 152	EMT Basic Part B
EMT 195	Crisis Intervention
<hr/>	
	Credits
	15-17
Spring	
AH 111	Medical Terminology I
BI 233	Human Anatomy and Physiology III
EMT 171	Emerg Response Pt Transport
FOR 211	Supervision and Leadership
or BA 285	Business Human Relations
SFS 230	Rescue Practices
<hr/>	
	Credits
	15
<hr/>	
	Total Credits
	59-62

Paramedicine - Associate of Applied Science (AAS)

Description

The AAS in Paramedicine is designed for students seeking a career in emergency medical services and/or the fire service industry. The program meets or exceeds the required technical skills and knowledge necessary for national and state licensure testing.

The program is challenging and will require participants to spend between 600 and 800 hours in clinical and field settings. The program contains certification requirements at the Emergency Medical Technician (EMT) and Paramedic levels. Students will need to satisfy a computer based and practical hands-on test through the National Registry of EMTs to complete certification.

Paramedics work in a variety of settings including fire departments, private and public ambulance services, hospitals (emergency departments), emergency communication systems, law enforcement agencies, search and rescue, recreation industry, forest service/ smokejumpers and some rural clinical environments. Paramedics provide many services to their communities, often working in teams where communication and technical skills are expected. Starting salaries range from \$3,500 to \$5000 per month.

Learning Outcomes

1. **Critical Thinking:** Use critical thinking skills to confidently and effectively manage emergency situations.
2. **Professional Standards:** Practice professional standards by demonstrating a strong work ethic, positive attitude, respect for patients, ability to work cooperatively as a health care team member, and willingness to maintain and enhance technical skills.
3. **Communication:** Communicate clearly and professionally using verbal and nonverbal communication techniques.
4. **Assessment:** Perform accurate scene safety and patient assessments.
5. **Technical Knowledge:** Apply appropriate emergency medical and technical knowledge as required in emergency situations.
6. **Personal Well-being & Safety:** Apply safety and infection control practices to maintain personal and professional well-being and to ensure patient safety.
7. **Clinical & Technical Skills:** Manage emergency patient care and treatment appropriately within the scope of practice for an Emergency Medical Technician-Paramedic.
8. **Medical Legal Issues:** Apply legal knowledge and medical ethics to all patient care situations by documenting accurate and complete patient records and reports and maintaining patient confidentiality.
9. **Certification:** Meet requirements for certification at appropriate level

Entrance Requirements

Academic Entrance Requirements

- **Required:**
 - Successfully complete the application process and be accepted into paramedic program.
- **Recommended:**
 - It is strongly recommended that candidates planning to enroll in the paramedicine program have a strong background in high school or college math and chemistry. This knowledge will

enhance the student's success in anatomy and physiology and college-level math.

Other Entrance Requirements

- **Required:**
 - High school diploma or GED.
 - Students must be 18 years old or older prior to day 1 of any EMT class, and to be eligible test for state and national exams.
 - A current Health Care Provider CPR card is required prior to placement into EMT or paramedic courses.
 - Uploaded and verified, required immunizations as set forth in clinical agreement with St. Charles hospital system.
 - Information on the courses that are required for entry into the paramedic course as prerequisites and those used to calculate points for selection can be found on the paramedicine website (<https://www.cocc.edu/programs/ems/default.aspx>).
 - All COCC students enrolled in an EMT or paramedic course and/or seeking agency affiliation requiring practical experience, will have to pass a background check as a condition of their acceptance into a medical, fire or other facility for training. Students who do not pass the background check may not be eligible to complete training at affiliated sites, to sit for licensure or certification exams, or to be hired for some professional positions. Students who believe their personal history may interfere with their ability to complete the program of study or to obtain licensure or certification in their chosen field should contact the appropriate state board and the paramedicine program director.
- Prior to entry into a health profession program, students must complete a 10 panel urine drug screen with Verified Credentials, Inc. With the exception of certain prescribed medications, students with a positive drug screen, which prevents them from attending clinical, will be disqualified from entering the program. Please refer to the paramedicine website (<https://www.cocc.edu/programs/ems/default.aspx>) and/or program handbook for more information.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- CPR for Healthcare Provider card: \$79. Must remain current throughout EMT basic and paramedic classes.
- Background check: \$55. Students must pass a prior to enrolling in the EMT basic or paramedic classes.
- Drug screen: \$55.
- Verified Credentials Immunization upload \$15. My Clinical Exchange Upload (St. Charles clinicals) \$36.50. Documentation of completion of the following immunizations; Hepatitis B, current TB, MMR, annual Influenza, Tetanus within previous 10 years, Varicella (Chickenpox).
- In some cases fees associated with immunizations can range from \$20-\$200.
- Materials (stethoscope, paramedic field manual, uniforms, etc.) range from \$50-\$250.
- Testing fees which include National Registry computer exams, practical skills testing, fingerprint background checks (depending on location of practical testing) range from \$450-\$1,000 (includes travel outside of the area).

- Paramedic students should anticipate costs for housing and living expenses when doing their field internship outside of the local area.

- ² Student will have the option if affiliated with a transporting EMS agency to enroll in a 1 credit CWE course in the Winter and/or Spring terms. If a student completes a CWE in one or both of these terms, they will enroll in a two or three credit CWE for the Summer term in order to have a total of four credits worth of CWE. Summer CWE is required by the program as more than 50% of a student's patient contacts needs to happen at the conclusion of all didactic and clinical experiences.

Course Requirements

Course	Title	Credits
Core Courses		
AH 111	Medical Terminology I	3
BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4
EMT 151	EMT Basic Part A	5
EMT 152	EMT Basic Part B	5
EMT 170	Emergency Response Communication/Documentation	2
EMT 171	Emerg Response Pt Transport	2
EMT 195	Crisis Intervention	3
EMT 290	Paramedic Part I	8
EMT 291	Paramedic Part I Clinical	3
EMT 292	Paramedic Part II	8
EMT 293	Paramedic Clinical Part II	3
EMT 294	Paramedic Part III	8
EMT 295	Paramedic Clinical Part III	3
EMT 296	Advanced Cardiac Life Support (ACLS)	1
EMT 297	Pediatric Advanced Life Support (PALS)	1
EMT 298	Prehospital Trauma Life Support (PHTLS)	1
SFS 101	Introduction to Emergency Services	4
SFS 230	Rescue Practices	3
Choose enough from the following to reach 4 credits: ²		4
EMT 280	Paramedic Co-op Work Experience	
EMT 280A	Paramedic Co-op Work Experience	
EMT 280B	Paramedic Co-op Work Experience	
EMT 280C	Paramedic Co-op Work Experience	
Paramedic Elective: ANTH 103, BI 234, CJ 100, EMT 163, EMT 164, OL 244, PSY 101, PSY 201, PSY 202, PSY 216, SOC 201		3-5
Other Required Courses		
Choose one of the following:		3-4
COMM 111	Fundamentals Public Speaking	
COMM 114	Argumentation & Discourse	
COMM 115	Intro Intercultural Comm.	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
HHP 242	Stress Management	3
or HHP 266	Nutrition for Health	
or HHP 295	Health and Fitness	
FOR 211	Supervision and Leadership	3
or BA 285	Business Human Relations	
MTH 065	Beginning Algebra II (or higher) ¹	4
WR 121	Academic Composition	4
Total Credits		99-102

Advising Notes

- Students should contact the Admissions and Records office to obtain details for paramedic course selection and application process.
- Speak with an advisor prior to registration to get a list of recommended courses in categories that offer more than one option such as the general education requirement.
- Speak with the paramedicine program director to make sure students understand the state and national testing process for EMT and paramedic courses.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - All students will undergo drug screening, background check and immunization verification with the vendor approved by Central Oregon Community College, prior to entrance into the EMT or Paramedic certification courses, at their expense. Students will be administratively withdrawn from the program and the seat given to an alternate student if requirements are not initiated with the specified vendor by the due date indicated by the Paramedicine program. Students with a positive urine drug screen will be disqualified from entering the EMT or Paramedic certification courses at Central Oregon Community College, with the exception of certain prescribed medications. The director of EMS/SFS will notify the student of positive drug screens and their resulting disqualification from the program. Students have a right to appeal the decision.
 - State requirements: 85 percent attendance in EMT or Paramedic classes; 100 percent attendance for clinical and field rotations; and students must pass the overall EMT or Paramedic class at a minimum of 76 percent to sit for state and national registry testing and certification.
 - All prerequisite courses must be completed at an average of a 3.0 GPA or higher.
 - Students must maintain a minimum overall 2.7 GPA to maintain enrollment in the program; students falling below an overall 2.7 GPA during the Paramedicine program will have one term to correct the deficit. Students who fail to bring their grades up may not be allowed to register the following term and complete the course. They may reapply for the following year if they meet current requirements as set in Paramedic program readmission policy. Students applying for readmission who have failed a course will have to repeat the entire program sequence.
 - Upon completion of EMT 151 EMT Basic Part A and EMT 152 EMT Basic Part B, students must pass the National Registry exam and be certified in the state of Oregon before continuing in

¹ Students planning to transfer should take MTH 105 Math in Society or MTH 111 College Algebra

Paramedic courses. Currently certified students do not need to retake the courses for the degree but must hold a current Oregon EMT License or higher to enter the Paramedic course. License must remain current during entire program including CWE; failure to maintain current license and CPR card will result in student removal from the program.

Sample Plan

First Year

Fall		Credits
BI 231	Human Anatomy and Physiology I	4
EMT 151	EMT Basic Part A	5
EMT 170	Emergency Response Communication/Documentation	2
EMT 171	Emerg Response Pt Transport	2
SFS 101	Introduction to Emergency Services	4
SFS 230	Rescue Practices	3
Credits		20

Winter

BI 232	Human Anatomy and Physiology II	4
EMT 152	EMT Basic Part B	5
EMT 195	Crisis Intervention	3
Choose one of the following:		3-4
COMM 111	Fundamentals Public Speaking	
COMM 114	Argumentation & Discourse	
COMM 115	Intro Intercultural Comm.	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	

Choose one from the following:		3-5
ANTH 103	Cultural Anthropology	
BI 234	Microbiology	
CJ 100	Survey of the Criminal Justice System	
EMT 163	Advanced EMT Part I	
EMT 164	Advanced EMT Part II	
OL 244	Psych. of Risk & Adventure	
PSY 101	Applied Psychology	
PSY 201	Mind and Brain	
PSY 202	Mind and Society	
PSY 216	Social Psychology	
SOC 201	Introduction to Sociology	
Credits		18-21

Spring

AH 111	Medical Terminology I	3
BI 233	Human Anatomy and Physiology III	4
FOR 211	Supervision and Leadership	3
MTH 065	Beginning Algebra II (higher)	4
WR 121	Academic Composition	4
Choose one of the following:		3
HHP 242	Stress Management	
HHP 266	Nutrition for Health	
HHP 295	Health and Fitness	
Credits		21

Second Year

Fall

If admitted/selected into the Paramedicine classes:		
EMT 290	Paramedic Part I	8
EMT 291	Paramedic Part I Clinical	3
EMT 296	Advanced Cardiac Life Support (ACLS)	1
Credits		12

Winter

EMT 292	Paramedic Part II	8
EMT 293	Paramedic Clinical Part II	3
EMT 297	Pediatric Advanced Life Support (PALS)	1
Credits		12

Spring

EMT 294	Paramedic Part III	8
EMT 295	Paramedic Clinical Part III	3
EMT 298	Prehospital Trauma Life Support (PHTLS)	1
Credits		12

Summer

EMT 280	Paramedic Co-op Work Experience	4
Credits		4
Total Credits		99-102

Engineering & Physics

While there are small differences between the programs of each branch of engineering and physics, COCC works to provide the courses common to all programs. All engineering and physics programs share a common core of math, science, and skills courses. Basic skills in writing, reading, and mathematics are essential. These programs requires a high degree of mathematical proficiency with calculus required for all transfer programs.

<https://www.cocc.edu/programs/engineering/> (<https://www.cocc.edu/programs/engineering/default.aspx>)

Contact:

Wendi Wampler
541-318-3776
Science Center, Bend Campus

Department: Science
Department Chair: Carol Higginbotham

Programs

Transfer

- Engineering Emphasis - Associate of Science (AS) (p. 144)
- Physics - Associate of Arts Oregon Transfer (AAOT) (p. 145)

Courses

ENGR 188 Special Studies: Engineering (1-6 Credits)

Provides an opportunity to explore an area of engineering by doing a special project or to gain practical experience by working with a professional engineer.

ENGR 199 Selected Topics: Engineering (1-6 Credits)

This course is in development.

ENGR 201 Electrical Fundamentals (4 Credits)

Recommended preparation: PH 202/212 and MTH 251/252.

Topics covered in this course include: DC and 1st order transient analysis, Ohm's Law, Kirchhoff's Law (KCL and KVL), nodal analysis, branch analysis, source transformations, Thevenin and Norton equivalent circuits, maximum power transfer, operational amplifiers, inductance, capacitance, and transient response of RL and RC.

ENGR 202 Electrical Fundamentals II (4 Credits)

Recommended preparation: ENGR 201 and MTH 251/252.

Topics covered in this course include: AC and 2nd order transient analysis, sinusoids and phasors, sinusoidal steady-state analysis, nodal analysis, branch analysis, source transformations, Thevenin's and Norton's equivalent circuits, sinusoidal steady-state power calculation, and balanced three-phase circuits.

ENGR 211 Statics (4 Credits)

Prerequisites: MTH 251 and PH 211.

Analyzes forces induced in structures and machines by various types of loading.

ENGR 212 Dynamics (4 Credits)

Prerequisites: ENGR 211 and MTH 252.

Studies kinematics, Newton's law of motion, and work-energy and impulse-momentum relationships as applied to engineering systems.

ENGR 213 Strength Of Material (4 Credits)

Prerequisites: ENGR 211 and MTH 252.

Studies properties of structure materials. Analyzes stress and deformation in axially-loaded members, in circular shafts and beams and in statically indeterminate systems containing these components.

GE 101 Engineering Orientation (3 Credits)

Introduces students to many different engineering fields through guest lectures, field trips, and hands-on engineering projects and problem-solving exercises. Develops understanding of similarities and differences between the engineering fields. Discusses professional engineering testing and licensing requirements.

GE 102 Engineering Problem Solving and Technology (3 Credits)

Recommended preparation: MTH 112.

Introduces the use of Microsoft Excel for the solution of engineering problems and familiarizes students with the decision making and report preparation process in engineering design. Development of spreadsheets for analyzing engineering problems and preparation of final design reports that outline in detail design evaluation, recommendation and implementation.

GS 104 Physical Science: Physics (4 Credits)

Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

Energy is used as the theme to develop basic understanding of introductory principles of physics. Energy topics include mechanical, acoustic, heat, electric, radiant and nuclear. Emphasis placed on practical application of various energy forms.

GS 107 Physical Science: Astronomy (4 Credits)

Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

Introduction to astronomy including solar system, stellar systems and cosmology. Some individual observing may be required.

PH 201 General Physics I (5 Credits)

Studies Newtonian Mechanics beginning with basic math concepts and continuing into kinematics, dynamics, uniform circular motion, energy, momentum, and rotational equivalents of some of these topics. Lab addresses experiments and applied settings of Newtonian Mechanics along with explorations of diverse methods for analyzing and interpreting scientific data. Meets the basic requirements for many pre-health and life science programs. Should be taken in sequence. Recommended to be taken with MTH 111.

PH 202 General Physics II (5 Credits)

Studies basic electrostatic and magnetic interactions. Builds on concepts from PH 201 and continues into electrostatic forces, electric field concepts, electric potential, basic DC circuit concepts, magnetic interactions and forces, sources of magnetic fields and Faraday's Law. Lab addresses concepts and measurements in thermal physics and continues to explore the processes by which science seeks answers to questions. Meets the basic requirements for many pre-health and life science programs. Should be taken in sequence. Recommended to be taken with MTH 112.

PH 203 General Physics III (5 Credits)

Studies periodic behavior and topics from modern physics. Builds on concepts from previous terms and considers the physics of periodic motion, mechanical waves, wave interference, standing waves, acoustic waves, electromagnetic waves, geometric optics, diffractions and topics from special relativity to quantum mechanics. Lab includes basic optical experiences along with a long-term project to affirm student abilities to integrate investigative lab concepts from previous terms. Meets the basic requirements for many pre-health and life science programs. Should be taken in sequence.

PH 211 General Physics I (5 Credits)

Recommended preparation: MTH 251.

Studies Newtonian Mechanics beginning with basic math concepts and continuing into kinematics, dynamics, uniform circular motion, energy, momentum, and rotational equivalents of some of these topics. At all stages, applications of calculus to the solving of problems will be explored. Lab addresses experiments and applied settings of Newtonian Mechanics along with explorations of diverse methods for analyzing and interpreting scientific data. Required for engineering students and most students planning programs in the physical sciences. Should be taken in sequence.

PH 212 General Physics II (5 Credits)

Recommended preparation: MTH 252 and PH 211.

Studies basic electrostatic and magnetic interactions. Builds on concepts from PH 211 and continues into electrostatic forces, electric field concepts, electric potential, basic DC circuit concepts, magnetic interactions and forces, sources of magnetic fields and Faraday's Law. At all stages, applications of calculus to the solving of problems will be explored. Lab addresses concepts and measurements in thermal physics and continues to explore the processes by which science seeks answers to questions. Required for engineering students and most students planning programs in the physical sciences. Should be taken in sequence.

PH 213 General Physics III (5 Credits)

Recommended preparation: MTH 253 and PH 212; recommended to be taken with MTH 256.

Studies periodic behavior and topics from modern physics. Builds on concepts from previous terms and considers the physics of periodic motion, mechanical waves, wave interference, standing waves, acoustic waves, electromagnetic waves, geometric optics, diffractions and topics from special relativity to quantum mechanics. At all stages, applications of calculus to the solving of problems will be explored. Lab includes basic optical experiences along with a long-term project to affirm student abilities to integrate investigative lab concepts from previous terms. Required for engineering students and most students planning programs in the physical sciences. Should be taken in sequence.

PH 299 Selected Topics: Physics (1-5 Credits)

This course is in development.

Engineering Emphasis - Associate of Science (AS)

Description

COCC offers freshman and sophomore core science, engineering and general education courses needed for most engineering majors. Students earning an engineering degree choose from among the many branches of engineering available, such as: civil, mechanical, electrical, chemical, computer and OSU-Cascades' Energy Systems Engineering degree. Certain engineering majors and branches may require additional courses not offered at COCC.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative

explanations, solve problems, and make evidence-based decisions in an ethical manner; and

3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health		
HHP 295	Health and Fitness	3
Mathematics		
MTH 251	Calculus I	4
Oral Communication		
COMM 111	Fundamentals Public Speaking	4
Writing		
WR 121	Academic Composition	4
WR 227	Technical Writing	4
General Education/Discipline studies		
Arts and Letters: (p. 399)		
Choose two courses from the Discipline Studies list		6-8
Social Science: (p. 404)		
Choose two courses from the Discipline Studies list		6-8
Recommend: EC 201		
Program Requirements		
CH 221	General Chemistry I	5
CH 222	General Chemistry II	5
ENGR 201	Electrical Fundamentals	4

ENGR 202	Electrical Fundamentals II	4
ENGR 211	Statics	4
ENGR 212	Dynamics	4
ENGR 213	Strength Of Material	4
GE 101	Engineering Orientation	3
GE 102	Eng. Prob. Solv. & Technology	3
MTH 252	Calculus II	4
MTH 253	Calculus III	4
MTH 254	Vector Calculus I	4
MTH 256	Applied Differential Equations	4
PH 211	General Physics I	5
PH 212	General Physics II	5
PH 213	General Physics III	5
Total Credits		98-102

Advising Notes

Most engineering majors have few, if any, true electives and students must sequence courses very intentionally. The elective category should be used to tailor the program toward a specific engineering major or branch. Following are some general guidelines. We recommend students research requirements directly.

Chemical: CH 223 General Chemistry III, MTH 253 Calculus III. Note that OSU requires a year-long sequence prior to the junior year that COCC does not offer.

Civil: ENGR 212 Dynamics

Energy Systems Engineering: BA 217 Accounting Fundamentals, CS 161 Computer Science I, EC 201 Microeconomics, ENGR 202 Electrical Fundamentals II, ENGR 212 Dynamics, MTH 253 Calculus III

Mechanical: CIS programming class (CIS 122 Introduction to Programming, CIS 133JS Introduction to JavaScript, CIS 133P Introduction to PHP, CS 161 Computer Science I, CS 162 Computer Science II), CIS 125A1 AutoCAD 1, CIS 125A2 AutoCAD 2, ENGR 212 Dynamics, MFG 103 Welding Technology I, MFG 112 Manufacturing Processes II.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All General Education/Foundational courses must be completed with a C grade or higher.

Sample Plan

First Year

Fall		Credits
GE 101	Engineering Orientation	3
HHP 295	Health and Fitness	3
MTH 251	Calculus I	4
WR 121	Academic Composition	4
Credits		14

Winter

CH 221	General Chemistry I	5
COMM 111	Fundamentals Public Speaking	4

PH 211	General Physics I	5
MTH 252	Calculus II	4
Credits		18

Spring

CH 222	General Chemistry II	5
GE 102	Eng. Prob. Solv. & Technology	3
MTH 253	Calculus III	4
PH 212	General Physics II	5
Credits		17

Second Year

Fall

ENGR 211	Statics	4
MTH 254	Vector Calculus I	4
PH 213	General Physics III	5
WR 227	Technical Writing	4
Credits		17

Winter

Discipline Studies Social Science (recommend EC 201)		4
ENGR 201	Electrical Fundamentals	4
ENGR 213	Strength Of Material	4
MTH 256	Applied Differential Equations	4
Credits		16

Spring

Discipline Studies Arts & Letters		3-4
Discipline Studies Arts & Letters		3-4
Discipline Studies Social Science		3-4
ENGR 202	Electrical Fundamentals II	4
ENGR 212	Dynamics	4
Credits		17-20
Total Credits		99-102

Physics - Associate of Arts Oregon Transfer (AAOT)

Description

Physics is arguably the oldest academic discipline; it is the study of matter and its motion and related energy. The Associate of Arts Oregon Transfer (AAOT) with a focus in physics includes most courses that are commonly required for a major and meets lower division general education requirements at all Oregon public universities. Since there are minor variations between university physics programs, students may have to take some additional courses after transferring.

Learning Outcomes

Arts & Letters

- Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
- Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Recommend: MTH 251		
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
	or WR 227	Technical Writing
Recommend: WR 227		
General Education/Discipline Studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Recommend: MTH 252, PH 211, PH 212, PH 213		
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39
Recommend: CH 221, CH 222, CH 223, ENGR 201, ENGR 202, ENGR 211, ENGR 212, ENGR 213, GE 101, GE 102, MTH 253, MTH 254, MTh 255, MTH 256		
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher

Sample Plan

First Year		Credits
Fall		
Health (3 credits with HHP/HHPA prefix)		3
Elective (recommend CH 221)		5
MTH 251	Calculus I	4

WR 121	Academic Composition	4
	Credits	16

Winter

Discipline Studies Math/Science/Computer Science (recommend MTH 252)		4
Discipline Studies Math/Science/Computer Science (recommend PH 211)		5
Discipline Studies Social Science		3-4
Elective (recommend CH 222)		5
	Credits	17-18

Spring

Discipline Studies Math/Science/Computer Science (recommend PH 212)		5
Elective (recommend CH 223)		5
Elective (recommend MTH 253)		4
	Credits	14

Second Year**Fall**

Discipline Studies Math/Science/Computer Science (recommend PH 213)		5
Discipline Studies Social Science		3-4
Elective (recommend MTH 256)		4
Writing (recommend WR 227)		4
	Credits	16-17

Winter

Discipline Studies Arts & Letters		3-4
Discipline Studies Social Science		4
Elective (recommend MTH 254)		4
Oral Communication		3-4
	Credits	14-16

Spring

Discipline Studies Arts & Letters		3-4
Discipline Studies Arts & Letters		3-4
Discipline Studies Social Science		3-4
Elective (recommend MTH 255)		4
	Credits	13-16

Total Credits		90-97
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Exercise Science

Exercise science is the study of the movements of the human body that contribute to fitness, holistic wellness and longevity. Exercise science courses provide an in-depth view of topics within the exercise science fields such as exercise physiology, the care and prevention of athletic injuries, anatomical kinesiology, nutrition for health, exercise testing and prescription, sport and exercise psychology, and wellness coaching.

<https://www.cocc.edu/programs/exercise-science/> (<https://www.cocc.edu/programs/exercise-science/default.aspx>)

Contact:

John Liccardo
541-318-3754
Mazama Hall, Bend Campus

Department: Health and Human Performance
Department Chair: Jessica Russell

Programs

Transfer

- Exercise Science/Kinesiology - Associate of Arts Oregon Transfer (AAOT) (p. 150)
- Pre-Physical Therapy - Associate of Arts Oregon Transfer (AAOT) (p. 152)

Courses

HHP 131 Introduction to Exercise/Sport Science (3 Credits)

Recommended preparation: WR 065 or higher.

Introduces students to the profession of exercise science including an overview of basic concepts and careers in exercise physiology, athletic training, personal training, coaching, sports medicine, physical therapy and fitness management. Provides a comprehensive introduction to any student who is considering a career in the area of health, fitness, wellness, exercise physiology and sports medicine. Also, includes guest speakers currently working in the profession, as well as tours of local fitness facilities. Various fitness certifications are compared and contrasted.

HHP 188 Special Studies: HHP (1-6 Credits)

Explores topics of current interest in the discipline.

HHP 199 Selected Topics: Health and Human Performance Activities (1-6 Credits)

Includes both introductory courses and activities.

HHP 216 Sociocultural Dimensions of Physical Activity (3 Credits)

This course will provide an overview of physical activity in contemporary society. It will look at relationships with the social processes: interrelationships between physical activity and cultural institutions.

HHP 246 Introduction to Adapted Physical Activity (3 Credits)

This course will provide an overview of cognitive, neuromuscular, sensory, and orthopedic impairments; understanding accessible physical activity programs for individuals with disabilities. This is a hybrid course where approximately 50% of the course will take place in a traditional face-to-face classroom and 50% will be delivered via Blackboard, your online learning management system, where you will interact with your classmates and with the instructor.

HHP 259 Care and Prevention of Athletic Injury (3 Credits)

Recommended preparation: BI 231, HHP 260 and WR 065 or higher.

Introduces management of athletic injuries, injury recognition and assessment, proper care and treatment of athletic injuries and rehabilitation of athletic injuries. Emphasizes hands-on experience included for mastery of surface anatomy, injury assessment and proficiency in rudimentary injury care and rehabilitation practices.

HHP 260 Anatomical Kinesiology (4 Credits)

Recommended preparation: BI 231 and WR 065 or higher.

This is an introduction to the science of human movement (kinesiology). The class explores the anatomical elements such as muscle action and joint structure and function involved in the gross motor movement. Major emphasis will be on structural anatomy, primary movers of each joint, and muscle utilization for specific sport actions.

HHP 261 Exercise Physiology (4 Credits)

Recommended preparation: MTH 020 or higher and WR 065 or higher. This course is designed to provide the student with an introductory foundation for understanding the physiology associated with exercise. Emphasis will be placed on how the various tissues and systems of the body adjust to acute work stress and ultimately adapt to chronic exercise training. Course materials will include metabolic, musculoskeletal, cardiovascular, and respiratory adaptations to exercise and exercise training.

HHP 262 Exercise Testing and Prescription (3 Credits)

Recommended preparation: HHP 260 and HHP 261. The intent is to provide a practical guide for administering safe exercise testing as well as development of safe and effective exercise prescription for all clients including special populations. Specific content to be addressed includes: initial client consultation, risk factor classification, performance of hands-on exercise testing, prescribing appropriate aerobic, anaerobic, flexibility, and resistance exercise plans, periodization, prevention of overtraining, metabolic calculations, & legality including HIPAA laws.

HHP 267 Wellness Coaching Fundamentals (3 Credits)

Recommended preparation: WR 65 or higher. Explore components of behavior change by providing an overview of the dimensions of wellness, coaching technique and models in health. Foundational concepts of positive psychology, including the history, theory and ethics, as well as mindfulness, appreciative inquiry and self-efficacy will be examined and applied.

HHP 270 Sport and Exercise Psychology (3 Credits)

Recommended preparation: WR 065 or higher. Introduces broad range of topics relevant to sport and exercise psychology, including sport personality, motivation, psychological skills training, energy management, attention, imagery, competitive anxiety and mental relaxation. Content is relevant for coaches, athletes and others interested in the psychology of sport.

HHP 280A Practicum-Exercise Science (1-2 Credits)

Prerequisites: instructor approval.
Recommended preparation: complete a minimum of three exercise science classes. Provides exercise science practicums by the department in conjunction with the community in health & fitness programs including group fitness, personal training, wellness coaching, research, clinical professions such as physical therapy, occupational therapy, athletic training, and cardiac rehabilitation. P/NP grading.

HHP 280B Practicum- Exercise Science (1-2 Credits)

Prerequisites: instructor approval.
Recommended preparation: complete a minimum of three exercise science classes. Provides Exercise Science practicums by the department in conjunction with the community in health & fitness programs including group fitness, personal training, wellness coaching, research, clinical professions such as physical therapy, occupational therapy, athletic training, and cardiac rehabilitation. P/NP grading.

HHP 298 Independent Study: HHP (1-4 Credits)

Prerequisites: instructor approval.
Recommended preparation: prior coursework in the discipline. Individualized, advanced study in health and human performance to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

HHP 299 Selected Topics: HHP (1-3 Credits)

Health topics requiring advanced level of critical thinking, writing and/or other skills.

HHPA 102 Beginning Rock Climbing (1 Credit)

Provides an introduction to rock climbing.

HHPA 103 Training for Rock Climbing (1 Credit)

Provides training for rock climbing.

HHPA 104 Intermediate Rock Climbing (1 Credit)

This class focuses on preparing the student to transition into a lead sport climber. This class builds upon the skills covered in the beginning rock climbing courses, including advanced belay techniques, belay/ rappel transitions, and anchor building in a sport climbing environment. Students will develop a plans to improve their climbing techniques, strength and endurance.

HHPA 105 Backpacking (1 Credit)

Provides instruction for backpacking.

HHPA 106 Snowshoeing (1 Credit)

Provides an introduction to snowshoeing.

HHPA 107 Backcountry Skiing (1 Credit)

Provides an introduction to backcountry skiing.

HHPA 109 Whitewater Kayaking I (1 Credit)

Provides introduction to whitewater kayaking.

HHPA 110 Whitewater Rafting I (1 Credit)

Provides introduction to whitewater rafting.

HHPA 112 Beginning Mountain Biking (1 Credit)

Introduction to mountain biking which will include local trail systems.

HHPA 114 Intermediate Mountain Biking (1 Credit)

Designed to build upon fundamental mountain bike skills. Trail etiquette and basic nutrition will be reviewed. Introduces intermediate bike maintenance and advanced riding techniques. Rides will take place on local trails. Previous mountain biking experience is necessary.

HHPA 115 Wilderness Training: Beginning (1 Credit)

Introduces a variety of outdoor activities, which may include: rock climbing, whitewater rafting, kayaking, canoeing, snowshoeing, caving, hiking, and cross-country skiing. Develops basic skills in outdoor activities and learns about appropriate preparation for participation.

HHPA 120 Tai Chi/Qigong (1 Credit)

Introduces the basic techniques of Tai Chi Yang style simplified form and three Qigong exercises, as well as theories and concepts for better health and relaxation through meditation in movement. Can accommodate all levels.

HHPA 122 Yoga-Beginning (1 Credit)

Introduces the basic techniques of yoga incorporating a wide range of yoga styles. Classes vary according to instructor offerings, which include Ashtanga, Hatha, Vinyasa, Yin, Restorative and Kundalini.

HHPA 125 Yoga-Intermediate (1 Credit)

Appropriate for any student who has a yoga background and is familiar with basic yoga postures, breathing and intentions. Self-exploration is enhanced through the introduction of variations of alternative movements to basic poses such as arm balances. Following a dynamic warm-up, students will participate in a flow-type session with quick movements to increase heart rate. Deep stretch and shavasana will conclude each class. Students will often work in pairs on advanced postures.

HHPA 126 Yoga-All Levels (1 Credit)

Modification and additional variation in postures for students wanting a more challenging practice, using a blend of different yoga styles. Appropriate for all levels.

HHPA 127 Yoga for Athletes (1 Credit)

Designed for anyone (novice to advanced) who aspires to utilize the benefits of yoga to boost their athletic performance in any sport. Although not required, it may be helpful to have had an introductory course prior to this class. A dynamic, flow-style of Vinyasa practice linking breath and movement with modifications emphasizing safety and anatomical clarity. The practice will utilize traditional asanas (poses) to build a foundation for a robust athletic yoga tool. The importance of strength will be equally emphasized with Yin like deep-style stretching. Rest and recovery will be given equal time with an intro to the benefits of restorative practice utilizing props (bolsters).

HHPA 128 Yoga/Pilates Blend (1 Credit)

Focuses on a blend of two modalities, with the flexibility of yoga and core strength training of Pilates.

HHPA 130 Total Fitness (1 Credit)

High-intensity, physically demanding activity class geared toward improving overall physical fitness in a supportive team atmosphere. Various forms of games, skills, exercises, and activities will be used to improve weakness areas as well as further enhance areas in which the student already excels physically. All levels welcome but a positive, can-do attitude is a must.

HHPA 132 Jogging (1 Credit)

Focuses on improving running economy and cardiovascular fitness through various running-related activities. Students will run at both on and off campus sites. Runners of all levels welcome.

HHPA 133 Ski Conditioning-Nordic (1 Credit)

An outdoor/indoor conditioning class for all levels of Nordic skiers. Goal of the class is to provide ski-specific cardiovascular fitness and muscular strength as well as improving Nordic ski technique. Various ski-specific drills and exercises will be used in a fun group atmosphere.

HHPA 134 Circuit Training (1 Credit)

Traditional circuit training class for total body conditioning that includes interval training via different apparatuses and core circuit training using various forms of equipment. Emphasizes improvement in both core strength and cardiovascular fitness. Appropriate for all levels of fitness and exercise experience.

HHPA 135 Cycling: Studio (1 Credit)

Introduces indoor studio cycling skills to all fitness and experience level of cyclists. Emphasizes proper form and designed to provide a fun mode of enhancing cardiovascular fitness in a group setting.

HHPA 136 Boot Camp (1 Credit)

Introduction to exercises that improve cardiovascular endurance, muscular strength and flexibility in a supportive team atmosphere. Utilizes interval training, core strength, plyometrics, running, games and weights and is appropriate for all levels of fitness and experience.

HHPA 137 Progressive Walking (1 Credit)

A group class designed to prepare and progressively improve cardiovascular fitness through walking. An emphasis will be placed on monitoring intensity through heart rate. All levels of walkers are welcome.

HHPA 138 Ki Aikido (1 Credit)

Introduces the martial art of Ki Aikido, a form of self-defense and non-fighting to all levels of experience in Ki Aikido. It is based upon coordination of mind and body, not only in throwing, but also in the art of falling (ukemi).

HHPA 140 Basketball (1 Credit)

This activity class teaches all the fundamental skills and rules of basketball to all levels of basketball players. There will be an emphasis on team play.

HHPA 141 Golf (1 Credit)

Held at local golf courses and is taught by local professional golf instructors. Instruction of basic golf skills to all levels of golf players. Golf clubs may be available for use in class (contact the department for more information).

HHPA 142 Beginning Rugby (1 Credit)

Familiarizes students with the rules, skills, strategy, fitness level and basic concepts of modern Rugby Union Football. Equips students to be an informed Rugby participant.

HHPA 143 Softball (1 Credit)

Focuses on fundamental skill development and team play for all levels of softball players.

HHPA 144 Soccer (1 Credit)

Focuses on fundamental skill development and team play for all levels of soccer players.

HHPA 146 Tennis I (1 Credit)

Focuses on skill development for beginning tennis players. Students will learn through various drills and court games.

HHPA 147 Tennis II (1 Credit)

Recommended Preparation: HHPA 146. Geared toward students with intermediate or advanced tennis skills. Students will work towards improving current tennis skill level and strategy by means of practice as well as feedback from the instructor.

HHPA 148 Volleyball-All Levels (1 Credit)

Focuses on fundamental volleyball skill development and team play for beginning students and continuing students who want to enhance their skill level.

HHPA 149 Volleyball-Doubles (1 Credit)

Provides rules and strategy of doubles volleyball. Includes communication with teammates on the courts due to the faster pace of the game.

HHPA 150 Cultural Dance Fitness (1 Credit)

Designed to introduce individuals to various types of energetic dance styles from Africa to the Caribbean in a fun, dance fitness setting as well as learning the art of choreography. Integrates several dance styles (i.e., West African, Dance Hall, Hip-Hop) to a variety of beats and rhythms from around the world. Designed for all levels.

HHPA 153 Aerobic Dance-Hip Hop (1 Credit)

Explains the growing awareness of hip hop as a mind-body, dance-style aerobic movement. Includes choreographed moves with each class and building upon each other as a sequenced routine.

HHPA 154 Dancercise (1 Credit)

High-energy activity class emphasizing dance movements including jazz, contemporary and salsa styles.

HHPA 156 Pilates-Beginning (1 Credit)

Through Pilates exercises, this class familiarizes students with the awareness of core flexibility and strength, relative muscle groups and joint actions of the core. Students will learn Pilates vocabulary and training techniques, including specific stretching, as well as stretching for general health. Also provides proper sequence form for stretching, the slide, rings, exercise balls and weights for cardio and overall balance.

HHPA 157 Pilates-All Levels (1 Credit)

Includes a brief review of Pilates fundamentals (proper spine alignment, elongation, thoracic breath and core control, including the use of appropriate Pilates equipment). Students will learn several sequences of Pilates exercises with appropriate modifications for all fitness levels.

HHPA 158 Stretch and Relaxation (1 Credit)

Introduces students to progressive stretching activities and emphasizes the value of stretching to the overall relaxation process.

HHPA 159 Barre Body (1 Credit)

Combines ballet & Pilates fundamentals with motivating music to improve fitness through use of ballet or body barres. This low-impact class is ideal for all fitness levels without traditional gym equipment. Muscles are engaged in strategic patterns that intermix small isometric movements with greater range of motion working toward a defined physique.

HHPA 170 Snowboarding I (1 Credit)

For beginning snowboarders. Students will learn the fundamentals of snowboarding with qualified instructors. Equipment must be provided by the student.

HHPA 171 Snowboarding II (1 Credit)

For intermediate to advanced snowboarders. Students will be provided instruction to enhance their current skill level in snowboarding. Equipment must be provided by the student.

HHPA 172 Snowboarding III-Competitive Freestyle Riding (1 Credit)

Focuses on freestyle techniques for advanced riders. Emphasis of instruction is on freestyle maneuvers, including straight airs, 180's, and straight airs with grabs, as well as etiquette when riding in the half-pipe, slope-style facilities and natural freestyle terrain. Equipment must be provided by the student.

HHPA 173 Brazilian Jujitsu (1 Credit)

Modified version of traditional Japanese Jujitsu and martial art sport that focuses on gaining a dominant position over an opponent. Students will learn proper techniques, using leverage, sparring and self-defense drills to gain self-confidence.

HHPA 174 Swimming I-Swim Fitness and Technique (1 Credit)

Swim Fitness and Technique helps student feel safe and comfortable in the water for at least ten minutes at a time, incorporating and refining swimming strokes.

HHPA 176 Masters Swimming (1 Credit)

Designed to strengthen swimming stroke skills to the advanced level. Introduces advanced concepts of fitness swimming. Prepares students for a lifetime of participation in swimming and racing if desired. Students will attend organized masters swim team practices. Previous swimming experience expected.

HHPA 177 Swimming Fundamentals (1 Credit)

Basic swim instruction for individuals with limited to no swim experience. Learn basic swim skills (floating, breathing techniques, and flutter kicking), swimming theory concepts and strokes (front and back crawl and breaststroke) at your own pace.

HHPA 178 Ski Alpine I (1 Credit)

Designed for beginning downhill skiers. Learn the fundamentals of skiing with qualified instructors. Equipment must be provided by the student.

HHPA 179 Ski Alpine II (1 Credit)

Designed for intermediate to advanced alpine skiers. Provides instruction to enhance current ski skill level. Equipment, including helmet, must be provided by the student.

HHPA 182 Tae Kwon Do (1 Credit)

A martial art form that if properly performed, improves cardiovascular endurance, muscular strength, and flexibility. Instruction includes techniques of self-defense, proper Tae Kwon Do etiquette, and a cultural introduction of Dojang.

HHPA 183 Water Aerobics (1 Credit)

Introduces water aerobics which improves cardiovascular endurance, muscular strength and flexibility in a low-impact environment.

HHPA 184 ZUMBA (1 Credit)

ZUMBA dance fitness fuses hypnotic rhythms and easy-to-follow moves to create a dynamic fitness program. This course is designed to include cardiovascular strengthening, muscle toning with resistance and movements to enhance flexibility and balance.

HHPA 185 Weight Training (1 Credit)

Covers the basic principles of weight training and proper use of weight room equipment and safety. The course includes a variety of weight training methods and incorporates core strength and flexibility activities. Students will develop their own weight lifting program throughout the term.

HHPA 186 Stand Up Paddle Boarding (1 Credit)

Introduction into the world of stand-up paddle boarding. Designed for all levels, teaches the fundamentals of stand-up paddle boarding with a qualified instructor. Introduces skills for proper paddling technique, safety considerations and trip planning. Participants should be comfortable in and around the water. Equipment provided.

HHPA 199 Selected Topics: Health and Human Performance (1-4 Credits)

This course is in development.

Exercise Science/Kinesiology - Associate of Arts Oregon Transfer (AAOT)

Description

The AAOT degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements. The following is a suggested course of study for students interested in pursuing a bachelor's degree in Exercise Science/Kinesiology.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Recommend: HHP 295		
Mathematics: (p. 399)		

Choose one course		4
Recommend: MTH 111		
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Recommend: HHP 100, HHP 270, PSY 201, SOC 201		
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Recommend: BI 231, BI 232, BI 233, HHP 261		
Electives²		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39
Recommend: HHP 131, HHP 259, HHP 260, HHP 262, and MTH 112		
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

² Related courses to consider: HHPA courses, HHP 212A AHA BLS Provider CPR, HHP 248 Health Psychology, HHP 266 Nutrition for Health, HHP 240 Science of Nutrition, HHP 267 Wellness Coaching Fundamentals, HHP 268 Sustainable Food and Nutrition, HHP 280A Practicum-Exercise Science, HHP 280B Practicum- EXSS

Advising Notes

Nearby public universities with either an Exercise Science/Kinesiology major or closely related major:

- Boise State University
- Eastern Oregon University-Distance Education (Physical Activity and Health)
- Montana State University
- Oregon State University – Kinesiology
- Oregon State University-Cascades – Kinesiology
- Portland State University
- University of Montana
- University of Oregon

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.

- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Elective (recommend HHP 280A and 280B)	2
Credits	14-15
Total Credits	91-95

Sample Plan

First Term		Credits
Discipline Studies Science/Math/Computer Science (recommend BI 231)		4
Elective (recommend HHPA activity class)		1
Health (recommend HHP 131)		3
Mathematics (recommend MTH 111)		4
WR 121	Academic Composition	4
Credits		16
Second Term		Credits
Discipline Studies Science/Math/Computer Science (recommend BI 232)		4
Elective (recommend HHP 260)		4
Elective (recommend MTH 112)		4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		16
Third Term		Credits
Discipline Studies Arts & Letters		3-4
Discipline Studies Science/Math/Computer Science (recommend BI 233)		4
Discipline Studies Social Science (recommend HHP 270)		3
Elective (recommend HHPA activity class)		1
Oral Communication: (p. 399)		3-4
Credits		14-16
Fourth Term		Credits
Discipline Studies Social Science (recommend PSY 201)		4
Discipline Studies Science/Math/Computer Science (recommend HHP 261)		4
Elective (recommend HHP 259)		3
Discipline Studies Social Science (recommend HHP 100)		4
Credits		15
Fifth Term		Credits
Discipline Studies Social Science/Cultural Literacy (recommend SOC 201)		4
Elective (HHP 267)		3
Elective (recommend HHP 240 or HHP 266)		3
Discipline Studies Arts & Letters		3-4
Health (recommend HHP 295)		3
Credits		16-17
Sixth Term		Credits
Discipline Studies Arts & Letters		3-4
Elective (recommend HHPA activity class)		1
Elective (recommend HHP 212A)		1
Elective (recommend HHP 248)		4
Elective (recommend HHP 262)		3

Pre-Physical Therapy - Associate of Arts Oregon Transfer (AAOT)

Description

Students interested in pursuing professional degrees to become a physical therapist (PT) are required to complete a bachelor's degree, preferably in a related area, typically from exercise science, the biological sciences, or psychology. To provide a solid foundation for bachelor's degree work, students are encouraged to complete the Associate of Arts Oregon Transfer (AAOT) degree, with an emphasis on pre-PT coursework.

Learning Outcomes

Arts & Letters

- Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
- Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

- Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

- Explain the relationship between human behavior and health.

Mathematics

- Use appropriate mathematics to solve problems; and
- Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

- Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
- Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
- Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

- Apply analytical skills to social phenomena in order to understand human behavior; and

2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Recommend: (BI 101 and BI 102) or (BI 211 and 212), CH 221, CH 222, CH 223, PH 201, PH 202, PH 203, AH 111, and BI 234⁴

Total Credits 90-106

- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² Related courses to consider: Students explore the field of physical therapy through HHP 131 Introduction to Exercise/Sport Science and the other courses recommended in the following prefixes: HHP, BI, CH, and PH.
- ³ Refer to advising notes and your assigned advisor for suggestions for a baccalaureate major.
- ⁴ Discuss the selection of BI 101 General Biology: Cells & Genes or BI 211 Principles of Biology with your advisor.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Recommended: MTH 111 or MTH 243		
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
	or WR 227 Technical Writing	
General Education/Discipline Studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Recommend: PSY 201, PSY 219, HHP 100, HHP 270		
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Recommend: BI 231, BI 232, BI 233, and CH 221		
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable. ^{2,3}		39

Advising Notes

Pacific University and George Fox are the two Doctorate of Physical Therapy (DPT) programs in Oregon. These recommendations are based off of their pre-requisites for application. If you are pursuing other schools you must look at that school's specific course requirements for application as they may vary.

Students should also complete requirements for a major; common choices include exercise science, biological science, and psychology. Courses associated with these majors include the following (see individual focus area descriptions for details):

- Exercise science: HHP 100 Introduction to Public Health, HHP 131 Introduction to Exercise/Sport Science, HHP 259 Care and Prevention of Athletic Injury, HHP 260 Anatomical Kinesiology, HHP 261 Exercise Physiology, HHP 262 Exercise Testing and Prescription, HHP 270 Sport and Exercise Psychology;
- Biological science: BI 211 Principles of Biology, BI 212 Principles of Biology, BI 213 Principles of Biology, CH 221 General Chemistry I, CH 222 General Chemistry II, CH 223 General Chemistry III;
- Psychology: PSY 201 Mind and Brain, PSY 202 Mind and Society

The American Physical Therapy Association website (<http://www.apta.org/>) is a helpful tool in identifying colleges across the U.S. which offer Doctorate of Physical Therapy (DPT) degree and their respective lower division requirements.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Science/Math/Computer Science (recommend BI 231)	4
Mathematics (recommend MTH 111)	4
Oral Communication: (p. 399)	3-4
WR 121 Academic Composition	4
Credits	15-16

Second Term

Discipline Studies Social Science (recommend PSY 201)	4	
Discipline Studies Science/Math/Computer Science (recommend BI 232)	4	
Health (3 credits with HHP prefix; see elective recommendations and advising notes)	3	
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
<hr/>		
Credits	15	

Third Term

Discipline Studies Arts & Letters	3-4
Discipline Studies Science/Math/Computer Science (recommend BI 233) ⁴	4
Discipline Studies Social Science (recommend HHP 270)	3
Elective	3-4
Elective	3-4
<hr/>	
Credits	16-19

Fourth Term

Discipline Studies Arts and Letters	3-4
Discipline Studies Science/Math/Computer Science (recommend CH 221) ⁴	5
Discipline Studies Social Science (recommend HHP 100)	4
Elective	3-4
<hr/>	
Credits	15-17

Fifth Term

Discipline Studies Social Science (recommend PSY 219)	3-4
Elective	4
Elective	4
Elective	3-4
<hr/>	
Credits	14-16

Sixth Term

Discipline Studies Arts and Letters	3-4
Elective	3-4
Elective	3-4
Elective	3-4
Elective	3-4
<hr/>	
Credits	15-20
<hr/>	
Total Credits	90-103

Forest Resources Technology/ Forestry

COCC's forestry discipline offers courses and programs to prepare students for either immediate employment into forestry related industries (associate of applied science), transfer to bachelor's degree program in forestry or natural resources (associate of science), or for advancement in current forestry or natural resource careers (career pathways certificates of completion). Students benefit from field-based work with hands-on learning (including outdoor labs and field trips), small classes, and knowledgeable and accessible instructors with research, agency, and industry experience.

The educational program in Forest Resources Technology that leads to the Associate of Applied Science is accredited by the Society of American Foresters (SAF).

<https://www.cocc.edu/programs/forestry/> (<https://www.cocc.edu/programs/forestry/default.aspx>)

Contact:

Rebecca Franklin, Program Director rfranklin@cocc.edu 541-330-4369
Cascades Hall, Bend Campus
Department: Natural and Industrial Resources
Department Chair: Paula Simone

Career and Technical Education

- Advanced Forest Concepts - Career Pathway Certificate of Completion (CPCC) (p. 156)
- Conservation of Natural Resources - Career Pathway Certificate of Completion (CPCC) (p. 159)
- Forest Ecology - Career Pathway Certificate of Completion (CPCC) (p. 159)
- Forest Measurements - Career Pathway Certificate of Completion (CPCC) (p. 160)
- Forest Protection - Career Pathway Certificate of Completion (CPCC) (p. 160)
- Forest Resources Technology - Associate of Applied Science (AAS) (p. 161)
- Mapping/Cartography - Career Pathway Certificate of Completion (CPCC) (p. 164)

Transfer

- Agricultural Sciences (OSU Transfer) Emphasis - Associate of Science (AS) (p. 157)
- Forestry (OSU Transfer) Emphasis - Associate of Science (AS) (p. 163)
- Natural Resources (OSU Transfer) Emphasis - Associate of Science (AS) (p. 165)

Courses

FOR 100 Forestry Program Orientation (1 Credit)

Provides students with an orientation to the Forest Resources Technology program. Designed to give students knowledge and tools to succeed in the Forest Resources AAS, the natural resources work force, and in an academic career beyond COCC. The course is required of all students seeking the Forest Resources Technology AAS degree, and is highly recommended for students in the Wildland Fire program. P/NP grading.

FOR 110 Wildland Fire Science I (2 Credits)

Focuses on the effects of Wildland Fire Policy, current fire suppression strategies and tactics; weather, topography, fuel models and how each interact to effect fire behavior. Additional topics include the wildland fire environment as it relates to situational awareness and personal safety. An overview of modern wildland firefighting with an emphasis on understanding and applying fireline safety. Course cannot be challenged, but will be waived for those with proof of wildland fire single resource status.

FOR 111 Forestry Perspectives (4 Credits)

Introduction to the entire discipline of forestry, including the history of forest use and management, North American forest regions, forest ecology, mensuration and management, forest products and the importance of forest resources other than wood fiber. Also provides overview of state, regional and local employment opportunities.

FOR 126 Field Studies Pacific NW Forests (1 Credit)

This course examines the ecology, management, and human uses of Pacific Northwest forests. Field experience takes place during a 4-day field trip to the Oregon coast and Northern California and includes visiting forest environments, forest product manufacturing facilities, field lectures and guided tours, as well as individual and small-group exercises.

FOR 127 Plants of the Pacific Northwest (1 Credit)

Identification, classification and distribution of shrubs, forbs, and grasses found in low-, mid-, and high-elevation Oregon habitat types. Emphasis is placed upon proper field identification through use of terminology and taxonomic keys. Also discusses sensitive plants and noxious weeds.

FOR 130 Chainsaw Use and Maintenance (2 Credits)

Covers basic tree falling, bucking and limbing techniques. Equipment safety, use, maintenance and repairs of saws is covered. Designed for inexperienced or novice chainsaw operators or can be used as refresher course for experienced saw operators.

FOR 180 Co-op Work Experience Forestry (1-7 Credits)

Provides opportunity for on-the-job training in forestry field operations, forest products manufacturing or work related to these areas. Normally undertaken during summer months on a full-time basis but can occur any term.

FOR 188 Special Studies: Forestry (1-4 Credits)

Explores topics of current interest in the discipline.

FOR 195 Wilderness Concepts (2 Credits)

Introduction to concepts of wilderness and wilderness management principles. Introduction to the history of wilderness and the National Wilderness Preservation System.

FOR 199 Selected Topics: Forestry (1-5 Credits)

Prerequisites: instructor approval.

Provides opportunity for students with exceptional background or need to continue beyond normal program content. Content and credit earned by mutual agreement between instructor and student and detailed in written agreement. Maximum of three credits may be applied to degree.

FOR 208 Soils: Sustainable Ecosystems (4 Credits)

Focuses on the basics of Soil Science, ranging from physical properties to use and management. Soils with respect to traditional agricultural, wildlands and rangelands, watersheds and modern environmental perspectives will be discussed. New and current events of soils applications and the science of soils in the world around us will be reviewed to better understand the role soil has in our everyday lives. Lab component will include in and out of classroom lab work and field trips.

FOR 209 Fire Ecology and Effects (3 Credits)

Discusses the role of fire in Pacific Northwest ecosystems. Identifies effects on flora, fauna, soils, water; fire and cultural/visual resource management; fire and insect interactions. Covers the effects of fire on different forest and range ecosystems.

FOR 210 Wildland Fire Science II (2 Credits)

A study of hazardous fuel management and treatment practices. Incorporates current fuel measurement and analysis techniques, fire behavior prediction models and hazardous wildland fuel mitigation methods.

FOR 211 Supervision and Leadership (3 Credits)

Covers basic human relations and management skills as applied to first-line supervision in forestry, fire science and EMS. Defines work environment. Identifies and discusses subordinate, peer, and supervisory relationships. Case studies, including students' own work experiences will be used.

FOR 215 Forest Resource Capstone (3 Credits)

Prerequisites: instructor approval.

Students conduct a sample survey of a large area and present their findings, along with recommendations for management of the area, in a written report. Oral presentation also made to department staff. Limited to second year students or those who have fulfilled majority of Forest Resources Technology Degree requirements.

FOR 230A Map, Compass and GPS (3 Credits)

Teaches the basic skills of field and forest navigation with compass and GPS. Competency obtained in pacing, paper and computer map use, compass and basic GPS use.

FOR 230B Forest Surveying (3 Credits)

Recommended preparation: FOR 230A or instructor approval.

Studies basic surveying techniques and equipment emphasizing traversing, differential leveling, profiling, GPS mapping and basic coordinate geometry.

FOR 235 Resource Measurements (4 Credits)

Recommended preparation: MTH 085 or higher.

Students will learn the fundamentals of measuring and quantifying natural resources, including cruising and scaling timber to determine merchantable volume, quantifying wildlife and fisheries habitat, measuring and estimating forage production for wildlife and livestock, and sampling wildlife populations. Course will also introduce basic statistical concepts and their applications in resource management. First course in the sequence of FOR 235, FOR 236, and FOR 237.

FOR 236 Aerial Photo (3 Credits)

Recommended preparation: MTH 086 or higher and FOR 230B.

Covers practical use of aerial photographs including photo interpretation, navigation, scale, area and distance determination, corner search, basic type-mapping and GPS application. Second course in the sequence of FOR 235, FOR 236, and FOR 237.

FOR 237 Resource Sampling (4 Credits)

Recommended preparation: MTH 086 or higher, FOR 235, and FOR 236.

Includes instruction in log scaling, tree measurement techniques, sampling statistics, tree volume and tree taper equations, sampling and field procedures for equal probability (sample tree and fixed area) and variable probability (3P and point sampling) sampling systems. Final course in the sequence of FOR 235, FOR 236, and FOR 237.

FOR 240A Forest Ecology (3 Credits)

Provides students with an overview of basic plant structure and function and introduces students to functioning of forest ecosystems. Class will examine the physical environment and how it affects growth and distribution of organisms and ecological processes. Course concludes with an examination of communities, disturbance and succession.

FOR 240B Wildlife Ecology (3 Credits)

Recommended preparation: FOR 240A.

Explores wildlife ecology and biodiversity in context of forest and range management. Focuses on relationship between wildlife and forest and range ecosystems, and examines the role of forest and range management in wildlife habitat management.

FOR 241A Field Dendrology (3 Credits)

Identification, classification, and distribution of common trees and shrubs found in the Western United States and major tree species of North America. The course emphasizes botanical nomenclature and proper identification using plant keys and field characteristics.

FOR 241B Dendrology (3 Credits)

Covers identification, classification and distribution of plant communities (tree, shrub, forb and grass) found within Oregon and major North American plant communities. This class covers in lecture format the structure and function of the primary organs and tissues that comprise woody plants. This course is the classroom portion of FOR 241A. Course does not need to follow FOR 241A.

FOR 251 Recreational Resource Management (3 Credits)

Overview of recreational resource management including study of land and water resources used for outdoor recreation. Includes planning and management of natural and cultural resources for long-term resource productivity.

FOR 255 Resource Interpretation (3 Credits)

Introduces fundamental theories of interpretation and active and passive techniques of interpretation including: activities, presentations, signage, brochures and information kiosks. Course allows optional certification as an interpreter.

FOR 260 Conservation of Natural Resources (3 Credits)

Recommended preparation: WR 121.

Examines current utilization and issues surrounding natural resources availability and management, as well as the effect of human population on resource use and the environment. Includes critical analysis of sustainable development and resource use concepts, including principles of conservation and management. Emphasis placed on current issues. Two-day field trip required.

FOR 271 Applied Forest Ecology (3 Credits)

Recommended preparation: FOR 240A and FOR 241A.

Applies principles of forest ecology to develop a basic understanding of forest stand dynamics and silvicultural principles. Emphasis is placed on stand development, regeneration and stand analysis. Students will develop a practical understanding of stand establishment, maintenance and stand data collection. First course in sequence of FOR 271, FOR 272, and FOR 273.

FOR 272 Forest Entomology/Pathology (3 Credits)

Recommended preparation: FOR 240A and FOR 241A.

Emphasizes the recognition and effects of diseases, insects and mammals affecting forest ecosystems in the Pacific Northwest. Course will examine the role of insects, diseases and animals in forest functioning, health and management, as well as control measures and integrated pest management. Lab work is largely field-based and emphasizes identification of damaging forest insects and diseases common in Oregon. Second course in the sequence of FOR 271, FOR 272, and FOR 273.

FOR 273 Silviculture and Harvesting Systems (5 Credits)

Recommended preparation: FOR 271, FOR 272, and FOR 235.

Emphasizes interrelated systems of silviculture and harvesting. Discussions provide an understanding of the various treatments and harvesting systems applied to forest stands to meet various management objectives for forest ecosystems. Topics include forest regeneration processes and intermediate operations (thinning, pruning, etc.) and different methods of timber harvest. Observation and data collection will be performed in lab sections. Written reports interpreting prescriptions and harvest systems will be required. Last course in a sequence of FOR 271, FOR 272, and FOR 273.

FOR 298 Independent Study: Forestry (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

FOR 299 Selected Topics: Forestry (1-5 Credits)

This course is in development.

FW 135 Museum Techniques (1 Credit)

Hands on technique course focusing on preparing and preserving mammal and bird specimens for use in education and research. Students will complete a minimum of three projects which requires skinning and preserving wildlife specimens suitable for study and display.

FW 199 Selected Topics: Fish/Wildlife (1-4 Credits)

Prerequisites: instructor approval.

Provides students with hands-on field experience and aids students in acquiring experience which may meet basic qualification standards required by federal agencies. Content and credit earned by mutual agreement between instructor and student in detailed written agreement.

FW 212 Survey of Northwest Birds (2 Credits)

Recommended preparation: BI 102 or BI 213 or FOR 241A.

This course is an introduction to bird systematics, and surveys ecologically, economically, and socially important bird species in the Pacific Northwest with an emphasis on field identification and basic life history.

FW 218 Survey of Northwest Mammals (2 Credits)

Recommended preparation: BI 102 or BI 213 or FOR 241A.

This course is an introduction to mammal systematics, and surveys ecologically, economically, and socially important mammal species in the Pacific Northwest with an emphasis on identification and basic life history.

FW 251 Wildlife Conservation (3 Credits)

Recommended preparation: WR 121.

Introduces fundamentals of wildlife ecology and management and their role in wildlife conservation. Examines history of wildlife management, current issues and case examples in wildlife conservation.

Advanced Forest Concepts - Career Pathway Certificate of Completion (CPCC)

Description

The Advanced Forest Concepts Career Pathway Certificate of Completion is designed for students who hold degrees in other areas or are already in the workforce and are looking to enhance their skills related to determining forest utilization, planning and management.

Entrance Requirements

There are no formal entrance requirements for the Advanced Forest Concepts Career Pathway Certificate of Completion, though individual courses include recommended preparation of forestry coursework. In addition, this career pathway certificate of completion is designed to offer advanced forest concepts to students or professionals who have experience in the field of forestry or natural resources management.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Students are expected to provide their own appropriate field clothing and tools.

Course Requirements

Course	Title	Credits
Core Courses		
FOR 215	Forest Resource Capstone	3
FOR 237	Resource Sampling	4
FOR 273	Silviculture and Harvesting Systems	5
Total Credits		12

Advising Notes

It will take three quarters to complete this certificate.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
FOR 273	Silviculture and Harvesting Systems	5
	Credits	5
Second Term		
FOR 237	Resource Sampling	4
	Credits	4
Third Term		
FOR 215	Forest Resource Capstone	3
	Credits	3
	Total Credits	12

Agricultural Sciences (OSU Transfer) Emphasis - Associate of Science (AS)

Description

The Associate of Science (Agricultural Sciences/Oregon State University emphasis) fulfills many of the lower division requirements of a Bachelor of Science in Agricultural Sciences from Oregon State University. Course requirements for other agricultural majors at OSU and other universities will differ. Students are strongly encouraged to check current degree requirements for changes.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and

2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirement, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

(See the baccalaureate core list (p. 407) or use the links below to locate courses.)

Course	Title	Credits
Baccalaureate Core		
Skills		
Writing I		
WR 121	Academic Composition	4
Writing II: Met by Program Requirements		
Speech		
COMM 111	Fundamentals Public Speaking	3-4
	or COMM 114 Argumentation & Discourse	
Mathematics: Met by Program Requirements		
Fitness		
HHP 295	Health and Fitness	3
Perspectives Courses ^{1,2}		
Choose one course from each of the following categories:		
Physical Science: Met by Program Requirements		
Biological Science: Met by Program Requirements		
Physical or Biological Science: Met by Program Requirements		
Western Culture: (p. 408) ¹		3-4
Cultural Diversity: (p. 408) ¹		4
Literature and the Arts: (p. 409) ¹		3-4
Social Processes and Institutions: Met by Program Requirements		
Difference, Power and Discrimination: (p. 409) ¹		4
Program Requirements		
BA 217	Accounting Fundamentals	4
BI 101	General Biology: Cells & Genes ³	4-5
	or BI 211 Principles of Biology	
BI 102	General Biology: Evolution ³	4-5
	or BI 212 Principles of Biology	
BI 103	General Biology: Ecology ³	4-5
	or BI 213 Principles of Biology	
CH 104	Introduction to Chemistry I ³	5
	or CH 221 General Chemistry I	
CH 105	Introduction to Chemistry II ³	5
	or CH 222 General Chemistry II	
CIS 120	Computer Concepts	4
EC 201	Microeconomics	4
FOR 208	Soils: Sustainable Ecosystems	4
MTH 105	Math in Society (or higher)	4
WR 227	Technical Writing	4
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		20
Recommend: BA 226, CH 106, CH 223, FOR 260, MFG 100, MFG 103, MTH 111, MTH 112, MTH 241, MTH 113, MTH 251, SPAN 101, SPAN 102		
Total Credits		90-96

- ¹ Select from the appropriate category in the OSU Baccalaureate Core course list (p. 407).
- ² No more than two courses (or lecture/lab combinations) from any one department may be used by a student to satisfy the Perspectives category of the core. GEO courses listed under Physical Science are considered to be from a different department than GEO courses listed under any other Perspective category.
- ³ Recommend: BI 211 Principles of Biology, BI 212 Principles of Biology and BI 213 Principles of Biology and CH 221 General Chemistry I, CH 222 General Chemistry II and CH 223 General Chemistry III.

Advising Notes

Transferrable from OSU E-Campus

AG 242 Personal Leadership Development 3
 ANS 121 Introduction to Animal Science 4
 AREC 221 Marketing in Agriculture 3
 AREC 250 Introduction to Environmental Economics and Policy 3
 HORT 111 Introduction to Horticultural Crop Production 2
 HORT 112 Intro. to Horticultural Systems, Practices and Careers 2

Students are encouraged to take BI 211 Principles of Biology, BI 213 Principles of Biology, and BI 212 Principles of Biology in that sequence with CH 221 General Chemistry I taken before or concurrently with BI 211 Principles of Biology. Students are also encouraged to take MTH 241 Calculus for Management/Social Science or MTH 251 Calculus I. The FOR 208 Soils: Sustainable Ecosystems is a spring term course that may be offered during some fall terms.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
COMM 111 Fundamentals Public Speaking	3-4
or COMM 114 Argumentation & Discourse	
HHP 295 Health and Fitness	3
Western Culture: (p. 408)	3-4
WR 121 Academic Composition	4
Credits	13-15
Second Term	Credits
BI 211 Principles of Biology	5
Cultural Diversity: (p. 408)	4
MTH 105 Math in Society (higher)	4
WR 227 Technical Writing	4
Credits	17
Third Term	Credits
BA 217 Accounting Fundamentals	4
BI 212 Principles of Biology	5
CH 221 General Chemistry I	5
Literature and the Arts: (p. 409)	3-4
Credits	17-18

Fourth Term

BI 213	Principles of Biology	5
CH 222	General Chemistry II	5
CIS 120	Computer Concepts	4
EC 201	Microeconomics	4
Credits		18

Fifth Term

Difference, Power and Discrimination: (p. 409)		4
Elective		4
Elective		4
FOR 208	Soils: Sustainable Ecosystems	4
Credits		16

Sixth Term

Elective		4
Elective		4
Elective		4
Credits		12
Total Credits		93-96

Conservation of Natural Resources - Career Pathway Certificate of Completion (CPCC)

Description

The Conservation of Natural Resources Career Pathway Certificate of Completion is designed for students who hold degrees in other areas or are already in the workforce and are looking to enhance their skills related to the basic concepts of conserving natural resources including forest, wildlife, soil and water resources.

Entrance Requirements

There are no formal entrance requirements for the Conservation of Natural Resources Career Pathway Certificate of Completion.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Students are expected to provide their own appropriate field clothing and tools.

Course Requirements

Course	Title	Credits
Core Courses		
FOR 111	Forestry Perspectives	4
FOR 208	Soils: Sustainable Ecosystems	4
FOR 240B	Wildlife Ecology	3
FOR 260	Conservation of Natural Resources	3
Total Credits		14

Advising Notes

It will take three quarters to complete this career pathway certificate.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
FOR 111	Forestry Perspectives	4
FOR 208	Soils: Sustainable Ecosystems	4
Credits		8

Second Term		Credits
FOR 240B	Wildlife Ecology	3
Credits		3

Third Term		Credits
FOR 260	Conservation of Natural Resources	3
Credits		3

Total Credits 14

Forest Ecology - Career Pathway Certificate of Completion (CPCC)

Description

The Forest Ecology Career Pathway Certificate of Completion is designed for those who hold degrees in other areas or are already in the work force and are looking to enhance their skills related to the practical aspects of forest ecology, dendrology and their applications.

While this program has no formal entrance requirement, individual courses may have prerequisites which must be met prior to enrollment.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Students are expected to provide their own appropriate field clothing and tools.

Course Requirements

Course	Title	Credits
Core Courses		
FOR 240A	Forest Ecology	3
FOR 241A	Field Dendrology	3
FOR 241B	Dendrology	3
FOR 271	Applied Forest Ecology	3
Total Credits		12

Advising Notes

It will take three quarters to complete this Career Pathway Certificate.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
FOR 240A	Forest Ecology	3
FOR 241A	Field Dendrology	3
	Credits	6
Second Term		
FOR 241B	Dendrology	3
FOR 271	Applied Forest Ecology	3
	Credits	6
	Total Credits	12

Forest Measurements - Career Pathway Certificate of Completion (CPCC)

Description

The Forest Measurements Career Pathway Certificate of Completion is designed for students who hold degrees in other areas or are already in the work force and are looking to enhance their skills related to basic measurements of trees, land and on-land navigation using maps, compasses and GPS.

While this program has no formal entrance requirement, individual courses may have prerequisites which must be met prior to enrollment.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Students are expected to provide their own appropriate field clothing and tools.

Course Requirements

Course	Title	Credits
Core Courses		
FOR 230A	Map, Compass and GPS	3
FOR 230B	Forest Surveying	3
FOR 235	Resource Measurements	4
FOR 236	Aerial Photo	3
	Total Credits	13

Advising Notes

It will take three quarters to complete this Career Pathway Certificate.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
FOR 230A	Map, Compass and GPS	3
	Credits	3
Second Term		
FOR 230B	Forest Surveying	3
FOR 235	Resource Measurements	4
	Credits	7
Third Term		
FOR 236	Aerial Photo	3
	Credits	3
	Total Credits	13

Forest Protection - Career Pathway Certificate of Completion (CPCC)

Description

The Forest Protection Career Pathway Certificate of Completion is designed for students who hold degrees in other areas or are already in the work force and are looking to enhance their skills related to identification of forest disease and insects and the basic techniques used to protect forests from fire, disease and insects.

While this program has no formal entrance requirement, individual courses may have prerequisites which must be met prior to enrollment.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Students are expected to provide their own appropriate field clothing and tools.

Course Requirements

Course	Title	Credits
Core Courses		
FOR 110	Wildland Fire Science I	2
FOR 210	Wildland Fire Science II	2
FOR 271	Applied Forest Ecology	3
FOR 272	Forest Entomology/Pathology	3
FOR 273	Silviculture and Harvesting Systems	5
	Total Credits	15

Advising Notes

It will take three quarters to complete this Career Pathway Certificate.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
FOR 110	Wildland Fire Science I	2
	Credits	2
Second Term		
FOR 210	Wildland Fire Science II	2
	Credits	2
Third Term		
FOR 271	Applied Forest Ecology	3
	Credits	3
Fourth Term		
FOR 272	Forest Entomology/Pathology	3
	Credits	3
Fifth Term		
FOR 273	Silviculture and Harvesting Systems	5
	Credits	5
	Total Credits	15

Forest Resources Technology - Associate of Applied Science (AAS)

Description

The Associate of Applied Science (AAS) degree program in Forest Resources Technology provides the education and practical skills needed to succeed as a technician in forestry and natural resource fields throughout the western U.S. Job opportunities exist in government agencies (both state and federal) as well as private industry (contractors, consultants and private companies). The U.S. Forest Service is the primary employer for graduates of this program.

Traditional forest technician positions are now often referred to as natural resource technicians. Technicians spend considerable time outdoors. Typical entry-level positions might include forest management activities such as evaluation of reforestation efforts, timber sale layout, tree measurements, forest damage assessment and numerous other activities that are required when managing a forest. Additionally, entry-level natural resource technicians may perform noxious weed identification and eradication, plant and wildlife surveys, fire protection and suppression and stream monitoring and restoration. Natural resource technicians can work for state or federal government agencies and manage public property, or work for private industry and private landowners.

COCC's Forest Resources Technology program has the advantage of being located near several national forests. A majority of the courses within the program include outdoor lab opportunities, which provide hands-on experience and knowledge essential to being an effective natural resource technician. Additionally, students are able to take advantage of opportunities working with local agencies to develop and

implement land management plans in the capstone course at the end of their second year.

The educational program in Forest Resources Technology that leads to the Associate of Applied Science is accredited by the Society of American Foresters (SAF).

Learning Outcomes

- Collect, quantify, and present information or data to promote informed decision making in natural resource management.
- Disseminate information effectively to diverse audiences either verbally, in documentation, and via appropriate media.
- Enter data into multiple programs and analyze that data into useful outputs.
- Identify, describe, and apply ecosystem management techniques; including fire riparian, wildlife protection and implementation, and silvicultural prescriptions.
- Identify biological, abiotic, and cultural ecosystems to facilitate natural resource management.
- Demonstrate key attributes and ethical practices of a natural resource professional.
- Use mapping tools for navigation, planning, and to implement forest management.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - Minimum placement into MTH 085 Technical Mathematics I.
 - Minimum placement into WR 121 Academic Composition.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Equipment costs ranging from \$665-\$915 (suggested equipment includes: hardhat, boots, vest, compass, GPS, datum, plant press, hand lens, rain gear, field book)
- Students are expected to provide their own appropriate field clothing and tools.

Enrollment Fees

- Additional lab fees of approximately \$250

Course Requirements

Course	Title	Credits
Core Courses		
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
FOR 100	Forestry Program Orientation	1
FOR 110	Wildland Fire Science I	2
FOR 111	Forestry Perspectives	4
FOR 126	Field Studies Pacific NW Forests	1
FOR 127	Plants of the Pacific Northwest	1
FOR 180	Co-op Work Experience Forestry	3
FOR 208	Soils: Sustainable Ecosystems	4
FOR 210	Wildland Fire Science II	2

FOR 211	Supervision and Leadership	3
FOR 215	Forest Resource Capstone	3
FOR 230A	Map, Compass and GPS	3
FOR 230B	Forest Surveying	3
FOR 235	Resource Measurements	4
FOR 236	Aerial Photo	3
FOR 237	Resource Sampling	4
FOR 240A	Forest Ecology	3
FOR 240B	Wildlife Ecology	3
FOR 241A	Field Dendrology	3
FOR 241B	Dendrology	3
FOR 260	Conservation of Natural Resources	3
FOR 271	Applied Forest Ecology	3
FOR 272	Forest Entomology/Pathology	3
FOR 273	Silviculture and Harvesting Systems	5
Forestry Resource Elective ¹		2
FW 218	Survey of Northwest Mammals	2
or FW 212	Survey of Northwest Birds	
GEOG 265	Geographic Information Systems	4
Other Required Courses		
HHP 252A	Fitness/First Aid	3
Discipline Studies Courses		8
MTH 085	Technical Mathematics I ²	4
MTH 086	Technical Mathematics II ²	4
Choose one course from the following:		3-4
COMM 111	Fundamentals Public Speaking	
COMM 115	Intro Intercultural Comm.	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
WR 121	Academic Composition ³	4
Total Credits		101-106

¹ Choose a minimum of 2 credits of courses not already required, with the following prefixes: BI, CH, FOR, FW, G, or GEOG.

² Students can choose to take MTH 085 and MTH 086, or MTH 111. Students planning to transfer should consider MTH 111 and consult with their advisor for other specific transfer requirements.

³ Transfer students should also take WR 227.

Advising Notes

This program can be completed within two years provided the student is adequately prepared to take MTH 085 Technical Mathematics I and WR 121 Academic Composition and coursework is initiated during fall term. Students entering in winter or spring term and/or who require developmental writing or math courses, can complete the program within a three-year period.

This degree is designed for students planning to enter their chosen career upon graduation. As such, only selected credits are considered transferable to public or private baccalaureate institutions. This will vary by institution. Institutions with which COCC has articulation agreements in forest resources technology are Oregon State University and Oregon State University – Cascades.

Students planning to transfer to Humboldt State University, Oregon State University, or the University of Idaho to acquire a bachelor of science

degree should meet with a COCC forestry program advisor to discuss current transfer requirements. Many of the required undergraduate courses for the bachelor of science degrees can be taken at COCC and transferred accordingly.

Students are encouraged to meet with a faculty advisor in the forestry program to discuss a two- or three-year educational plan. Students who have obtained a degree or completed coursework from another institution may be able to transfer some coursework to apply toward the AAS in Forest Resources Technology. A meeting with faculty or their advisor is strongly recommended.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

Fall		Credits
FOR 100	Forestry Program Orientation	1
FOR 111	Forestry Perspectives	4
FOR 230A	Map, Compass and GPS	3
FOR 240A	Forest Ecology	3
FOR 241A	Field Dendrology	3
MTH 085	Technical Mathematics I ²	4
Credits		18

Winter

CIS 120	Computer Concepts (Computer Competency Test)	0-4
FOR 230B	Forest Surveying	3
FOR 235	Resource Measurements	4
FOR 271	Applied Forest Ecology	3
MTH 086	Technical Mathematics II ²	4
Credits		14-18

Spring

FOR 110	Wildland Fire Science I	2
FOR 126	Field Studies Pacific NW Forests	1
FOR 127	Plants of the Pacific Northwest	1
FOR 236	Aerial Photo	3
FOR 241B	Dendrology	3
FOR 272	Forest Entomology/Pathology	3
WR 121	Academic Composition ³	4
Credits		17

Summer

FOR 180	Co-op Work Experience Forestry	3
Credits		3

Second Year

Fall		
FOR 210	Wildland Fire Science II	2
FOR 240B	Wildlife Ecology	3
FOR 273	Silviculture and Harvesting Systems	5

HHP 252A	Fitness/First Aid	3
Choose one of the following:		3-4
COMM 111	Fundamentals Public Speaking	
COMM 115	Intro Intercultural Comm.	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
Credits		16-17
Winter		
FOR 211	Supervision and Leadership	3
FOR 237	Resource Sampling	4
Forest Resource Elective ¹		2
GEOG 265	Geographic Information Systems	4
Discipline Studies Course		4
Credits		17
Spring		
FOR 208	Soils: Sustainable Ecosystems	4
FOR 215	Forest Resource Capstone	3
FOR 260	Conservation of Natural Resources	3
FW 218	Survey of Northwest Mammals	2
or FW 212	Survey of Northwest Birds	
Discipline Studies Course		4
Credits		16
Total Credits		101-106

Forestry (OSU Transfer) Emphasis - Associate of Science (AS)

Description

The Associate of Science (Forestry/OSU emphasis) is intended to fulfill many of the lower division requirements of a Bachelor of Science in forest management from Oregon State University, Corvallis. Other universities' requirements for a forest management degree will be similar (though course requirements for other forestry majors will differ). Students planning to transfer to any university forestry program should meet with a COCC forest resources technology advisor to discuss current transfer requirements.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
Baccalaureate Core		
Skills		
Writing I		
WR 121	Academic Composition	4
Writing II		
WR 227	Technical Writing	4
Speech		
COMM 111	Fundamentals Public Speaking	4

Mathematics (OSU)		
MTH 112	Trigonometry	4
Fitness		
HHP 295	Health and Fitness	3
Perspectives Courses ^{1,2}		
Select one course in each of the following categories:		
Physical Science: Met by Program Requirements		
Biological Science: Met by Program Requirements		
Physical or Biological Science: Met by Program Requirements		
Western Culture: (p. 408) ¹		3-4
Cultural Diversity: (p. 408) ¹		4
Literature and the Arts: (p. 409) ¹		3-4
Social Processes and Institutions: Met by Program Requirements		
Program Requirements		
BI 101 or BI 212	General Biology: Cells & Genes Principles of Biology	4-5
CH 221	General Chemistry I	5
CH 222	General Chemistry II	5
EC 201	Microeconomics	4
FOR 111	Forestry Perspectives	4
FOR 208	Soils: Sustainable Ecosystems	4
FOR 230A	Map, Compass and GPS	3
FOR 230B	Forest Surveying	3
FOR 240A	Forest Ecology	3
FOR 240B	Wildlife Ecology	3
FOR 241A	Field Dendrology	3
FOR 241B	Dendrology	3
FOR 235	Resource Measurements	4
FOR 236	Aerial Photo	3
GEOG 265	Geographic Information Systems	4
MTH 241	Calculus for Mgmt/Soc Science	4
MTH 243	Introduction to Probability and Statistics I	4
MTH 244	Introduction to Probability and Statistics 2	4
Total Credits		96-99

¹ Select from the appropriate category in the OSU Baccalaureate Core course list (p. 407).

² No more than two courses (or lecture/lab combinations) from any one department may be used by a student to satisfy the Perspectives category of the core. GEO courses listed under Physical Science are considered to be from a different department than GEO courses listed under any other Perspective category.

Advising Notes

It is recommended that a student also take FOR 251 Recreational Resource Management and BI 212 Principles of Biology. Though it is not included as an AS requirements, students will need to meet the Difference, Power and Discrimination requirement at OSU and could use COCC courses to meet it.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.

- All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
BI 101 or BI 212	General Biology: Cells & Genes Principles of Biology	4-5
HHP 295	Health and Fitness	3
MTH 112	Trigonometry	4
WR 121	Academic Composition	4
Credits		15-16
Second Term		Credits
COMM 111	Fundamentals Public Speaking	4
EC 201	Microeconomics	4
MTH 241	Calculus for Mgmt/Soc Science	4
Western Culture: (p. 408)		3-4
WR 227	Technical Writing	4
Credits		19-20
Third Term		Credits
CH 221	General Chemistry I	5
FOR 111	Forestry Perspectives	4
FOR 208	Soils: Sustainable Ecosystems	4
MTH 243	Introduction to Probability and Statistics I	4
Cultural Diversity: (p. 408)		4
Credits		21
Fourth Term		Credits
CH 222	General Chemistry II	5
FOR 230A	Map, Compass and GPS	3
FOR 240A	Forest Ecology	3
FOR 241A	Field Dendrology	3
Credits		14
Fifth Term		Credits
FOR 230B	Forest Surveying	3
FOR 240B	Wildlife Ecology	3
FOR 241B	Dendrology	3
MTH 244	Introduction to Probability and Statistics 2	4
Literature and the Arts: (p. 409)		3-4
Credits		16-17
Sixth Term		Credits
FOR 235	Resource Measurements	4
FOR 236	Aerial Photo	3
GEOG 265	Geographic Information Systems	4
Credits		11
Total Credits		96-99

Mapping/Cartography - Career Pathway Certificate of Completion (CPCC)

Description

The Mapping/Cartography Career Pathway Certificate of Completion is designed for students who hold degrees in other areas or are already in

the workforce and are looking to enhance their skills related to the basic use and production of maps focusing on field techniques and use of basic geographic information systems.

While this program has no formal entrance requirement, individual courses may have prerequisites which must be met prior to enrollment.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Students are expected to provide their own appropriate field clothing and tools.

Course Requirements

Course	Title	Credits
Core Courses		
FOR 230A	Map, Compass and GPS	3
FOR 230B	Forest Surveying	3
GEOG 211	Computer Cartography	4
GEOG 265	Geographic Information Systems	4
Total Credits		14

Advising Notes

It will take two quarters to complete this career pathway certificate.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
FOR 230A	Map, Compass and GPS	3
GEOG 211	Computer Cartography	4
Credits		7
Second Term		
FOR 230B	Forest Surveying	3
GEOG 265	Geographic Information Systems	4
Credits		7
Total Credits		14

Natural Resources (OSU Transfer) Emphasis - Associate of Science (AS)

Description

The Natural Resources (OSU Transfer) emphasis Associate of Science program is designed to fulfill 90-106 credits of the lower division requirements of a Bachelor of Science in Natural Resources, from Oregon State University - Cascades (<https://osucascades.edu/academics/natural-resources/>). Two specialty options, the fish and wildlife conservation option and the individualized specialty option are available at OSU-Cascades and COCC. Other universities' requirements for a natural

resources degree may be similar. Students planning to transfer to any university natural resources program should meet with a COCC forest resources technology advisor to discuss current transfer requirements.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;

- Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
- Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
Baccalaureate Core		
Skills		
Writing I: (p. 407) ¹		4
Writing II: (p. 407) ¹		3-4
Speech: (p. 407) ¹		4
Mathematics: Met by Program Requirements		
Fitness: (p. 407) ¹		3
Perspectives Courses ^{1,2}		
Choose one course in each of the following categories:		
Physical Science: Met by Program Requirements		
Biological Science: Met by Program Requirements		
Physical or Biological Science: Met by Program Requirements		
Western Culture: (p. 408) ¹		3-4
Literature and the Arts: (p. 409) ¹		3-4
Social Processes and Institutions: Met by Program Requirements ¹		
Program Requirements		
Choose one option from the following: ³		12-15
Option 1:		
BI 101	General Biology: Cells & Genes	
BI 102	General Biology: Evolution	
BI 103	General Biology: Ecology	
Option 2:		
BI 211	Principles of Biology	
BI 212	Principles of Biology	
BI 213	Principles of Biology	
CH 104	Introduction to Chemistry I	5
or CH 221	General Chemistry I	
EC 201	Microeconomics	4
FOR 208	Soils: Sustainable Ecosystems	4
FW 212	Survey of Northwest Birds	2
or FW 218	Survey of Northwest Mammals	
FOR 235	Resource Measurements	4
FOR 240A	Forest Ecology	3
FOR 241A	Field Dendrology	3
or FOR 241B	Dendrology	
FOR 251	Recreational Resource Management	3-4
or ANTH 103	Cultural Anthropology	
FW 251	Wildlife Conservation	3
G 201	Geology I	4
or G 202	Geology II	
or GEOG 278	Physical Geography-Landforms and Water	
GEOG 265	Geographic Information Systems	4

GEOG 279	Physical Geography-Weather and Climate	4
MTH 243	Introduction to Probability and Statistics I	4
Choose one from the following:		4
MTH 112	Trigonometry	
MTH 241	Calculus for Mgmt/Soc Science	
MTH 245	Mathematics for Management, Life, and Social Sciences	
MTH 251	Calculus I	

Natural Resources Options

Choose one of the following three options (see lists below):		4-12
NR Conservation and Technology Option		
Fish and Wildlife Conservation Option		
NR Policy and Management Option		

Electives

Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.	3-4
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Total Credits	90-106
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¹ Select from the appropriate category in the OSU Baccalaureate Core course list (p. 407).

² No more than two courses (or lecture/lab combinations) from any one department may be used by a student to satisfy the Perspectives category of the core. GEO courses listed under Physical Science are considered to be from a different department than GEO courses listed under any other Perspective category.

³ Option 2 is recommended.

Natural Resources Options

NR Conservation and Technology Option

Course	Title	Credits
FOR 230A	Map, Compass and GPS	3
FOR 230B	Forest Surveying	3
FOR 236	Aerial Photo	3
FOR 240B	Wildlife Ecology	3
Total Credits		12

Fish and Wildlife Conservation Option

Course	Title	Credits
FOR 111	Forestry Perspectives	4
Total Credits		4

NR Policy and Management Option

Course	Title	Credits
FOR 111	Forestry Perspectives	4
Choose two of the following course options:		8
PHL 201	Knowledge, Science, and Reason	
PS 201	Intro US Government & Politics	
PSY 201	Mind and Brain	
or PSY 202	Mind and Society	
SOC 201	Introduction to Sociology	
Total Credits		12

Advising Notes

OSU recently updated their curriculum and the NR Conservation and Technology Option and the NR Policy and Management Option are no longer offered. While these options are no longer available, the courses within both options can transfer to the individualized specialty option at OSU-Cascades. Please contact COCC's forest resources technology advisor for more information.

The following requirement is not part of this AS degree but is required at OSU: Perspectives: Cultural Diversity category (see Baccalaureate Core list (p. 407)). Difference, Power and Discrimination is met by an upper division program requirement.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher

Sample Plan

First Term		Credits
FOR 208	Soils: Sustainable Ecosystems	4
Fitness: (p. 407)		3
Choose one of the following:		4
MTH 112	Trigonometry	
MTH 241	Calculus for Mgmt/Soc Science	
MTH 245	Mathematics for Management, Life, and Social Sciences	
MTH 251	Calculus I	
Writing I: (p. 407)		4
	Credits	15
Second Term		
CH 104 or CH 221	Introduction to Chemistry I General Chemistry I	5
FW 251	Wildlife Conservation	3
Writing II: (p. 407)		3-4
Western Culture: (p. 408)		3-4
	Credits	14-16
Third Term		
BI 211	Principles of Biology	5
FW 212 or FW 218	Survey of Northwest Birds Survey of Northwest Mammals	2
FOR 240A	Forest Ecology	3
Speech: (p. 407)		4
	Credits	14
Fourth Term		
BI 212	Principles of Biology	5
G 201 or G 202 or GEOG 278	Geology I Geology II Physical Geography-Landforms and Water	4
Literature and the Arts: (p. 409)		3-4
MTH 243	Introduction to Probability and Statistics I	4
	Credits	16-17

Fifth Term

BI 213	Principles of Biology	5
Fish and Wildlife Conservation Option Course (FOR 111)		4
FOR 251 or ANTH 103	Recreational Resource Management Cultural Anthropology	3-4
GEOG 265	Geographic Information Systems	4
	Credits	16-17

Sixth Term

EC 201	Microeconomics	4
FOR 235	Resource Measurements	4
FOR 241A	Field Dendrology	3
GEOG 279	Physical Geography-Weather and Climate	4
	Credits	15
	Total Credits	90-94

General Transfer

COCC supports students who plan to transfer and complete a bachelor's degree at another college at the course and program level. Each course approved to meet general education (foundational skills and discipline studies) requirements has been verified as transferable to a general education core at an Oregon public university at the time it is approved. Transfer programs are another way to help students package courses for transfer towards university requirements. The Associate of Arts Oregon Transfer guarantees a student completion of lower division general education at all Oregon public universities. The Associate of Science Oregon Transfer, Associate of Science, and Associate of General Studies degrees provide students with guidance towards their intended goal; see individual programs for details.

Contact:

Vickery Viles
541-383-7258
Metolius Hall, Bend Campus

Department: Curriculum and Instruction

Programs

Transfer

- Associate of General Studies - (AGS) (p. 167)
- Exploratory - Associate of Arts Oregon Transfer (AAOT) (p. 169)
- General Transfer-OSU - Associate of Science (AS) (p. 171)
- Undeclared Transfer Major - Associate of Arts Oregon Transfer (AAOT) (p. 173)

Associate of General Studies - (AGS) Description

For students who are not pursuing specific transfer or Career and Technical Education (CTE) programs, the Associate of General Studies (AGS) degree provides an alternative to pursue a broad general education and accomplish personal educational goals. It is important for a student to work closely with an advisor in designing a course plan for this degree.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;

2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirement, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Digital Literacy:		
CIS 120	Computer Concepts (or pass competency exam)	0-4
Health: (p. 398)		
Choose 4 credits ¹		4
Math:		
Choose one course from either the general education mathematics list or the related instruction computation list. ²		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing:		
WR 121	Academic Composition	4
Choose one of the following: ³		3-4
BA 214	Business Communications	
WR 122	Argument, Research, and Multimodal Composition	
WR 227	Technical Writing	
General Education/ Discipline studies		
Arts and Letters: (p. 399)		
Choose one course from the disciplines studies list		3-4
Physical/Biological Lab Science:		
Choose one course from the disciplines studies list		3-5
Social Science: (p. 404)		
Choose one course from the disciplines studies list		3-4
Cultural Literacy: (p. 401)		
Choose one course from the disciplines studies list		3-4
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours.		60
Total Credits		90-101

¹ HHPA activity courses (1 credit each) are not to be duplicated.

² Choose one math course from either the general education mathematics list (p. 397) or the related instruction computation list (p. 406).

³ WR 122 Argument, Research, and Multimodal Composition and WR 227 Technical Writing are designed as a sequence to follow WR 121 Academic Composition. Consult with an advisor to determine the best selection between BA 214 Business Communications, WR 122 Argument, Research, and Multimodal Composition, and WR 227 Technical Writing.

Advising Notes

Advantages

• The AGS awards a degree for completion of college-level coursework in core skills and general education and allows students flexibility to customize more than half of the degree's required number of credits. It can be used to enhance employment, meet sponsoring agency requirements and/or meet unusual baccalaureate requirements.

Considerations

- The AGS degree is not transferrable as a whole and does not meet certification requirements for any Career and Technical Education (CTE) area.
- The AGS degree does not guarantee that a student will meet all lower-division general education and major requirements; however, with careful academic advising and in consideration of transfer institution requirements, the AGS degree may be designed to do so.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All general education courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
Health (4 credits of HHP or HHPA prefix)		4
Elective		4
Math course		4
WR 121	Academic Composition	4
Credits		16
Second Term		
Choose one from the following:		3-4
BA 214	Business Communications	
WR 122	Argument, Research, and Multimodal Composition	
WR 227	Technical Writing	
CIS 120	Computer Concepts	4
Discipline Studies Arts & Letters		3-4
Discipline Studies Social Science		3-4
Credits		13-16
Third Term		
Discipline Studies Physical/Biological Lab Science		3-5
Discipline Studies Cultural Literacy		3-4
Elective		4
Elective		4
Credits		14-17
Fourth Term		
Elective		4
Elective		4
Elective		4
Oral Communication: (p. 399)		3-4
Credits		15-16
Fifth Term		
Elective		4
Elective		4
Elective		4

Elective	4
Credits	
	16
Sixth Term	
Elective	4
Elective	4
Elective	4
Elective	4
Credits	
	16
Total Credits	
	90-97

Exploratory - Associate of Arts Oregon Transfer (AAOT)

Description

If a student plans to earn a college degree but has not yet decided on a major, COCC identifies the student as "exploratory," which aligns with the Associate of Arts Oregon Transfer (AAOT) degree audit in GradTracks. The AAOT degree is used for exploratory students because it provides a guideline of courses that meet bachelor's degree general education requirements at Oregon public universities. The AAOT degree does not include all bachelor degree requirements for freshmen and sophomores and it does not include requirements for COCC's Career and Technical Education (CTE) programs. It is important for exploratory students to work actively to identify an educational goal and communicate with their advisor.

Some exploratory students may choose to declare the Associate of General Studies (AGS) degree which allows students to self-design a program to meet individual needs. However, it is not designed to meet bachelor's degree general education requirements as the AAOT degree, nor does it align with workforce training and skills as the AAS degrees.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		

One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).

Arts and Letters: (p. 399)	
Choose three courses from at least two prefixes	9-12
Social Science: (p. 404)	
Choose four courses from at least two prefixes	12-16
Science/Math/Computer Science: (p. 403)	
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science	12-20
Electives	
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.	39
Total Credits	90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

COCC recommends that students use several strategies to ensure good decisions about educational goals. Many COCC resources are available to assist.

- Take HD 110 Career Planning, a 3-credit course offered every term.
- Visit with the Career Services Coordinator in CAP Services.
- Discuss options with your academic advisor and faculty members in departments that interest you.

COCC uses the AAOT and AGS degrees to provide exploratory students with a framework, but students should change their declared major when they make a decision. Initially, the GradTracks audit will present the Associate of Arts Oregon Transfer requirements but students should be aware that these guidelines are preliminary. Students can explore other COCC programs by using the "What If" option on the GradTracks menu. Give yourself a timeline within which to make a decision. Many universities require students to declare their major within their first 90 credits, but large majors such as engineering, science and business, should be declared in the first 45 credits. CTE programs that lead directly to employment typically don't have elective credits, so the earlier students make a decision, the better.

Nearly all bachelor's degrees are either a bachelor of arts (BA) or a bachelor of science (BS). Students pursuing a BA usually need to complete two years of a world language (the 200-level language courses may be applied to the arts and letters requirement in Discipline Studies.) Students pursuing a BS should consider taking more math and science courses. Students should refer to the transfer college's degree requirements for details.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
Discipline Studies Arts & Letters		3-4
Mathematics: (p. 399)		4
Oral Communication: (p. 399)		3-4
WR 121	Academic Composition	4
Credits		14-16
Second Term		
Discipline Studies Arts & Letters		3-4
Discipline Studies Social Science		3-4
Elective		3
Health (3 credits with HHP or HHPA prefix) ¹		3
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		16-18
Third Term		
Discipline Studies Arts & Letters		3-4
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4
Elective		4
Credits		17-21
Fourth Term		
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4
Elective		4
Credits		14-17
Fifth Term		
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4
Elective		4
Credits		14-17
Sixth Term		
Discipline Studies Science/Math/Computer Science		3-5
Elective		4
Elective		4
Elective		4
Credits		15-17
Total Credits		90-106

General Transfer-OSU - Associate of Science (AS)

Description

The Associate of Science (Oregon State University emphasis) degree is intended to give students who are confident they will finish their bachelor's degree at either OSU-Corvallis or OSU-Cascades a framework to directly meet OSU's general education (called "baccalaureate core" at OSU) requirements. Those students who are not certain that they

will complete their degree at OSU or those who have fewer remaining requirements with the AAOT degree may be better served by the associate of arts degree which guarantees progress toward the general education core requirements at all Oregon public universities.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
Baccalaureate Core		
Skills		
Writing I: (p. 407)	¹	4
Writing II: (p. 407)	¹	3-4
Speech: (p. 407)	¹	3-4
Mathematics (OSU): (p. 407)	¹	4
Fitness: (p. 407)	¹	3
Perspectives Courses ^{1,2}		
Choose one course in each of the following categories:		
Physical Science: (p. 408)	¹	4-5
Biological Science: (p. 408)	¹	4-5
Physical or Biological Science: (p. 408)	¹	4-5
Western Culture: (p. 408)	¹	3-4
Cultural Diversity: (p. 408)	¹	4
Literature and the Arts: (p. 409)	¹	3-4
Social Processes and Institutions: (p. 409)	¹	3-4
Difference, Power and Discrimination: (p. 409)	¹	4
Electives		
Choose enough elective credits from the following list to reach a minimum of 90 overall degree units.	³	44
Total Credits		90-98

¹ Select from the appropriate category in the OSU Baccalaureate Core course list (p. 407).

² No more than two courses (or lecture/lab combinations) from any one department may be used by a student to satisfy the Perspectives category of the core. GEO courses listed under Physical Science are considered to be from a different department than GEO courses listed under any other Perspective category.

³ Electives must be numbered 100 or higher (with a maximum of 12 Career and Technical Education (CTE) credits).

Advising Notes

Students are highly recommended to include lower division major requirements and their BA/BS requirements in their first 90 credits. Many OSU majors require a significant number of lower division courses, and some programs (such as engineering, computer science and business) require completion of these courses before students may continue to upper division courses. Students who do not complete these requirements in their first 90 credits may find that they cannot complete

their bachelor's degree in two years after completion of this AS degree nor in the minimum total of 180 credits.

This information reflects an accurate picture of OSU requirements at the time of approval, using the OSU catalog, advisors and web resources for consultation. However, degree requirements can and do change. OSU has made no guarantee about the accuracy of requirements in this AS degree; determination of transfer status is made on an individual course basis at the point of admission to OSU.

Timing

OSU recommends the following plan for timing your baccalaureate core requirements.

First Year:

- Complete Writing 1 (WR 121 Academic Composition, C- or higher), Speech and Math (required in first 45 OSU credits)
- Begin Perspectives courses
- Consider a Difference, Power and Discrimination (DPD) or Fitness course

Second Year:

- Complete Writing II (required in first 90 OSU credits)
- Continue Perspectives courses
- Completed Difference, Power and Discrimination (DPD) and Fitness course requirements

Notes for majors from the College of Liberal Arts (CLA)

At Cascades campus, this includes majors such as American Studies, Liberal Studies, Psychology and Social Science.

- Generally, double dipping is not allowed.
- CLA majors have a Liberal Arts Core requirement (5 courses, at least 15 credits).
- Students are encouraged to include the BA or BS requirements in their lower division courses.

Requirements for a BA or BS degree, other requirements

Following are considerations for students working on their BA/BS requirement.

- Nearly all degrees at OSU are either BA (Bachelor of Arts) or BS (Bachelor of Science) degrees.
- Some majors offer both BA and BS options, and some only offer one option.
- BS requirements are included in major curriculum for all degrees that are in colleges outside of the College of Liberal Arts.
- A major will either allow students to "double dip" (use a course to meet two requirements, such as a major requirement and a BA/BS or baccalaureate core requirement) or will prohibit double dipping.
- Usually, majors that allow double dipping will require specific courses that can be used in both the major and the BA/BS or baccalaureate core.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses must be completed with a C grade or higher.

Sample Plan

First Term	Credits
Biological Science: (p. 408)	4-5
Fitness: (p. 407)	3
Mathematics (OSU): (p. 407)	4
Writing I: (p. 407)	4
Credits	15-16
Second Term	
Elective	3-4
Writing II: (p. 407)	3-4
Physical Science: (p. 408)	4-5
Western Culture: (p. 408)	3-4
Credits	13-17
Third Term	
Cultural Diversity: (p. 408)	4
Elective	4
Speech: (p. 407)	3-4
Physical or Biological Science: (p. 408)	4-5
Credits	15-17
Fourth Term	
Western Culture: (p. 408)	3-4
Literature and the Arts: (p. 409)	3-4
Elective	3
Elective	4
Elective	4
Credits	17-19
Fifth Term	
Social Processes and Institutions: (p. 409)	3-4
Elective	4
Elective	4
Elective	4
Credits	15-16
Sixth Term	
Difference, Power and Discrimination: (p. 409)	4
Elective	4
Elective	4
Elective	3
Credits	15
Total Credits	90-100

Undeclared Transfer Major - Associate of Arts Oregon Transfer (AAOT)

Description

If a student plans to transfer in order to earn a bachelor's degree at another college or university but has not yet decided on a major, COCC identifies the student as "undeclared transfer." This goal aligns with the Associate of Arts Oregon Transfer (AAOT) degree plan because it provides a guideline of courses that meet bachelor's degree general education requirements at Oregon public universities. The AAOT degree does not include all bachelor degree requirements for freshmen and

sophomores; it is important for undeclared transfer students to work actively with an academic advisor to identify a specific transfer goal.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;

- Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
- Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses chosen from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses chosen from at least two prefixes		12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39
Recommend: HD 110		
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

Nearly all bachelor's degrees are either a bachelor of arts (BA) or a bachelor of science (BS). Students pursuing a BA usually need to complete two years of a world language (the 200-level language courses may be applied to the arts and letters requirement in Discipline Studies.) Students pursuing a BS should consider taking more math and science courses. Students should refer to the transfer college's degree requirements for details.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters	3-4
Mathematics: (p. 399)	4
Oral Communication: (p. 399)	3-4
WR 121	Academic Composition
	Credits
	14-16
Second Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Elective	3
Health (3 credits with HHP or HHPA prefix)	3
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing
	Credits
	16-18
Third Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
	Credits
	17-21
Fourth Term	
Discipline Studies Social Science	3-4
Discipline Studies Science/Math/Computer Science	3-5
Elective	4
Elective	4
	Credits
	14-17
Fifth Term	
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
	Credits
	14-17
Sixth Term	
Discipline Studies Science/Math/Computer Science	3-5
Elective	4
Elective	4
Elective	4
	Credits
	15-17
	Total Credits
	90-106

Geographic Information Systems

A geographical information system (GIS) is an information system that is designed to work with data referenced by spatial or geographic coordinates. In other words, a GIS is both a database system with specific capabilities for spatially-referenced data, as well as a set of operations for working [analysis] with the data. (Star and Estes, 1990)

Simply put, a GIS combines layers of information about a place to give you a better understanding of that place. What layers of information you combine depends on your purpose finding the best location for a new store, analyzing environmental damage, viewing similar crimes in a city to detect a pattern, and so on.

<https://www.cocc.edu/programs/gis/> (<https://www.cocc.edu/programs/gis/default.aspx>)

Contact:

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Pioneer Hall

Department: Computer and Information Systems
Department Chair: Ken Swartwout

Programs

Career and Technical Education

- Geographic Information Systems - Associate of Applied Science (AAS) (p. 175)
- Geographic Information Systems - One Year Certificate of Completion (CC1) (p. 177)

Courses

GEOG 211 Computer Cartography (4 Credits)

Develops skills needed to produce maps using ArcGIS Desktop software. Outlines cartographic principles and map use. Emphasis on mapping techniques within a GIS. Intended for students enrolled in GIS or UAS programs.

GEOG 265 Geographic Information Systems (4 Credits)

Introduces students to principles and practice of GIS, while providing experience using ArcGIS Desktop and Spatial Analyst software. Develops both theoretical understanding of GIS and experience in accessing GIS datasets. Students exposed to raster and vector GIS.

GEOG 266 Arc GIS (5 Credits)

Recommended preparation: or to be taken with GEOG 265.

Provides working knowledge of ArcGIS Desktop software. In addition, students undertake designing and developing a GIS database, performing spatial analysis, creating maps, and generating a report using the desktop products.

GEOG 267 Geodatabase Design (5 Credits)

Recommended preparation: GEOG 266.

Covers fundamentals of creating, using, editing, and managing spatial and attribute data stored in a geodatabase in ArcGIS. Topics include data migration; data loading; topology rules; use of subtypes, attribute domains, and relationship classes. Also covered are creation, editing and analysis of geometric networks.

GEOG 273 Spatial Data Collection (5 Credits)

Provides the skills to collect location information for the purpose of integration with a Geographic Information System. The focus is on proper utilization of Global Positioning System (GPS) receivers and data collection. Intended for students enrolled in the second year of GIS or UAS programs, or similar academic preparation (see program director for details).

GEOG 275 GIS Capstone (5 Credits)

Recommended preparation: GEOG 285.

Culmination GIS project. Students are presented with a set of criteria and perform all steps necessary to complete the project including: project planning, designing and developing a GIS database, data collection and editing, performing spatial analysis, creating maps, generating reports and presenting of project output. See instructor for details.

GEOG 280 Co-op Work Experience GIS (1-3 Credits)

Prerequisites: instructor approval.

Provides opportunity for on-the-job experience in the GIS field. Normally taken summer term, but may occur during any term. See instructor for details.

GEOG 284 GIS Customization (5 Credits)

Recommended preparation: CIS 122.

Utilizes techniques to customize ArcGIS software through use of a current programming language. Publishing content to the Internet and Servers is also undertaken.

GEOG 285 Data Conversion and Documentation (5 Credits)

Recommended preparation: GEOG 266.

Covers a variety of techniques to collect and convert data between various formats, projections and coordinate systems, etc. Cultivates student's ability to research and experiment with data and enhance problem-solving skills. Stresses use of metadata which allows the data user to determine whether a particular data set is suitable for its proposed use.

GEOG 286 Remote Sensing (5 Credits)

Introduces students to the theory and methods of remote sensing through use of satellite imagery. Practical exercises involve use of SPOT, LANDSAT and Quickbird images with ArcGIS/Imagine Analysis software. Digital analysis is discussed and performed including preprocessing, image classification and image evaluation. Intended for students enrolled in the second year of GIS or UAS programs, or similar academic preparation (see program director for details).

GEOG 287 Analysis of Spatial Data (5 Credits)

Recommended preparation: GEOG 266.

Leads students through the analytical capabilities of GIS. Course begins with the more elementary but useful techniques involving locating and describing features, then proceeds to more advanced techniques based on higher-level spatial objects. Lab exercises utilize the Spatial Analyst Extension of ArcGIS to perform analysis of raster datasets.

Geographic Information Systems - Associate of Applied Science (AAS)

Description

GIS is an information system designed to work with data referenced by spatial or geographic coordinates. GIS is both a database system with specific capabilities for spatially referenced data, as well as a set of operations for processing the data. The program is built on a foundation of computer-aided mapping and surveying technology for collecting

spatial data, database generation and manipulation for tabular data and GIS-specific courses for organization, analysis and reporting.

Graduates work in retail and commercial businesses, natural resources, education, federal/state/local governments, banking and insurance, internet, publishing and real estate. GIS careers typically include positions such as GIS technician, analyst, project manager, computer programmer, database administrator, system administrator, cartographic designer, developer and related managerial and administrative roles.

Learning Outcomes

1. Apply foundational skills in computer hardware/software.
2. Apply foundational skills in position/data acquisition.
3. Integrate theoretical and practical considerations in GIS process problem solving.
4. Demonstrate cogent oral and written, GIS and computational skills.
5. Communicate effectively with a professional demeanor and attitude individually and collectively as a team member.
6. Develop and implement GIS services for users.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra and/or MTH 060 Beginning Algebra I equivalent.
 - Completion of computer competency (either IC3 exam or CIS 120 Computer Concepts, which may be taken as part of program).

Other Entrance Requirements

- All COCC students enrolled in the Geographic Information Systems program (which includes requirements for Co-operative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. See the web site or program director for more information.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required
 - Materials (usb/flash drive, maps, assorted office supplies), \$500.
- Recommended
 - A home or laptop computer capable of running the GIS software, \$1200. Contact program instructor for specifics.

Course Requirements

Course	Title	Credits
Core Courses		
GEOG 211	Computer Cartography	4

GEOG 265	Geographic Information Systems	4
GEOG 266	Arc GIS	5
GEOG 267	Geodatabase Design	5
GEOG 273	Spatial Data Collection	5
GEOG 275	GIS Capstone	5
GEOG 280	Co-op Work Experience GIS	3
GEOG 284	GIS Customization	5
GEOG 285	Data Conversion/Documentation	5
GEOG 286	Remote Sensing	5
GEOG 287	Analysis of Spatial Data	5
GIS electives: Choose two of the following courses:		6-8
CIS 120	Computer Concepts	
CIS 125A1	AutoCAD 1	
FOR 230B	Forest Surveying	
FOR 236	Aerial Photo	
Other Required Courses		
CIS 135DB	Database Theory/SQL	4
Discipline Studies courses		8
FOR 230A	Map, Compass and GPS	3
FOR 235	Resource Measurements	4
HHP 252A	Fitness/First Aid	3
Human Relations approved course		3-4
Choose one of the following:		4-8
MTH 085 & MTH 086	Technical Mathematics I and Technical Mathematics II	
MTH 105	Math in Society (or higher)	
WR 121	Academic Composition	4
WR 227	Technical Writing	4
Total Credits		94-101

Advising Notes

GIS courses begin once per year, in fall term. Students take non-program support and/or selected GIS courses if they begin in a term other than fall or if they need to build skills related to prerequisites. GIS courses, offered each term, must be taken together and sequentially. Students are discouraged from working more than 10 hours per week during any term due to heavy course load.

This degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Term		Credits
FOR 230A	Map, Compass and GPS	3
GEOG 265	Geographic Information Systems	4
GEOG 266	Arc GIS	5
MTH 085	Technical Mathematics I	4
Credits		16
Second Term		
FOR 235	Resource Measurements	4
GEOG 211	Computer Cartography	4
GIS elective (recommend FOR 230B)		3
MTH 086	Technical Mathematics II	4
Credits		15
Third Term		
CIS 135DB	Database Theory/SQL	4
GEOG 267	Geodatabase Design	5
GIS elective (recommend FOR 236)		3
WR 121	Academic Composition	4
Credits		16
Fourth Term		
GEOG 280	Co-op Work Experience GIS	3
Credits		3
Fifth Term		
Discipline Studies Course		4
GEOG 273	Spatial Data Collection	5
HHP 252A	Fitness/First Aid	3
WR 227	Technical Writing	4
Credits		16
Sixth Term		
GEOG 284	GIS Customization	5
GEOG 285	Data Conversion/Documentation	5
GEOG 287	Analysis of Spatial Data	5
Credits		15
Seventh Term		
Discipline Studies Course		4
GEOG 275	GIS Capstone	5
GEOG 286	Remote Sensing	5
Human Relations List Course		3-4
Credits		17-18
Total Credits		98-99

Geographic Information Systems - One Year Certificate of Completion (CC1)

Description

The Geographic Information Systems (GIS) One Year Certificate of Completion is designed for students already possessing a two- or four-year college degree that seek to add specific GIS skills to their discipline.

GIS is an information system designed to work with data referenced by spatial or geographic coordinates. GIS is both a database system with

specific capabilities for spatially referenced data, as well as a set of operations for working with (analyzing) the data. The program is built on a foundation of computer-aided mapping and surveying technology for collecting spatial data, database generation and manipulation for tabular data and GIS-specific courses for organization, analysis and reporting.

Graduates work in retail and commercial businesses, natural resources, education, federal/state/local governments, banking and insurance, internet, publishing and real estate. GIS careers typically include positions such as GIS technician, analyst, project manager, computer programmer, database administrator, system administrator, cartographic designer, developer and related managerial and administrative roles.

Learning Outcomes

1. Integrate theoretical and practical considerations in GIS process problem solving.
2. Demonstrate cogent oral and written, GIS and computational skills.
3. Communicate effectively with a professional demeanor and attitude individually and collectively as a team member.
4. Develop and implement GIS services for users.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - Two year, four-year, or graduate degree from accredited institution.
 - Completion of computer competency (either IC3 exam or CIS 120 Computer Concepts).

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required
 - Materials (usb/flash drive, maps, assorted office supplies), \$500.
- Recommended
 - A home or laptop computer capable of running the GIS software, \$1200. Contact program instructor for specifics.

Course Requirements

Course	Title	Credits
Core Courses		
GEOG 211	Computer Cartography	4
GEOG 265	Geographic Information Systems	4
GEOG 266	Arc GIS	5
GEOG 267	Geodatabase Design	5
GEOG 273	Spatial Data Collection	5
GEOG 275	GIS Capstone	5
GEOG 285	Data Conversion/Documentation	5
GEOG 286	Remote Sensing	5
GEOG 287	Analysis of Spatial Data	5
Other Required Courses		
Human Relations approved course		3-4
WR 121	Academic Composition	4
Total Credits		50-51

Advising Notes

GIS courses begin once per year, in fall term. Students take non-program support and/or selected GIS courses if they begin in a term other than fall or if they need to build skills related to prerequisites. Students receiving federal financial aid are encouraged to speak with the financial aid advisor.

GIS courses, offered each term, must be taken together and sequentially. Students are discouraged from working more than 10 hours per week during any term due to heavy course load.

This one year certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

Fall		Credits
GEOG 265	Geographic Information Systems	4
GEOG 266	Arc GIS	5
GEOG 273	Spatial Data Collection	5
WR 121	Academic Composition	4
	Credits	18

Winter

GEOG 211	Computer Cartography	4
GEOG 285	Data Conversion/Documentation	5
GEOG 287	Analysis of Spatial Data	5
Choose one course from the Human Relations list		3-4
	Credits	17-18

Spring

GEOG 267	Geodatabase Design	5
GEOG 275	GIS Capstone	5
GEOG 286	Remote Sensing	5
	Credits	15
	Total Credits	50-51

Geography

An awareness of landscape, plus the investigation of economic, physical and cultural processes that influence the landscape, are integral parts of study in geography. Factors included in the analysis of world and regional geography are location and structure of settlements, cultural influences, atmospheric processes, water resources, landforms, and climatic regions of the world. Sample courses include: Cultural Geography, Physical Geography, Environmental Geography, and several World Regional geography classes.

Geography provides excellent preparation for advanced studies in such fields as environmental studies, economics, economic development, city

and regional planning, tourism and recreation, landscape architecture, and cartography.

<https://www.cocc.edu/programs/geography/> (<https://www.cocc.edu/programs/geography/default.aspx>)

Contact:

Mick McCann
541-383-7747
Modoc Hall

Department: World Languages and Cultures
Department Chair: Murray Godfrey

Programs

Transfer

- Geography - Associate of Arts Oregon Transfer (AAOT) (p. 179)

Courses

GEOG 100 Introduction to Geography (4 Credits)

Designed to examine the key themes, concepts and ideas in geography and to develop a geographical perspective of the contemporary world. A basic foundation of the fundamental themes in geographic education will be extended to the study of places and regions. Emphasis will be placed on the development of cartographic and map interpretation skills.

GEOG 106 Economic Geography (4 Credits)

Recommended preparation: minimum placement into WR 065.

Introduces the distribution of economic activities across the nation and the world. Explores core issues such as economic development, resource distribution and use, global agriculture, changes in manufacturing and the growth of the service sector. Urban patterns are explained in the context of our interrelated, globalized world. Useful course for business majors or any student wanting to understand criteria for business location.

GEOG 107 Cultural Geography (4 Credits)

Recommended preparation: minimum placement into WR 065.

Examination of different cultural traits in the world. Special emphasis on perception of space and landscape, language, world religion and folk and popular culture issues.

GEOG 190 Environmental Geography (4 Credits)

Recommended preparation: WR 121.

Introductory view of the environment and how it is shaped by and shapes human activity. Units include famine, water resources, deforestation, energy use, biodiversity and sustainable land-use practices.

GEOG 198 Field Geography of Central Oregon (3 Credits)

Recommended preparation: WR 121.

Field course that examines natural and cultural landscapes of Central Oregon sub-regions such as the Bend Core, Sisters Country, High Desert, and Upper and Lower Deschutes Basins.

GEOG 199 Selected Topics: Geography (1-4 Credits)

Series of mini-courses focusing on selected geographical topics including the following: an invitation to geography and natural regions of the world (deserts, mountains, humid tropics) and thematic topics.

GEOG 201 World Regional Geography I (4 Credits)

Recommended preparation: WR 121.

Introductory Geography course that explores the following regions: Europe, the former Soviet Union, Anglo-America, Australia and Japan. Evaluate how culture, politics, economics, history and the physical environment help create differences across regions.

GEOG 202 World Regional Geography II (4 Credits)**Recommended preparation:** WR 121.

Introductory Geography course that explores the following regions: Latin America, Middle East/North Africa, Sub-Saharan Africa, East, South and Southeast Asia. Evaluate how culture, politics, economics, history and the physical environment help create differences across regions.

GEOG 212 Tourism And Recreation (3 Credits)**Recommended preparation:** WR 065.

Includes a study of various components of the tourist industry and an analysis of the economic and environmental impacts of tourism and recreation upon communities. Examines tourism and recreation in Central Oregon and in other selected parts of the world.

GEOG 213 Geography of Pacific Northwest (3 Credits)**Recommended preparation:** WR 065.

General introduction to geographical characteristics of the Pacific Northwest and, through this regional emphasis, to some of the basic principles and concepts of geography as a discipline. Comprises three broad sections dealing in turn with historical geography, physical geography and economic geography.

GEOG 270 Map Interpretation and Design (4 Credits)**Recommended preparation:** MTH 60 or equivalent.

Looks at the world of maps. How to design, interpret and critique many forms of maps.

GEOG 272 Geography for Teachers (3 Credits)**Recommended preparation:** WR 121.

Designed for public and private school teachers in Geography and for all teachers wishing to include geographic content and concepts in their social studies classes. Emphasizes how to teach Geography at any grade level and incorporates the benchmarks and curriculum goals of the state of Oregon Department of Education as well as National Geography standards.

GEOG 278 Physical Geography-Landforms and Water (4 Credits)

Introduction to the science of landforms and the processes that form them, including both internal and external processes, and how these processes interact and form a system. The course will survey different landform types, such as fluvial, Aeolian, glacial, volcanic, coastal, karst, and periglacial landforms and identify where, on a global basis, these landforms are likely to occur.

GEOG 279 Physical Geography-Weather and Climate (4 Credits)

This course is an introduction to the sciences of meteorology and climatology. The focus of study for the meteorology section of the course will be on the troposphere, which is the layer of the atmosphere closest to the earth. The last portion of the course will study climatic classification and the relationship of climate with natural vegetation and human activity.

GEOG 290 Environmental Problems (3 Credits)**Recommended preparation:** WR 121.

Examines intentional and inadvertent human modification of the natural environment and local, regional and global problems it may cause. Includes deforestation, urbanization, resource depletion and climate.

GEOG 295 Wilderness and Society (4 Credits)

Cultural and historical overview of the changing attitudes toward wilderness as reflected through literature and the history of federal land legislation. Attempts to define the social and economic values of wilderness lands and where they occur geographically. A reading intensive course.

GEOG 298 Independent Study: Geography (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study in geography to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

GEOG 299 Selected Topics: Geography (1-4 Credits)

This course is in development.

Geography - Associate of Arts Oregon Transfer (AAOT)

Description

Geography is a discipline that studies the Earth and its human inhabitants, and is commonly divided into the branches of human geography and physical geography. The Associate of Arts Oregon Transfer (AAOT) with a focus in geography includes courses that are commonly required for this bachelor's degree major and meets lower division general education requirements at all Oregon public universities. A bachelor's degree in geography prepares students for a number of careers in business and industry such as city planning, recreation, natural resources, and real estate.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and

3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits	¹	3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Recommend: GEOG 106, GEOG 201, GEOG 202		
Choose another course from the Social Science Discipline list that does not have a GEOG prefix		
Science/Math/Computer Science: (p. 403)		

Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science 12-20

Recommend: GEOG 278, GEOG 279

Electives

Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable. 39

Recommend: GEOG 107, GEOG 190

Total Credits 90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

Students pursuing a BA after transfer should consider completing three terms of a 200-level language course. The 100-level language courses will count as electives. The 200-level language courses will partially fulfill the arts and letters requirement.

Students pursuing a BS after transfer should consider taking more math and science courses. Language is not necessary. For specific details, speak with an advisor.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters	3-4
Mathematics: (p. 399)	4
Oral Communication: (p. 399)	3-4
WR 121	Academic Composition
	Credits
	14-16
Second Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science (recommend GEOG 106)	4
Health (3 credits with HHP or HHPA prefix) ¹	3
WR 122	Argument, Research, and Multimodal
or WR 227	Composition
	Technical Writing
	Credits
	14-15
Third Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Science/Math/Computer Science (recommend GEOG 278 or GEOG 279)	4
Discipline Studies Social Science (recommend GEOG 201)	4
Elective	4
	Credits
	15-16
Fourth Term	
Discipline Studies Science/Math/Computer Science	3-5

Discipline Studies Social Science (recommend GEOG 202)	4
Elective (recommend GEOG 107)	4
Elective	4
<hr/>	
Credits	15-17

Fifth Term

Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective (recommend GEOG 190)	4
Elective	4
Elective	3
<hr/>	
Credits	17-20

Sixth Term

Discipline Studies Science/Math/Computer Science	3-5
Elective	4
Elective	4
Elective	4
<hr/>	
Credits	15-17
<hr/>	
Total Credits	90-101

Geology

"Civilization exists by geologic consent, subject to change without notice."

- Will Durant

Geology is unique among the sciences in that it uses concepts & laws from other fields (chemistry, physics, etc) to try and understand the messy, infinitely complicated real world. In practice, this means we must go out and explore the outstanding geology in our backyard via field trips!

Geology includes natural hazards such as earthquakes and volcanic eruptions, the processes responsible for earth's internal structure and external landforms, earth resources such as fossil fuels and water, a geologic perspective on earth's dynamic climate, as well as a focus on geologic time including the history of the planet. For geology majors interested in transferring and completing a Bachelors of Science in Geology, we recommend supplemental coursework in physics, chemistry, and mathematics. COCC geology coursework includes Geology I (interior processes), Geology II (surface processes), Geology III (earth history), Cascade Volcanoes (field-based) and other field-based courses, Geology of the Pacific Northwest, and Physical Science: Geology.

<https://www.cocc.edu/programs/geology/> (<https://www.cocc.edu/programs/geology/default.aspx>)

Contact:

Hal Wershow (hwershow@cocc.edu)
541-383-7557
Science Center 280, Bend Campus

Department: Science
Department Chair: Carol Higginbotham

Programs

If you are interested in a possible career in the geosciences, or simply are interested in pursuing a four-year degree in Geology, then make sure to talk with Hal Wershow (hwershow@cocc.edu), the COCC Geology instructor. You might also peruse the American Geosciences Institute's "Status of the Geoscience Workforce ([https://](https://www.americangeosciences.org/workforce/reports/status-report/)

www.americangeosciences.org/workforce/reports/status-report/"), a free online report. The link below will take you through the coursework necessary to complete an AAOT with a focus in geology.

Transfer

- Geology - Associate of Arts Oregon Transfer (AAOT) (p. 181)

Geology

G 162CV Cascade Volcanoes (3 Credits)

Consists of field studies of selected areas with emphasis on relationship between rock type, geologic setting and topography. Includes lectures, laboratory and weekend field trips. Topic areas include Cascade Volcanoes.

G 199 Selected Topics: Geology (1-6 Credits)

This course is in development.

G 201 Geology I (4 Credits)

Examines the nature of Earth's interior processes from a geologic perspective. Need not be taken in sequence. Field trips will occasionally substitute for labs, with multiple options to ensure accessibility for every student.

G 202 Geology II (4 Credits)

Examines the nature of Earth's surface processes from a geologic perspective. Need not be taken in sequence. Field trips will occasionally substitute for labs, with multiple options to ensure accessibility for every student.

G 203 Geology III (4 Credits)

Examines earth history from a geologic perspective. Need not be taken in sequence. Field trips will occasionally substitute for labs, with multiple options to ensure accessibility for every student.

G 207 Geology of the Pacific Northwest (4 Credits)

This is a one-term introductory lab science course in geology. It provides an introduction to the regional geology of the Pacific Northwest with emphasis on Oregon, Washington and parts of neighboring states and provinces. Includes basic geologic principles, earth materials and geologic history of the Pacific Northwest. Required weekend field trip.

G 299 Selected Topics: Geology (1-6 Credits)

Selected Topics in Geology.

GS 106 Physical Science: Geology (4 Credits)

Recommended preparation: MTH 060.

Examines how the Earth's interior transfers energy to the surface, with a guided inquiry focus. Students work closely in groups to discover geologic ideas. Field trips will occasionally substitute for labs, with multiple options to ensure accessibility for every student.

Geology - Associate of Arts Oregon Transfer (AAOT)

Description

Geology includes natural hazards such as earthquakes and volcanic eruptions, the processes responsible for earth's internal structure and external landforms, earth resources such as fossil fuels and water, a geologic perspective on earth's dynamic climate, and a focus on geologic time including the history of the planet. The Associate of Arts Oregon Transfer (AAOT) with a focus in geology includes courses that are commonly required for a geology major and meets lower division general education requirements at all Oregon public universities. Note that you

will likely have to take additional coursework in physics, chemistry and mathematics.

A bachelor's degree with a major in geology prepares a student for entry level jobs in environmental geology and resource extraction industries, but also prepares students for graduate school which can also lead to jobs in research and government. If you are interested in learning more about geoscience careers, please read through the American Geosciences Institute's "Status of the Geoscience Workforce (<https://www.americangeosciences.org/workforce/reports/status-report/>)", a free online report.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Recommend: CH 221, G 201, G 202, G 203		
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39
Recommend: BI 101, BI 102, BI 103, CH 222, CH 223, G 148, G 162CV, G 207, GS 108, MTH 254, MTH 255, MTH 256, PH 211, PH 212, PH 213		
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

Oregon universities with a geology major include Oregon State University, Portland State University, Southern Oregon University and University of Oregon. Students planning to transfer should take the following:

- CH 221 General Chemistry I, CH 222 General Chemistry II and CH 223 General Chemistry III
- PH 201 General Physics I, PH 202 General Physics II and PH 203 General Physics III or PH 211 General Physics I, PH 212 General Physics II and PH 213 General Physics III

Those planning to transfer to:

- OSU should take MTH 112 Trigonometry, MTH 251 Calculus I and MTH 252 Calculus II;
- PSU should take MTH 251 Calculus I, MTH 252 Calculus II, MTH 253 Calculus III and MTH 254 Vector Calculus I;
- SOU should take MTH 111 College Algebra, MTH 112 Trigonometry, MTH 251 Calculus I and MTH 252 Calculus II;
- UO should take MTH 251 Calculus I, MTH 252 Calculus II and MTH 253 Calculus III.

Students are strongly encouraged to contact the appropriate transfer university for the most current requirements of their major and emphasis area.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

	Credits
First Term	
Discipline Studies Arts & Letters	3-4
Mathematics: (p. 399)	4
Oral Communication: (p. 399)	3-4
WR 121 Academic Composition	4
Credits	14-16
Second Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Health (3 credits with HHP or HHPA prefix) ¹	3
WR 122 Argument, Research, and Multimodal or WR 227 Composition Technical Writing	4
Credits	13-15
Third Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Science/Math/Computer Science (recommend G 201)	4
Discipline Studies Social Science	3-4

Elective	4
Credits	14-16
Fourth Term	
Discipline Studies Science/Math/Computer Science (recommend G 202)	4
Discipline Studies Social Science	3-4
Elective	4
Elective	4
Credits	15-16
Fifth Term	
Discipline Studies Science/Math/Computer Science (recommend G 203)	4
Discipline Studies Social Science	3-4
Elective	4
Elective	4
Elective	3
Credits	18-19
Sixth Term	
Discipline Studies Science/Math/Computer Science (recommend CH 221)	5
Elective	3
Elective	4
Elective	4
Credits	16
Total Credits	90-98

Health Information Management

The Health Information Technology (HIT) discipline at Central Oregon Community College prepares students for local or national employment opportunities in the medical field, information management and computer technology. It includes more than 40 work settings and more than 125 job titles.

<https://www.cocc.edu/programs/hit/> (<https://www.cocc.edu/programs/hit/default.aspx>)

Contact:

Michelle Aistear, RHIT
541-383-7732
Pioneer Hall

Department: Computer and Information Systems
Department Chair: Ralph Phillips

Programs

Career and Technical Education

- Coding Competency - Two Year Certificate of Completion (CC2) (p. 185)
- Health Information Management - Associate of Applied Science (AAS) (p. 187)
- Medical Billing Specialist - Two Year Certificate of Completion (CC2) (p. 188)
- Medical Office Specialist - One Year Certificate of Completion (CC1) (p. 190)

Courses

AH 111 Medical Terminology I (3 Credits)

Covers terminology pertaining to medical term construction, body structure, integumentary, hematopoietic/lymph, cardiovascular, oncology, respiratory and musculoskeletal systems. Includes standard abbreviations, anatomic, diagnostic, symptomatic and operative terms related to these body systems. Students (online and face-to-face) must pass a face-to-face written final exam at 70% or higher to pass this class. The overall grade parameter to pass this class is "C" (75%) or higher.

AH 112 Medical Terminology II (3 Credits)

Prerequisites: AH 111.

The second of a two-quarter sequence that provides continuity from AH 111 in medical terminology used in the health sciences that pertain to the human body. This course studies neurologic terms and disorders; the digestive system; urogenital system; endocrine system; gynecologic and obstetric terminology; fetal and neonatal disorders and anomalies; terminology relating to psychiatry, anesthesia, pharmacology, and emergency medicine; and the sense organs of sight and hearing. Students (online and face-to-face) must pass a face-to-face, written final exam at 70% or higher to pass this class. The overall grade parameter to pass this class is "C" (75%) or higher.

HIM 103 Introduction to Health Information Management (5 Credits)

Prerequisites: AH 111; CIS 120; and WR 121.

Provides an introductory survey of the subject matter covered throughout the health information management programs. Includes data and information governance, informatics, revenue cycle management, health law and compliance, and leadership. Students are required to pass a criminal history check prior to beginning HIM 103.

HIM 104 Health Information Standards and Governance (5 Credits)

Prerequisites: Instructor approval.

Provides an in-depth study of documentation standards in the healthcare system. Emphasis is defining quality healthcare data, data analysis, and information governance. Also explores the legislation that has impacted documentation standards, as well as the functions of healthcare documentation.

HIM 105 Health Information Compliance and Analytics (3 Credits)

Prerequisites: Instructor approval.

Provides an in-depth study of the federal and state requirements and accreditation guidelines for health data and information compliance. Emphasis is defining the role of the healthcare record as a basis for compliance and risk management in diverse healthcare settings.

HIM 171 Project Management (2 Credits)

Prerequisites: Instructor approval.

Provides a formal set of principles and procedures to use when implementing large undertakings to achieve a specific goal. Topics include project life cycle, tools, and types.

HIM 182 Introduction to Reimbursement and Classification Systems (4 Credits)

Prerequisites: Instructor approval.

Provides an introductory survey of healthcare reimbursement methodologies: prospective payment systems, fee-for-service, resource-based relative value scale, and fee schedules. Provides an introductory survey of healthcare classification systems (coding systems): Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS) Level II, International Classification of Diseases, 10th Revision, Clinical Modification/Procedure Classification (ICD-10-CM/PCS), and others (DSM-5, ICD-O, ICF, NDC).

HIM 184 Pathophysiology and Pharmacology (5 Credits)

Prerequisites: Instructor approval.

Provides an in-depth study of human disease processes which affect organs and interrelated body systems. Introduces general principles of pharmacology. Topics include etiology, physical signs and symptoms, diagnosis/treatment modalities, manifestations, prognosis of disease conditions, drugs, drug classes, and drug actions.

HIM 190 HIPAA for Practical Experience (1 Credit)

Prerequisites: Instructor approval.

Provides a medical legal foundation for professional practice experience with respect to HIPAA (Health Insurance Portability and Accountability Act), federal legislation enacted in 1996. Course focus is on the privacy and security rules of HIPAA Title II. This course is a requirement for enrollment in Professional Practice Experience (HIM 193).

HIM 193 Professional Practice Experience I (2 Credits)

Prerequisites: Instructor approval based on completion of first-year HIT curriculum.

Provides practical experience in a healthcare setting, under the supervision of a registered health information administrator or registered health information technician. Students report to an approved location and participate in activities related to HIM. Fulfills 60 hours (40 on site/20 off site) of 120 total professional practice experience hours required for program completion. P/NP grading.

HIM 201 Legal and Ethical Aspects of Health Care (3 Credits)

Prerequisites: Instructor approval.

Provides a medico-legal foundation with respect to laws and regulations affecting the health care industry. Special emphasis is placed on HIPAA (Health Insurance Portability and Accessibility Act). Topics also include: general law and ethics, bioethics, hospital and physician liability, medical staff bylaws, consents, and release of protected health information.

HIM 202 Health Information Management Applications (1 Credit)

Prerequisites: instructor approval.

Provides an opportunity to apply documentation standards, data analysis, and compliance and risk management policies and procedures through the use of simulated health records and other clinical documentation.

HIM 203 Health Information Technologies (4 Credits)

Prerequisites: Instructor approval based on completion of first-year HIM curriculum.

Provides an introduction and history of computer systems used in health care, the current status of health information systems in health care, and how they are specifically used in Health Information Management.

HIM 271 Quality Improvement in Health Care (4 Credits)

Prerequisites: Instructor approval based on completion of first-year HIM curriculum.

Provides an analysis and application of quality management, risk management, and performance improvement. Includes performance improvement data analysis, identification of improvement opportunities based on performance measurements, and communicating improvement activities. Students will have the opportunity to examine and apply known team structures and quality improvement techniques while creating a performance improvement model.

HIM 272 Management Principles and Leadership in HIM (4 Credits)

Prerequisites: Instructor approval based on completion of first-year HIM curriculum.

Provides an introductory survey to management principles and leadership development in the Health Information Management profession. The emphasis of this course management theory, planning, organizational models, financial resources, and the interpersonal aspects of leadership and management.

HIM 273 HIM Capstone (2 Credits)

Prerequisites: Instructor approval required based on completion of first-year HIM curriculum.

This capstone course is the culmination of the HIM program. The capstone project provides the student the opportunity to review and apply the knowledge, skills, and tools gained throughout the HIM course of study. Students will also review core curriculum identified by AHIMA as essential domains of learning and includes RHIT and CCA practice exams.

HIM 281 Healthcare Statistics (4 Credits)

Prerequisites: Instructor approval based on completion of first-year HIM curriculum.

Provides a study of statistical terminology and health care data collection. Focus is on specific statistical analysis of common health care data, the use of percentiles, research and descriptive data presentations.

HIM 282 Reimbursement Systems (5 Credits)

Prerequisites: Instructor approval required based on completion of first-year HIM curriculum.

Provides an understanding of third party payers in a variety of healthcare settings. Includes commercial health insurance, government payers, workman's comp, and liability. Also addresses coding compliance, coding for medical necessity and completion and submission of claims, including their electronic versions.

HIM 283 Coding Classifications I (5 Credits)

Prerequisites: Instructor approval required based on completion of first-year HIM curriculum.

Provides an intermediate understanding of healthcare classification systems (coding systems): Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS) Level II, International Classification of Diseases, 10th Revision, Clinical Modification/Procedure Classification (ICD-10-CM/PCS).

HIM 284 Coding Classifications II (3 Credits)

Prerequisites: Instructor approval based on completion of first-year HIM curriculum.

Provides an in-depth application of healthcare classification systems (coding systems): Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS) Level II, International Classification of Diseases, 10th Revision, Clinical Modification/Procedure Classification (ICD-10-CM/PCS).

HIM 285 Revenue Cycle Management (3 Credits)

Prerequisites: Instructor approval required based on completion of first-year HIM curriculum.

Provides an in-depth study of revenue cycle management from a multi-disciplinary approach. Includes the components of the revenue cycle across health care settings and from the facility/provider prospective versus the patient perspective. Applies knowledge, skills, and abilities accumulated in prior terms related to classification and reimbursement systems.

HIM 293 Professional Practice Experience II (2 Credits)

Prerequisites: Instructor approval based on completion of first and second-year HIM curriculum.

Provides practical experience in a healthcare setting, under the supervision of a registered health information administrator or registered health information technician. Students report to an approved location and participate in activities related to HIM. Fulfills 60 hours (40 on site/20 off site) of 120 total professional practice experience hours required for program completion. P/NP grading.

Coding Competency - Two Year Certificate of Completion (CC2)

Description

The Coding Competency Two Year Certificate prepares students for an entry-level position as a medical coder in a hospital, clinic, or medical office. A Medical Coder analyzes medical records (history and physical reports, lab results, x-ray reports, treatment plans, etc.) and assigns codes which classify diagnoses and procedures, while applying the principles of professionalism and ethical conduct.

Learning Outcomes

1. Evaluate and interpret medico-legal aspects concepts affecting the healthcare industry.
2. Determine the accuracy and integrity of health data and information.
3. Examine the health record and abstract data for the purpose of coding, billing, and insurance claim processes.
4. Perform in-depth application of coding systems and compliance requirements. (CPT, HCPCS, ICD-CM/PCS)
5. Utilize health information technology and information systems in the performance of health information management functions, duties and processes.
6. Perform professionalism and ethical behavior consistent with the AHIMA Code of Ethics for health information managers and technicians during Professional Practice Experience in the healthcare field.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Prior to enrolling in HIM 103 Introduction to Health Information Management, students must pass CIS 120 Computer Concepts, AH 111 Medical Terminology I and WR 121 Academic Composition with a grade of "C" or better.

Other Entrance Requirements

- Recommended:
 - Keyboarding: 40 WPM minimum
 - Study skills
 - Writing skills
 - Reading with emphasis on critical thinking and analytical skills
 - Computer/technology skills (essential)
- Required:
 - Students entering the HIM program are required to have a criminal history check prior to enrolling in HIM 103 Introduction to Health Information Management. A student may be prevented from entering the program if there is a felony conviction on their record.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required:
 - Total cost depends upon preparatory coursework and extent of completion within the program - certificate/degree. Additional costs estimated to be approximately \$2,500 include textbooks,

technology fees, Directed Practice travel expense, OrHIMA Convention, criminal history check, etc.

- Recommended:
 - Students are strongly encouraged to have access to a home computer with high-speed internet access.

Course Requirements

Course	Title	Credits
Support Courses		
AH 111	Medical Terminology I	3
CIS 120	Computer Concepts	4
WR 121	Academic Composition	4
Core Courses		
HIM 103	Intro to Health Info Mgmt	5
HIM 104	Health Information Standards	5
HIM 105	Health Info Comp & Analytics	3
HIM 171	Project Management	2
HIM 182	Intro Reimbrsmt/Class Systems	4
HIM 184	Pathophysiology & Pharmacology	5
HIM 190	HIPAA for Practical Experience	1
HIM 193	Prof Practice Experience I	2
HIM 201	Legal Aspects of Health Care	3
HIM 202	HIM Applications	1
HIM 282	Reimbursement Systems	5
HIM 283	Coding Classifications I	5
HIM 284	Coding Classifications II	3
HIM 285	Revenue Cycle Management	3
Other Required Courses		
AH 112	Medical Terminology II	3
BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4
MTH 031	Health Care Math	3
COMM 111	Fundamentals Public Speaking	4
Choose one course from the following:		3
COMM 218	Interpersonal Communication	
BA 285	Business Human Relations	
PSY 101	Applied Psychology	
Total Credits		83

Advising Notes

Students are encouraged to consult their academic advisor if they have transfer credits and/or are not able to attend full time in order to determine an appropriate course schedule. Additionally, students should reference the course descriptions to determine required lab hours.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year		
Spring		Credits
AH 111	Medical Terminology I	3
CIS 120	Computer Concepts	4
WR 121	Academic Composition	4
COMM 111	Fundamentals Public Speaking	4
	Credits	15
Second Year		
Fall		
AH 112	Medical Terminology II	3
BI 231	Human Anatomy and Physiology I	4
MTH 031	Health Care Math	3
HIM 103	Intro to Health Info Mgmt	5
	Credits	15
Winter		
BI 232	Human Anatomy and Physiology II	4
HIM 104	Health Information Standards	5
HIM 171	Project Management	2
HIM 190	HIPAA for Practical Experience	1
Choose one from the following:		3
COMM 218	Interpersonal Communication	
BA 285	Business Human Relations	
PSY 101	Applied Psychology	
	Credits	15
Spring		
BI 233	Human Anatomy and Physiology III	4
HIM 105	Health Info Comp & Analytics	3
HIM 182	Intro Reimbrsmt/Class Systems	4
HIM 184	Pathophysiology & Pharmacology	5
HIM 193	Prof Practice Experience I	2
	Credits	18
Third Year		
Fall		
HIM 201	Legal Aspects of Health Care	3
HIM 202	HIM Applications	1
HIM 282	Reimbursement Systems	5
HIM 283	Coding Classifications I	5
	Credits	14
Winter		
HIM 284	Coding Classifications II	3
	Credits	3
Spring		
HIM 285	Revenue Cycle Management	3
	Credits	3
	Total Credits	83

Health Information Management - Associate of Applied Science (AAS)

Description

The Health Information Management AAS program prepares individuals in technical coursework, human relations, communications, mathematics and computer technology. The program employs a career ladder approach that includes the following certificates:

- Medical Office Specialist
- Medical Billing Specialist
- Coding Competency

At the end of six academic quarters (approximately two years), students earn an Associate of Applied Science (AAS) degree in Health Information Management. Students are eligible to take the RHIT (Registered Health Information Technician) national credential examination upon completion of the AAS degree. The Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) accredits the Health Information Technology program. Health information technicians collect, analyze, code, manage and maintain medical information regarding patients. Health information technicians must be highly organized and pay attention to detail, maintain patient medical information in a complete, accurate and secure manner while maintaining high ethical standards. Health information technicians work in a wide range of health care facilities including but not limited to hospitals, clinics, doctors' offices and nursing homes. In Oregon, the number of jobs for health information technicians is expected to grow much faster than the average for all occupations through the year 2020.

Learning Outcomes

1. Classify and apply legal concepts and principles to the practice of health information management includes analysis of data and health record privacy, confidentiality and security.
2. Analyze and apply policies and procedures to ensure the accuracy and integrity of health data and information. Focus is on data quality, data management, data analytics and information governance.
3. Differentiate health record content and documentation requirements throughout the continuum of healthcare as the requirements relate to the organizational structure and provider roles.
4. Collect, compile, organize, maintain and utilize health information across the continuum of health care, in a variety of formats (paper, electronic, hybrid).
5. Evaluate, critique and support the revenue cycle management process while adhering to the internal and external compliance environment (regulations, standards and policies/procedures).
6. Evaluate, interpret and support diagnosis/procedural codes according to current guidelines. Including the ranking of code selection by diagnostic/procedural groupings.
7. Utilize health information technology and information systems in the performance of health information management functions, duties and processes.
8. Utilize collaborative leadership skills to engage stakeholders across the health care industry in the facilitation of professionalism and ethical standards across the health care continuum.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Prior to enrolling in HIM 103 Introduction to Health Information Management, students must pass CIS 120 Computer Concepts, AH 111 Medical Terminology I and WR 121 Academic Composition with a grade of "C" or better.

Other Entrance Requirements

- Required:
 - Students entering the HIM program are required to have a criminal history check prior to enrolling in HIM 104 Health Information Standards and Governance. A student may be prevented from entering the program if there is a felony conviction on their record.
 - Documentation of immunizations is required for directed practice (Tdap, MMR, Varicella, TB, Hep B, and Flu).
 - Additional immunizations, background checks, and drug screens may be required by directed practice sites at the students expense.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required:
 - Total cost depends upon preparatory coursework and extent of completion within the program - certificate/degree. Additional costs estimated to be approximately \$2,500 include textbooks, technology fees, Directed Practice travel expense, OrHIMA Convention, criminal history check, etc.
- Recommended:
 - Students are strongly encouraged to have access to a home computer with high-speed internet access.

Course Requirements

Course	Title	Credits
Support Courses		
AH 111	Medical Terminology I	3
CIS 120	Computer Concepts	4
WR 121	Academic Composition	4
Core Courses		
HIM 103	Intro to Health Info Mgmt	5
HIM 104	Health Information Standards	5
HIM 105	Health Info Comp & Analytics	3
HIM 171	Project Management	2
HIM 182	Intro Reimbrsmt/Class Systems	4
HIM 184	Pathophysiology & Pharmacology	5
HIM 190	HIPAA for Practical Experience	1
HIM 193	Prof Practice Experience I	2
HIM 201	Legal Aspects of Health Care	3
HIM 202	HIM Applications	1
HIM 203	Health Info Technologies	4
HIM 271	Quality Improve/Health Care	4
HIM 272	Management & Leadership in HIM	4

HIM 273	HIM Capstone	2
HIM 281	Healthcare Statistics	4
HIM 282	Reimbursement Systems	5
HIM 283	Coding Classifications I	5
HIM 284	Coding Classifications II	3
HIM 285	Revenue Cycle Management	3
HIM 293	Professional Practice II	2

Other Required Courses

AH 112	Medical Terminology II	3
BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4
MTH 031	Health Care Math	3
COMM 111	Fundamentals Public Speaking	4
Choose one course from the following:		3
BA 285	Business Human Relations	
COMM 218	Interpersonal Communication	
PSY 101	Applied Psychology	

Total Credits 103

Advising Notes

HIM is a cohort program, which begins each Fall. Students can complete non-HIM courses prior to entry into the cohort or concurrently. Courses are in sequence for first and second year. Students must complete all first-year courses before enrolling in second-year coursework.

This degree is designed primarily for students planning to enter their chosen career upon graduation. However, credits are transferable per an articulation agreement (<https://www.cocc.edu/departments/admissions/grades-and-student-records/articulation-and-partnership-agreements.aspx>) with the University of Cincinnati for students choosing to pursue an online BS in Health Information Management (<https://online.uc.edu/undergraduate-degrees/bachelors-in-health-information-management/>).

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

Spring		Credits
AH 111	Medical Terminology I	3
CIS 120	Computer Concepts	4
WR 121	Academic Composition	4
Credits		11

Second Year

Fall		
AH 112	Medical Terminology II	3
BI 231	Human Anatomy and Physiology I	4
HIM 103	Intro to Health Info Mgmt	5

MTH 031	Health Care Math	3
Credits		15

Winter

BI 232	Human Anatomy and Physiology II	4
HIM 104	Health Information Standards	5
HIM 171	Project Management	2
HIM 190	HIPAA for Practical Experience	1
Choose one of the following:		3
BA 285	Business Human Relations	
COMM 218	Interpersonal Communication	
PSY 101	Applied Psychology	
Credits		15

Spring

BI 233	Human Anatomy and Physiology III	4
HIM 182	Intro Reimbrsmt/Class Systems	4
HIM 184	Pathophysiology & Pharmacology	5
HIM 105	Health Info Comp & Analytics	3
Credits		16

Summer

HIM 193	Prof Practice Experience I	2
Credits		2

Third Year**Fall**

HIM 201	Legal Aspects of Health Care	3
HIM 202	HIM Applications	1
HIM 282	Reimbursement Systems	5
HIM 283	Coding Classifications I	5
Credits		14

Winter

COMM 111	Fundamentals Public Speaking	4
HIM 272	Management & Leadership in HIM	4
HIM 281	Healthcare Statistics	4
HIM 284	Coding Classifications II	3
Credits		15

Spring

HIM 203	Health Info Technologies	4
HIM 271	Quality Improve/Health Care	4
HIM 273	HIM Capstone	2
HIM 285	Revenue Cycle Management	3
Credits		13

Summer

HIM 293	Professional Practice II	2
Credits		2
Total Credits		103

Medical Billing Specialist - Two Year Certificate of Completion (CC2)

Description

The Health Information Management program provides a career-ladder approach to the health information management profession. After completing four academic quarters (first year HIT curriculum, Directed

Practice I plus fall quarter of year two), students earn a Medical Billing Specialist Certificate.

Since 2003, the COCC HIM program has maintained a pass rate of 100% for students taking the RHIT exam within one year of graduation.

Students have the freedom to exit and re-enter the program after the first year. The program includes preparation in technical coursework, human relations, communications, mathematics and computer technology.

Learning Outcomes

1. Evaluate and interpret medico-legal aspects and concepts affecting the healthcare industry.
2. Develop policies and procedures to ensure the accuracy and integrity of health data and information.
3. Apply and analyze intermediate knowledge of coding systems and compliance requirements.
4. Explore the roles of third party payers in the reimbursement and management of healthcare expenses, including medical insurance, government payers, and workman's compensation, and describe the relationship to health information management.
5. Perform billing functions related to patient accounts, including charge, payment, adjustment posting.
6. Perform claims processing tasks and functions, including submission and analysis.
7. Utilize health information technology and information systems in the performance of health information management functions, duties and processes.
8. Display professionalism and ethical behavior consistent with the AHIMA Code of Ethics for health information managers and technicians during Professional Practice Experience in the healthcare field.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Prior to enrolling in HIM 103 Introduction to Health Information Management, students must pass CIS 120 Computer Concepts, AH 111 Medical Terminology I and WR 121 Academic Composition with a grade of "C" or better.
- Recommended
 - Keyboarding: 40 WPM minimum
 - Study skills
 - Writing skills
 - Reading with emphasis on critical thinking and analytical skills
 - Computer/technology skills (essential)

Other Entrance Requirements

- Required:
 - Students entering the HIM program are required to have a criminal history check prior to enrolling in HIM 103 Introduction to Health Information Management. A student may be prevented from entering the program if there is a felony conviction on their record.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required:
 - Total cost depends upon preparatory coursework and extent of completion within the program - certificate/degree. Additional costs estimated to be approximately \$2,500 include textbooks, technology fees, Directed Practice travel expense, OrHIMA Convention, criminal history check, etc.
- Recommended:
 - Students are strongly encouraged to have access to a home computer with high-speed internet access.

Course Requirements

Course	Title	Credits
Support Courses		
AH 111	Medical Terminology I	3
CIS 120	Computer Concepts	4
WR 121	Academic Composition	4
Core Courses		
HIM 103	Intro to Health Info Mgmt	5
HIM 104	Health Information Standards	5
HIM 105	Health Info Comp & Analytics	3
HIM 171	Project Management	2
HIM 182	Intro Reimbrsmt/Class Systems	4
HIM 190	HIPAA for Practical Experience	1
HIM 193	Prof Practice Experience I	2
HIM 201	Legal Aspects of Health Care	3
HIM 202	HIM Applications	1
HIM 282	Reimbursement Systems	5
HIM 283	Coding Classifications I	5
Other Required Courses		
AH 112	Medical Terminology II	3
BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4
COMM 111	Fundamentals Public Speaking	4
MTH 031	Health Care Math	3
Choose one course from the following:		3
BA 285	Business Human Relations	
COMM 218	Interpersonal Communication	
PSY 101	Applied Psychology	
Total Credits		72

Advising Notes

Students are encouraged to consult their academic advisor if they have transfer credits and/or are not able to attend full time in order to determine an appropriate course schedule. Additionally, students should reference the course descriptions to determine required lab hours.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

Spring		Credits
AH 111	Medical Terminology I	3
CIS 120	Computer Concepts	4
WR 121	Academic Composition	4
COMM 111	Fundamentals Public Speaking	4
	Credits	15

Second Year

Fall

AH 112	Medical Terminology II	3
BI 231	Human Anatomy and Physiology I	4
HIM 103	Intro to Health Info Mgmt	5
MTH 031	Health Care Math	3
	Credits	15

Winter

BI 232	Human Anatomy and Physiology II	4
HIM 104	Health Information Standards	5
HIM 171	Project Management	2
HIM 190	HIPAA for Practical Experience	1
Choose one from the following:		3
BA 285	Business Human Relations	
COMM 218	Interpersonal Communication	
PSY 101	Applied Psychology	
	Credits	15

Spring

HIM 105	Health Info Comp & Analytics	3
HIM 182	Intro Reimbrsmt/Class Systems	4
BI 233	Human Anatomy and Physiology III	4
	Credits	11

Summer

HIM 193	Prof Practice Experience I	2
	Credits	2

Third Year

Fall

HIM 201	Legal Aspects of Health Care	3
HIM 202	HIM Applications	1
HIM 282	Reimbursement Systems	5
HIM 283	Coding Classifications I	5
	Credits	14
	Total Credits	72

Medical Office Specialist - One Year Certificate of Completion (CC1)

Description

The Medical Office Specialist One Year Certificate of Completion program prepares the student to secure entry-level employment as a medical office specialist. With coursework in medical terminology, anatomy, physiology, health data content and systems, computer technology, disease, beginning coding and HIPAA, students gain the knowledge and skills necessary to begin a successful office career in the health services field. Employment may range from a single physician office to a large hospital organization. Job descriptions may include maintaining medical records and accounts, word processing, basic accounting, scheduling, professional communications, and general operations of a health care facility.

Learning Outcomes

- Utilize a body of knowledge in anatomy, physiology, medical terminology, and pathophysiology in administrative functions in the health care field.
- Classify and apply legal concepts related to HIPAA privacy and security rules and further rulings.
- Collect, compile, organize, maintain and utilize health information across the continuum of health care, in a variety of formats (paper, electronic, hybrid).
- Apply policies and procedures to ensure the accuracy and integrity of health data and information.
- Apply basic knowledge of coding systems and guidelines.
- Utilize health information technology and information systems in the performance of health information management functions, duties and processes.
- Demonstrate professionalism and ethical behavior consistent with the AHIMA Code of Ethics for health information managers and technicians.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Prior to enrolling in HIM 103 Introduction to Health Information Management, students must pass CIS 120 Computer Concepts, AH 111 Medical Terminology I and WR 121 Academic Composition with a grade of "C" or better.

Other Entrance Requirements

- Recommended:
 - Keyboarding: 40 WPM minimum
 - Study skills
 - Writing skills
 - Reading with emphasis on critical thinking and analytical skills
 - Computer/technology skills (essential)
- Required:
 - Students entering the HIM program are required to have a criminal history check prior to enrolling in HIM 103 Introduction to Health Information Management. A student may be prevented from entering the program if there is a felony conviction on their record.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required:
 - Total cost depends upon preparatory coursework and extent of completion within the program - certificate/degree. Additional costs estimated to be approximately \$2,500 include textbooks, technology fees, Directed Practice travel expense, OrHIMA Convention, criminal history check, etc.
- Recommended:
 - Students are strongly encouraged to have access to a home computer with high-speed internet access.

Course Requirements

Course	Title	Credits
Support Courses		
AH 111	Medical Terminology I	3
CIS 120	Computer Concepts	4
WR 121	Academic Composition	4
Core Courses		
HIM 103	Intro to Health Info Mgmt	5
HIM 104	Health Information Standards	5
HIM 105	Health Info Comp & Analytics	3
HIM 171	Project Management	2
HIM 182	Intro Reimbrsmt/Class Systems	4
HIM 184	Pathophysiology & Pharmacology	5
HIM 190	HIPAA for Practical Experience	1
Other Required Courses		
AH 112	Medical Terminology II	3
BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4
MTH 031	Health Care Math	3
Choose one course from the following:		3
COMM 218	Interpersonal Communication	
BA 285	Business Human Relations	
PSY 101	Applied Psychology	
Total Credits		57

Advising Notes

Students are encouraged to consult their academic advisor if they have transfer credits and/or are not able to attend full time in order to determine an appropriate course schedule. Additionally, students should reference the course descriptions to determine required lab hours.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year		
Spring		Credits
AH 111	Medical Terminology I	3
CIS 120	Computer Concepts	4
WR 121	Academic Composition	4
Credits		11
Second Year		
Fall		
AH 112	Medical Terminology II	3
BI 231	Human Anatomy and Physiology I	4
MTH 031	Health Care Math	3
HIM 103	Intro to Health Info Mgmt	5
Credits		15
Winter		
BI 232	Human Anatomy and Physiology II	4
HIM 104	Health Information Standards	5
HIM 171	Project Management	2
HIM 190	HIPAA for Practical Experience	1
Choose one from the following:		3
COMM 218	Interpersonal Communication	
BA 285	Business Human Relations	
PSY 101	Applied Psychology	
Credits		15
Spring		
BI 233	Human Anatomy and Physiology III	4
HIM 105	Health Info Comp & Analytics	3
HIM 182	Intro Reimbrsmt/Class Systems	4
HIM 184	Pathophysiology & Pharmacology	5
Credits		16
Total Credits		57

History

The study of history exposes you to the legacy of the past through exploration of historical events and social changes.

Historical investigation of ordinary, as well as famous, people and the attainments of various cultures will enhance your grasp of the human experience. Courses cover western civilization; world, European, U. S., women's, and Pacific Northwest history; and history of the American West, Civil War, and others.

History provides an excellent background for a broad range of careers in teaching, business, journalism, international affairs, foreign service, government, library and archival work, and the ministry. In addition, a history degree is good preparation for a variety of graduate programs, including law school.

<https://www.cocc.edu/programs/history/> (<https://www.cocc.edu/programs/history/default.aspx>)

Contact:

Murray Godfrey
541-383-7747

Modoc Hall

Department: World Languages and Cultures
Department Chair: Murray Godfrey

Programs

Transfer

- History - Associate of Arts Oregon Transfer (AAOT) (p. 193)

Courses

HST 101 History of Western Civilization (4 Credits)

Recommended preparation: or to be taken with WR 121.

Provides a framework for understanding the notion of "Western Civilization". Surveys political, social, intellectual and cultural developments in Europe from prehistoric times to the early Medieval period. Covers the ancient civilizations, the establishment of early European civilizations, and the world of the Greeks and Romans. HST 101, HST 102, and HST 103 need not be taken in sequence.

HST 102 Europe: From the Middle Ages to Enlightenment (700-1700 C.E.) (4 Credits)

Provides a framework for understanding the notion of "Western Civilization." Surveys the development of European civilizations from the fall of the Roman Empire, continuing through the Medieval period into the early 1700s. Focuses on the cultural, religious, political, and intellectual changes brought about by the Renaissance, Reformation, Enlightenment and Scientific Revolution, as well as the tensions in European society, which culminated in the French Revolution. The focus will extend from religion and politics to social class, gender, and stereotypes. Need not be taken in sequence.

HST 103 Europe: Revolution and War (1789 - Present) (4 Credits)

Provides a framework for understanding the notion of "Western Civilization." Explores European civilizations from the French Revolution in 1789 to the present day. Focuses on the establishment of nations, the impact of the Industrial Revolution, nationalism and racism, colonization, and the two World Wars. Concludes by questioning the differences between civilization and barbarism. Focuses on the cultural, religious, political, and intellectual changes that happened between the late 18th century and the present, extending from religion and politics to social class, gender, and stereotypes based on nationality or ethnicity. Need not be taken in sequence.

HST 104 Ancient Societies (Pre-history - 500 C.E.) (4 Credits)

Provides a survey of the development of world civilizations and nomadic/pastoral lifestyles. Investigates cultures, politics, belief systems, and lifestyles from prehistoric times through 500 C.E. Covers origins of civilizations in the Middle East, the Mediterranean, Africa, China, and the Indian subcontinent. Also covers the establishment of early European civilizations, the world of the Greeks and Romans, and the Fall of Rome. Uses a comparative perspective in order to understand larger changes provoked by climate change, nomadic incursions, and interactions on the Silk Road.

HST 105 The Expansion of World Religions (500 - 1700) (4 Credits)

Covers the world from 500 C.E. through early 1700s, focusing on the expansion of world religions, including Christianity, Buddhism, Hinduism, and Islam. Focuses on the regions of Asia, Africa, and India, and tells the story of Europe's first worldwide expansion. Looks at history from political, cultural, social, and intellectual angles using primary sources. Need not be taken in sequence.

HST 106 Modern World History: Industrialization, Nations and War (1800-Present) (4 Credits)

Traces the impact of industrialization upon the world. Industrialization propelled colonial expansion by European powers; traces the colonizers and the colonized. The twentieth century endured two world wars, several genocides, and several wars of decolonization; focuses on the cultural and intellectual trends that went along with political turmoil, industrialization, and modern warfare. Need not be taken in sequence.

HST 188 Special Studies: History (1-4 Credits)

Explores topics of current interest in the discipline.

HST 199 Selected Topics: History (1-4 Credits)

This course is in development.

HST 201 Early America - History of the United States (pre-history to 1820) (4 Credits)

Provides an overview of the civilizations of North America and the United States from pre-history to the early 19th century, covering the colonial, revolutionary, and early national periods. Topics include Native American societies, the migration of Europeans and Africans and the impact on native populations, regional Protestant cultures, the emergence of racial slavery, the political origins and constitutional consequences of the American Revolution, politics, culture and war in the first few decades of existence for the United States. Need not be taken in sequence.

HST 202 19th and early 20th Century United States History (1820-1920) (4 Credits)

Provides an overview of United States history from approximately 1820 to 1920, covering the antebellum, civil war, reconstruction, gilded age, and progressive periods. Topics include the Jacksonian era, territorial expansion, slavery and the Old South, the causes and consequences of the Civil War, successes and failures of Reconstruction, 19th-century society and culture, economic transformations, U.S. imperialism, progressivism and the United States entrance into World War I. Need not be taken in sequence.

HST 203 20th and Early 21st Century United States History (1920-present) (4 Credits)

Provides an overview of United States history from approximately 1920 to the present, covering the modern period. Topics include the end of World War I and its consequences, modernity, the Great Depression, World War II, the Cold War, foreign policy determinants & conflicts since WWII, Civil Rights, 1960s-70s social and cultural changes, shifting economic and social role of government, feminism and changing status of women since WWII, immigration, 20th century society and culture, late 20th century politics, terrorism and other recent developments. Need not be taken in sequence.

HST 204 History of the Civil War (4 Credits)

Recommended preparation: or to be taken with WR 121.

Examines problems of the Civil War period including politics, military leadership, troop life and activity, civilians, Native Americans, African-Americans, technology, and unique geographic challenges in order to better understand the impact of the war on the entire nation of this "brothers' war".

HST 206 War and Society in the 20th century, 1914-1945 (4 Credits)

Surveys the cultural, social, political, and military history of the world in the era of the major world wars, 1914 to 1945. Offers a wide-ranging description and analysis of the First World War, interwar period, and Second World War, their global impacts and legacies. Combines military history with political, social, and cultural approaches.

HST 207 History of the American West (4 Credits)**Recommended preparation:** or to be taken with WR 121.

Examines Native American tribal life, the emergence of a multicultural frontier, the problems, failures, and success of new settlement patterns in the growing commercial development of the West's unique assets.

HST 218 Native American History (4 Credits)**Recommended preparation:** or to be taken with WR 121.

Examines Native American (or First Peoples) lifestyles before and after contact with European settlers. With increasing demands by whites and new immigrants for land, Native Americans struggled for survival implementing various tactics to retain control of their homelands and retain their unique cultures.

HST 225 US Women's History (4 Credits)**Recommended preparation:** or to be taken with WR 121.

Survey of the problems and achievements of U.S. women from the 16th to the 20th century, including issues of race, ethnicity and class.

HST 235 Sexuality in 20th Century Europe (4 Credits)

A survey of sexual cultures, politics, and practices in Europe, from the waning of Victorianism to the collapse of Communism and the rise of Islam. This course provides an understanding of how gender and sexuality have changed over the course of the tumultuous twentieth century.

HST 242 History of the Pacific NW (4 Credits)**Recommended preparation:** or to be taken with WR 121.

Overview of Native American societies of the Pacific Northwest, patterns of white movement into the area, acquisition of the region by the United States, the long road to statehood, and the impact of national politics on this unique region.

HST 258 Colonial Latin American History (4 Credits)**Recommended preparation:** or to be taken with WR 121.

Surveys the history of economic, political and social development in Mexico, Central America and South America from the 15th century through the Wars of Independence. Recommended that HST 258 and HST 259 be taken in sequence, but not required.

HST 259 Modern Latin American History (4 Credits)**Recommended preparation:** or to be taken with WR 121.

Surveys Latin American history in Mexico, Central and South America from the Wars of Independence through modern times. Recommended that HST 258 and HST 259 be taken in sequence, but not required.

HST 260 History of Islamic Civilizations (4 Credits)

This course covers political, social, and religious developments in the Islamic world from 600 C.E. to the 1960s. It traces the formation of Islam and the establishment of the Caliphate; the impact of the Mongol Invasions; the Ottoman, Mughal, and Safavid Empires; and the impact of European colonization and 20th Century movements of decolonization.

HST 270 20th Century European History (4 Credits)

Covers the intellectual, political and cultural history of 20th-century European history. Investigates events in a European context, analyzing the historical setting and significance of major occurrences in Europe, such as fascism, world wars, the Holocaust, Soviet communism, and decolonization. Does not need to be taken in sequence.

HST 280 Co-op Work Experience History (1-3 Credits)**Prerequisites:** instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

HST 290 East Asian History (4 Credits)**Recommended preparation:** or to be taken with WR 121.

Traditional China as the foundation of East Asian civilization. Recommended that HST 290, HST 291 and HST 292 be taken in sequence, but not required.

HST 291 East Asian History (4 Credits)**Recommended preparation:** WR 121.

Development of Chinese, Japanese and Korean societies through the late 19th century. Recommended that HST 290, HST 291 and HST 292 be taken in sequence, but not required.

HST 292 East Asian History (4 Credits)**Recommended preparation:** WR 121.

Late Imperial China, Japan and Korea and their evolution/revolution into modern nation-states. Recommended that HST 290, HST 291 and HST 292 be taken in sequence, but not required.

HST 298 Independent Study: History (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

HST 299 Selected Topics: History (1-4 Credits)

This course is in development.

History - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer (AAOT) degree with a focus in history is designed for students who wish to transfer to a four-year university to pursue a bachelor's degree in history. The history discipline illuminates and analyzes the human past through primary and secondary evidence. History majors and minors learn to think with rigor, to write with clarity and precision, to research, organize and assess evidence and to interpret complex information. History majors develop a foundational skill set that opens the way to careers in such fields as education, government, international work, marketing, public relations, non-profit, business, journalism, museum work and law.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits	¹	3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		

WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4

General Education/Discipline studies

Cultural Literacy: (p. 401)

One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).

Arts and Letters: (p. 399)

Choose three courses from at least two prefixes 9-12

Social Science: (p. 404)

Choose four courses from at least two prefixes ² 12-16

Recommend: HST 101, HST 102, HST 103, HST 104, HST 105, HST 106, HST 201, HST 202, or HST 203

Science/Math/Computer Science: (p. 403)

Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science 12-20

Electives

Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable. ³ 39

Total Credits 90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

² History majors are advised to choose two survey courses with a History prefix in European, World or American History.

³ History courses at COCC are divided into three general areas: World, European and American history. History majors are advised to take at least two courses from each area during the course of earning an AAOT (including the social science requirement) and then choose any college-level courses that brings the total credits to 90 quarter hours.
European History: HST 235 Sexuality in 20th Century Europe, HST 270 20th Century European History.
World History: HST 258 Colonial Latin American Hist, HST 259 Modern Latin American History, HST 260 History of Islamic Civilizations, HST 290 East Asian History, HST 291 East Asian History, HST 292 East Asian History
American History: HST 204 History of the Civil War, HST 207 History of the American West, HST 218 Native American History, HST 225 US Women's History, HST 242 History of the Pacific NW

Advising Notes

Students pursuing a BA after transfer should consider completing to the third term of a 200-level language course. The 100-level language courses will count as electives. The 200-level language courses will partially fulfill the Arts and Letters requirement. For specific details, speak with an advisor.

Oregon public universities that offer a bachelor's degree in history include Eastern Oregon University, Oregon State University, Portland State University, Southern Oregon University, University of Oregon and Western Oregon University. Most of Oregon's private universities also offer BA programs in history.

Oregon State University – Cascades offers related majors in American Studies, Social Science and Liberal Studies, a minor in Art History and a Master of Arts in Teaching graduate program.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
Discipline Studies Arts & Letters		3-4
Mathematics: (p. 399)		4
Oral Communication: (p. 399)		3-4
WR 121	Academic Composition	4
Credits		14-16
Second Term		Credits
Discipline Studies Arts & Letters		3-4
Discipline Studies Social Science		3-4
Elective		4
Health (3 credits with HHP or HHPA prefix)		3
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		17-19
Third Term		Credits
Discipline Studies Arts & Letters		3-4
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4
Credits		13-17
Fourth Term		Credits
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4
Elective		4
Credits		14-17
Fifth Term		Credits
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4
Elective		4
Credits		14-17
Sixth Term		Credits
Discipline Studies Science/Math/Computer Science		3-5
Elective		3
Elective		4
Elective		4
Elective		4
Credits		18-20
Total Credits		90-106

Human Services

Human services programs prepare students to work for organizations that serve people in need. Students learn the theories, principles and practice of providing services. Human services jobs can include drug abuse counselor, youth worker, mental health aide or probation officer, and provide services to schools, prisons, government agencies and nonprofit groups.

<https://www.cocc.edu/programs/humanservices/> (<https://www.cocc.edu/programs/human-services/>)

Contact:

Monica Vines
mvines@cocc.edu
541-383-7251
Modoc Hall, Bend Campus

Department: Social Science

Department Chair: Sara Henson

Programs

Career and Technical Education

- Addiction Studies and Human Services - Associate of Applied Science (AAS) (p. 197)
- Addiction Studies and Human Services - Two Year Certificate of Completion (CC2) (p. 199)

Transfer

- Human Services - Associate of Arts Oregon Transfer (AAOT) (p. 200)

Courses

HS 101 Orientation to Human Services (3 Credits)

Introduces the human services profession. Helps students evaluate their fit within the human services field. Highlights self-understanding and individual compatibility with human services occupations. Emphasizes prevention, early intervention concepts and programs, significance of social justice and multicultural equity.

HS 161 Ethics for Human Services (4 Credits)

Prerequisites: HS 101; Math 31 or higher; and choose one of WR 121, WR 122, or WR 227.

Examines the legal and ethical issues facing human service practitioners. Explores how to set and maintain professional boundaries. Evaluates the roles, functions, and legal/ethical responsibilities of human services workers, including the process of ethical decision making and awareness of the moral and legal complexities in the field of human services.

HS 162 Effective Helping Skills I (4 Credits)

Prerequisites: HS 101; Math 31 or higher; and choose one of WR 121, WR 122, or WR 227.

Focus is on skills of interacting with people both verbally and non-verbally, as well as the ethical and cultural underpinnings to helping and interviewing. Emphasis placed on understanding and application of the principles of interviewing. Significant concentration on practicing skills with peers.

HS 180 Addictions, HIV and other Infectious Diseases (2 Credits)

Reviews the theory and technique for effectively addressing issues of substance use and addictive behaviors for the at-risk person. Considers issues of risk of exposure for the substance abusing or other at risk individual. Physiology, epidemiology, risk assessment, legal/ethical issues and societal implications of HIV and other pathogens will be presented.

HS 188 Special Studies: Human Services (1-4 Credits)

Explores topics of current interest in the discipline.

HS 199 Selected Topics: Human Development (1-4 Credits)

This course is in development.

HS 200 Introduction to Addictions (3 Credits)

Recommended preparation: or to be taken with WR 121.

Provides a broad overview of the field of addictions. Describes the etiology of addiction, the signs and symptoms of addiction, the continuum of addictive behaviors, treatment, prevention, recovery and relapse.

HS 201 Families and Addictions (3 Credits)

Recommended preparation: WR 121.

Examines how substance use disorders impact family systems. Topics will include etiology of substance use disorders within the family, impact upon members of the system and its dynamics, intervention and treatment approaches, and long-term recovery issues. Strategies and behaviors that family members, couples, and significant others must adopt in order to assist in sustaining recovery and healthy relationships will be outlined.

HS 205 Youth and Addictions (3 Credits)

Recommended preparation: WR 121.

Introduces child/adolescent biopsychosocial development and evaluates the effects of substance abuse on that development. Covers the signs of substance abuse and addiction; describes assessment, treatment, and prevention philosophies, protocols and models; describes recovery and covers relapse prevention and the signs of relapse in young people.

HS 206 Group Counseling Skills for Human Services (4 Credits)

Recommended preparation: WR 121.

Provides an introduction to social and interpersonal influences on behavior, group dynamics, developmental stages of a group, and an overview of theoretical approaches to group counseling. Emphasis is on developing group leadership skills.

HS 208 Multicultural Issues in Human Services (4 Credits)

Prerequisites: HS 101; MTH 31 or higher; and choose one of WR 121, WR 122, or WR 227.

Presents the foundations for developing the skills and sensitivities needed to practice as culturally alert counselors. Explore issues and trends related to culture, ethnicity, race, nationality, age, gender, sexual orientation, mental and physical abilities/disabilities, education, religious and spiritual values, immigrant dynamics, and socioeconomic factors which influence counseling relationships, process, and treatment outcomes. Encourages students to engage in self-exploration around their own cultural identities and their responses to issues of diversity including bias, oppression, discrimination and the role of privilege.

HS 209 Introduction to Psychological Trauma: Theory and Practice (4 Credits)

Recommended preparation: WR 121.

Introduction to types, history, and impact of trauma on individuals, family, and community. Explores the impact on those working with trauma survivors and inadvertent re-traumatization of victims that occurs by the social service system. It introduces crisis management strategies in the context of a trauma informed practice. It provides a framework for crisis recognition/response and intervention for people experiencing trauma symptoms. Students will analyze as well as practice using a trauma informed framework designed for multiple settings. Utilizes trauma informed and wellness informed approaches.

HS 210 Co-Occurring Disorders (4 Credits)

Recommended preparation: WR 121.

Recognize and differentiate symptoms and treatment of substance related and addictive disorders and mental health issues. Develop knowledge, skills, and theoretical frameworks applicable to co-occurring disorders. Understand best practice models and integrated treatment for co-occurring disorders.

HS 224 Psychopharmacology (4 Credits)

This course covers the knowledge required to pass the pharmacology section of the Certified Alcohol and Drug Counselor (CADC) 1 exam. It includes the ways drugs are used, controlled and valued culturally; how the human body functions normally, including knowledge of cells, nerve cells, and basic bodily systems (i.e., respiratory, circulatory, endocrine and digestive; how drugs are absorbed, distributed, metabolized and excreted and how drugs affect these systems).

HS 250 Process Addictions (4 Credits)

Recommended preparation: or to be taken with WR 121.

Provides an overview of the history, theory, and current research perspectives in the etiology, assessment, diagnosis and treatment of behavioral/process addictions. Specific attention paid to examining similarities and differences between chemical/substance addictions and behavioral/process addictions.

HS 260 Counseling Theories (4 Credits)

Recommended preparation: WR 121.

Provides an overview of theoretical approaches to counseling and psychotherapy, including fundamental concepts, assessment, client and counselor roles, cultural relevance, and intervention strategies/techniques.

HS 262 Effective Helping Skills II (4 Credits)

Recommended preparation: HS 162 or instructor approval.

Provides central theoretical and empirical tenets of Motivational Interviewing (MI), as well as practice of skills to deliver the intervention to a wide range of clients in diverse settings. Students will learn and practice both the spirit and techniques of motivational interviewing.

HS 263 Counseling the Chemically Dependent Client (3 Credits)

Recommended preparation: WR 121.

Provides an integrated approach to screening, assessing and treatment planning for individuals with substance use disorders. Culturally and ethically appropriate relationship building, assessment and relapse prevention approaches presented.

HS 266 Case Management for the Chemically Dependent Client (4 Credits)**Recommended preparation:** WR 121.

Explores ASAM Criteria (ASAM: Treatment Criteria for Addictive, Substance-Related, and Co-Occurring Conditions). Develops skills associated with effective case management in an addictions treatment / social services setting. Practices professional writing and case documentation skills.

HS 280 Co-op Work Experience Human Services (1-4 Credits)**Prerequisites:** Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

HS 290 Introduction to Practicum in Human Services (1 Credit)

Preparation for practicum. Should be taken at least one term before beginning practicum experience. Focus on researching internship sites; developing a résumé; practicing job search & job interviewing techniques.

HS 291 Practicum in Human Services I (4 Credits)

Practicum is closely supervised opportunity to implement professional skills, knowledge and attitudes presented in prior Human Services coursework. Provides experience working on site in a human service agency to integrate field and classroom experience. Students also attend a weekly seminar and meet individually with both the practicum instructor and the site supervisor throughout the quarter. Students are required to have a placement confirmed prior to the term they decide to begin. Addiction Studies students must have completed HS 161, HS 162, HS 206 and HS 290 prior to enrolling in this class. NOTE: 1,000 hours supervised experience are required before taking the Oregon Certified Alcohol and Drug Counselor I exam.

HS 292 Practicum in Human Services II (4 Credits)

This second-term practicum is more comprehensive and provides an opportunity to develop more advanced skills. Addiction Studies students must have completed HS 161, HS 162, HS 206, and HS 291 prior to enrolling in this class. With instructor approval only students may co-enroll in HS 291. NOTE: 1,000 hours supervised experience are required before taking the Oregon Certified Alcohol and Drug Counselor I exam.

HS 293 Practicum in Human Service III (4 Credits)

This third-term practicum is more comprehensive and provides an opportunity to develop more advanced skills. Addiction Studies students must have completed HS 161, HS 162, HS 206, HS 291 and HS 292 prior to enrolling in this class. With instructor approval only students may co-enroll in HS 292. NOTE: 1,000 hours supervised experience are required before taking the Oregon Certified Alcohol and Drug Counselor I exam. Course may be repeated for credit.

HS 298 Independent Study: Human Services (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

HS 299 Selected Topics: Human Services (1-4 Credits)

This course is in development.

Addiction Studies and Human Services - Associate of Applied Science (AAS)

Description

The AAS degree builds on the certificate of completion (which qualifies a student to sit for the Oregon Certified Alcohol and Drug Counselor (CADC) level I exam and prepares students academically for the CADC II certification.

Learning Outcomes

1. Demonstrate knowledge of professional values and ethical standards that are foundational to the human services profession
2. Demonstrate advanced aptitude to integrate knowledge of cultural diversity in multiple settings and with multiple clients and available significant others
3. Demonstrate advanced ability to collaboratively develop an effective and clear treatment plan by assessing client needs and selecting interventions that will assist clients in promoting optimal functioning, growth and goal attainment
4. Develop foundational awareness of their values, cultural bias, philosophies, personality, and style and how these personal characteristics affect clients
5. Demonstrate professional interviewing skills
6. Identify basic and advanced skills required to create genuine and empathetic relationships; implement knowledge, theory, and skills to support client change
7. Apply knowledge of appropriate community referral resources and utilization of client support systems and resources
8. Demonstrate writing skills appropriate to clinical documentation
9. Describe the role of neurochemistry in the brain and how substances, behaviors and experiences impact the brain
10. Implement evidence based strategies for behavior change based on current research

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 121 Academic Composition or (WR 121 Academic Composition plus WR 098 Writing Seminar) placement OR completion of WR 065 Rhetoric and Critical Thinking II
 - Students should have basic computer competency skills.

Other Entrance Requirements

Must pass a Criminal Background Check (CBC) as a condition of acceptance into a practicum for training. Students who do not pass the CBC may not be eligible to complete training at affiliated practicum sites, to sit for certification exams, or to be hired for some professional positions. Students with questions about their history should contact the appropriate state board or the program director.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Travel costs for practicum, three terms, costs based on location
- State Board exams (MHACBO): \$50 application fee; \$220 exam fee
- Videotaping fees for two terms: approximately \$50
- Background check for practicum placement: approximately \$50

Course Requirements

Course	Title	Credits
Core Courses		
HS 101	Orientation to Human Services	3
HS 161	Ethics for Human Services	4
HS 162	Effective Helping Skills I	4
HS 180	Addictions, HIV and Other	2
HS 200	Introduction to Addictions	3
HS 201	Families and Addictions	3
HS 205	Youth and Addictions	3
HS 206	Group Counseling Skills	4
HS 208	Multicultural Issues Hum Serv	4
HS 209	Introduction to Psychological Trauma: Theory and Practice	4
HS 210	Co-Occurring Disorders	4
HS 224	Psychopharmacology	4
HS 250	Process Addictions	4
HS 260	Counseling Theories	4
HS 262	Effective Helping Skills II	4
HS 263	Counsel Chem Dependent Client	3
HS 266	Case Mgt Chem Depend Client	4
HS 290	Introduction to Practicum	1
HS 291	Practicum in Human Services I	4
HS 292	Practicum in Human Services II	4
HS 293	Practicum in Human Service III	4
Other Required Courses		
Discipline Studies Electives ¹		3-5
Health (3 credits with HHP or HHPA prefix) ²		3
MTH 031	Health Care Math (or higher)	3-4
Choose one course from the following:		3-4
COMM 111	Fundamentals Public Speaking	
COMM 114	Argumentation & Discourse	
COMM 115	Intro Intercultural Comm.	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Total Credits		94-98

¹ Choose courses from the Discipline Studies list that do not have an HS prefix, and that have different prefixes from each other. Choose enough credits to reach the 90 credit minimum.

² HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

Always meet with an academic advisor to ensure the most effective and efficient course and program process.

Performance Standards

- Academic Requirements
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses with the HS prefix must be completed with a grade of C or higher.
- Additional Requirements
 - A student may be considered ineligible for continued enrollment in the program if the student has failed to satisfactorily complete a given Human Services/Addictions Studies course after re-enrolling in that course once (one time).

Sample Plan

First Term		Credits
HS 101	Orientation to Human Services	3
HS 200	Introduction to Addictions	3
MTH 031	Health Care Math ((or higher))	3-4
WR 121	Academic Composition	4
	Credits	13-14
Second Term		
HS 180	Addictions, HIV and Other	2
HS 205	Youth and Addictions	3
	Choose one from the following:	3-4
COMM 111	Fundamentals Public Speaking	
COMM 114	Argumentation & Discourse	
COMM 115	Intro Intercultural Comm.	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
	Credits	12-13
Third Term		
HS 161	Ethics for Human Services	4
HS 206	Group Counseling Skills	4
HS 210	Co-Occurring Disorders	4
	Credits	12
Fourth Term		
HS 162	Effective Helping Skills I	4
HS 201	Families and Addictions	3
HS 260	Counseling Theories	4
HS 290	Introduction to Practicum	1
	Credits	12
Fifth Term		
HS 224	Psychopharmacology	4

HS 250	Process Addictions	4
HS 262	Effective Helping Skills II	4
Credits		12
Sixth Term		
HS 263	Counsel Chem Dependent Client	3
HS 266	Case Mgt Chem Depend Client	4
HS 208	Multicultural Issues Hum Serv	4
Credits		11
Seventh Term		
HS 209	Introduction to Psychological Trauma: Theory and Practice	4
HS 291	Practicum in Human Services I	4
Discipline Studies Elective		3-5
Credits		11-13
Eighth Term		
HS 292	Practicum in Human Services II	4
HS 293	Practicum in Human Service III	4
Health (3 credits with HHP/HHPA prefix)		3
Credits		11
Total Credits		94-98

Addiction Studies and Human Services - Two Year Certificate of Completion (CC2)

Description

The two year certificate of completion provides the coursework and 300 of the 1,000 hours of supervised experience that are required to qualify to sit for the Oregon Certified Alcohol and Drug Counselor (CADC) I exam. The certificate also provides foundational coursework recommended by community partners to be successful in the addictions field, criminal justice field and other human services fields who work with addicted persons and their families.

Learning Outcomes

1. Demonstrate knowledge of professional values and ethical standards that are foundational to the human services profession
2. Demonstrate foundational aptitude to integrate knowledge of cultural diversity in multiple settings and with multiple clients and available significant others
3. Demonstrate basic ability to collaboratively develop an effective and clear treatment plan by assessing client needs and selecting interventions that will assist clients in promoting optimal functioning, growth and goal attainment
4. Develop foundational awareness of their values, cultural bias, philosophies, personality, and style and how these personal characteristics affect clients
5. Demonstrate beginning professional interviewing skills
6. Identify basic skills required to create genuine and empathetic relationships

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED
 - Minimum placement scores resulting in WR 121 Academic Composition or (WR 121 Academic Composition plus WR 098 Writing Seminar) placement or completion of WR 065 Rhetoric and Critical Thinking II
 - Students should have basic computer competency skills.

Other Entrance Requirements

- Must pass a Criminal Background Check (CBC) as a condition of acceptance into a practicum for training. Students who do not pass the CBC may not be eligible to complete training at affiliated practicum sites, to sit for certification exams, or to be hired for some professional positions. Students with questions about their history should contact the appropriate state board or the program director.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Travel costs for practicum, three terms, costs based on location
- State Board exams (MHACBO): \$50 application fee; \$220 exam fee
- Videotaping fees for two terms: approximately \$50
- Background check for practicum placement: approximately \$50

Course Requirements

Course	Title	Credits
Core Courses		
HS 101	Orientation to Human Services	3
HS 161	Ethics for Human Services	4
HS 162	Effective Helping Skills I	4
HS 180	Addictions, HIV and Other	2
HS 200	Introduction to Addictions	3
HS 201	Families and Addictions	3
HS 205	Youth and Addictions	3
HS 206	Group Counseling Skills	4
HS 208	Multicultural Issues Hum Serv	4
HS 209	Introduction to Psychological Trauma: Theory and Practice	4
HS 210	Co-Occurring Disorders	4
HS 224	Psychopharmacology	4
HS 250	Process Addictions	4
HS 260	Counseling Theories	4
HS 262	Effective Helping Skills II	4
HS 263	Counsel Chem Dependent Client	3
HS 266	Case Mgt Chem Depend Client	4
HS 290	Introduction to Practicum	1
HS 291	Practicum in Human Services I	4
HS 292	Practicum in Human Services II	4
HS 293	Practicum in Human Service III	4
Other Required Courses		
MTH 031	Health Care Math (or higher)	3-4

WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Total Credits		85-86

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses must be completed with a grade of C or higher.
- Additional Requirements:
 - A student may be considered ineligible for continued enrollment in the program if the student has failed to satisfactorily complete a given Human Services/Addictions Studies course after re-enrolling in that course once (one time).

Sample Plan

First Term		Credits
HS 101	Orientation to Human Services	3
HS 200	Introduction to Addictions	3
MTH 031	Health Care Math (higher)	3-4
WR 121	Academic Composition	4
Credits		13-14
Second Term		
HS 205	Youth and Addictions	3
HS 180	Addictions, HIV and Other	2
HS 260	Counseling Theories	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		13
Third Term		
HS 161	Ethics for Human Services	4
HS 206	Group Counseling Skills	4
HS 210	Co-Occurring Disorders	4
Credits		12
Fourth Term		
HS 162	Effective Helping Skills I	4
HS 201	Families and Addictions	3
HS 266	Case Mgt Chem Depend Client	4
HS 290	Introduction to Practicum	1
Credits		12
Fifth Term		
HS 208	Multicultural Issues Hum Serv	4
HS 224	Psychopharmacology	4
HS 262	Effective Helping Skills II	4
Credits		12
Sixth Term		
HS 263	Counsel Chem Dependent Client	3
HS 250	Process Addictions	4
HS 291	Practicum in Human Services I	4
Credits		11

Seventh Term

HS 209	Introduction to Psychological Trauma: Theory and Practice	4
HS 292	Practicum in Human Services II	4
HS 293	Practicum in Human Service III	4
Credits		12
Total Credits		85-86

Human Services - Associate of Arts Oregon Transfer (AAOT)

Description

Human Services programs prepare students to work for organizations that serve people in need. Students learn the theories, principles and practice of providing services. Human Services jobs can include substance abuse counselor, youth worker, mental health aide or probation officer and provide services to schools, prisons, government agencies and nonprofit groups.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Recommend: HS 206, HS 208, HS 209		
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Recommend: HS 224		
Electives		

Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.³

Total Credits	90-106
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- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² HS 208 Multicultural Issues Hum Serv is recommended to meet cultural literacy requirement.
- ³ Other Addiction Studies/Counseling Certificate courses are related courses to consider; 32 credits may be applied toward elective credits .

Advising Notes

Locally, OSU-Cascades offers a bachelor's degree with a major in Human Development and Family Science, Human Services option. This degree requires careful and accurate planning of the first 90 credits. Details can be found at osucascades.edu/academics/hdfs/ (<https://osucascades.edu/academics/hdfs/>). Working closely with a COCC academic advisor is highly recommended.

Another option is Portland State University's Bachelor in Social Work (BSW) Hybrid Program (<https://www.pdx.edu/ssw/bsw-hybrid-program/>). This program has some flexibility in transfer course work and prepares students for the local MSW program (for those students interested in continuing on). The BSW junior year is online and senior year is online and face to face five Saturdays in Eugene throughout each term.

Students pursuing a BA (as opposed to a BS) after transfer should consider completing three terms of a 200-level language course. The 100-level language courses will count as electives. The 200-level language courses will partially fulfill the Arts and Letters requirement.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters	3-4
Mathematics: (p. 399)	4
Oral Communication: (p. 399)	3-4
WR 121	Academic Composition
	Credits
	14-16
Second Term	Credits
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science (recommend HS 206)	4
Health (3 credits with HHP or HHPA prefix)	3
WR 122	Argument, Research, and Multimodal
or WR 227	Composition
	Technical Writing
	Credits
	14-15

Third Term

Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science (recommend HS 208) ²	4
Discipline Studies Science/Math/Computer Science (recommend HS 224) ³	4
Elective	4
Elective	3
Credits	18-19

Fourth Term

Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science (recommend HS 209)	4
Elective	4
Elective	4
Credits	15-17

Fifth Term

Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
Credits	14-17

Sixth Term

Discipline Studies Science/Math/Computer Science	3-5
Elective	4
Elective	4
Elective	4
Credits	15-17
Total Credits	90-101

Humanities

Humanities is the study of the expression of the human experience. At COCC, the Humanities discipline offers courses in literature, film, culture, and writing. Students develop the ability to apply creative skills to problem-solving, analyzing and evaluating information, thinking critically, and communicating effectively.

<https://www.cocc.edu/programs/humanities/>

Contact:

Tony Russell
541-383-3795
Ochoco Hall, Bend Campus

Department: Humanities
Department Chair: Tony Russell

Programs

Transfer

- English/Literature - Associate of Arts Oregon Transfer (AAOT) (p. 206)
- Humanities - Associate of Arts Oregon Transfer (AAOT) (p. 208)
- Liberal Arts/Liberal Studies - Associate of Arts Oregon Transfer (AAOT) (p. 210)

Courses

ENG 104 Introduction to Literature: Fiction (4 Credits)

Recommended preparation: WR 121.

Explores human purpose, literary structures, and cultural values within a variety of short stories and/or novels. Features close reading, interpretation and evaluation of selected works of fiction, with attention to authors' contexts and their creative processes, narrative elements, and reader responses. Explores topics and literatures from diverse viewpoints, backgrounds, and perspectives.

ENG 105 Introduction to Literature: Drama (4 Credits)

Recommended preparation: WR 121.

Examines drama as literature, through its traditions, imaginative purposes and organizing visions, such as tragedy, comedy and realism. Close reading and interpretation of selected plays with attention to the cultural contexts of their creation and to the literary dimensions of character, dialogue, plot, setting, language and theme. Need not be taken in sequence.

ENG 106 Introduction to Literature: Poetry (4 Credits)

Recommended preparation: WR 121.

Explores critical and personal pleasures of poetry as a powerful and compact means to express feelings and ideas and respond to the varieties of human experience. Close reading of a wide range of poetry with attention to poets' roles, literary traditions and poetic strategies expressed through tone, speaker, situation and event, theme, irony, language, images, sounds, rhythms, symbols, open and closed poetic forms. Need not be taken in sequence.

ENG 107 Western World Literature: Ancient (4 Credits)

Recommended preparation: WR 121.

Explores origins of Western culture through a study of representative Greek, Roman and other literary philosophical and historical texts. Mythology and the hero's quest as incorporated in Homer and Virgil may form the core of the readings. Need not be taken in sequence.

ENG 108 Western World Literature: Middle Ages (4 Credits)

Recommended preparation: WR 121.

Survey of representative texts explores Middle Ages, Renaissance, up to the 18th century Enlightenment, including rise of Christianity, chivalry, and the vision quest. Need not be taken in sequence.

ENG 109 Western World Literature: Modern (4 Credits)

Recommended preparation: WR 121.

Surveys representative texts, authors, and genres from the late 18th century to the present; explores modern Western world literary movements and their historical-intellectual contexts, from romanticism and realism to post-colonialism and contemporary global trends. Need not be taken in sequence.

ENG 180 Co-op Work Experience English and Literature (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

ENG 188 Special Studies: Literature (1-4 Credits)

Explores topics of current interest in the discipline.

ENG 199 Selected Topics: Literature (1-4 Credits)

This course is in development.

ENG 201 Shakespeare (4 Credits)

Recommended preparation: WR 121.

The major plays of Shakespeare's early and middle periods. May also include selected study of his sonnets. Need not be taken in sequence.

ENG 202 Shakespeare (4 Credits)

Recommended preparation: WR 121.

The major plays of Shakespeare's middle and later periods. May also include selected study of his sonnets. Need not be taken in sequence.

ENG 204 Survey British Literature I (4 Credits)

Recommended preparation: WR 121.

Examines representative texts from the heroic age (Medieval) through the Enlightenment (18th century). Literary forms such as the epic, chivalric romance, morality play and folk ballad, lyric and narrative poetry, drama, the speculative essay, prose non-fiction and the novel are studied.

Explores relations between texts and their cultural and historic contexts. Need not be taken in sequence.

ENG 205 Survey British Literature II (4 Credits)

Recommended preparation: WR 121.

Examines representative texts from the Romantic period through Contemporary literature. The romance of nature, industrial growth, urban experience, the rise of new class identities and alienation of the individual are themes in this period. Literary forms such as lyric and narrative poetry, short stories, the novel, and the drama of social realism and literature of the absurd are studied. Explores relations between texts and their cultural and historical contexts. Need not be taken in sequence.

ENG 212 Autobiography (4 Credits)

Recommended preparation: WR 121.

Examines diverse modes of autobiographical writing as texts that represent the self in society and where writers construct and represent memories. Explores the ways in which writers construct and represent memory and the impact these narratives have on our understanding of the political and cultural context in which they are produced. Explores autobiography from various places and periods.

ENG 221 Introduction to Children's Literature (4 Credits)

Recommended preparation: WR 121.

Provides an overview of children's literature for toddlers through teens by examining the different genres of children's literature, including picture books, myths and folklore, poetry, nonfiction, historical fiction, and fantasy, as well as the criteria for evaluation of each genre. This course is recommended for education majors as well as parents (present and future) who are interested in children's literature and issues related to children's literature.

ENG 232C Topics in American Literature: Contemporary Fiction (4 Credits)

Recommended preparation: WR 121.

In-depth study of several works of contemporary (late 20th/21st century) American fiction.

ENG 232M Topics in American Literature: Literature & Medicine (4 Credits)

Recommended preparation: WR 121.

This course examines fiction, poetry, drama and creative nonfiction by and about members of the health professions. The goal is to understand multiple perspectives on illness, health, and healing as presented in the course material.

ENG 250 Introduction to Folklore and Mythology (4 Credits)

Recommended preparation: WR 121.

Study of the systematic ways to explain how and why so many of the world's great religions, past and present, share similar stories, heroes and ways of attempting to understand and explain the unknowable. Analyzes tales from, among other locales, India, China, Africa, and North and South America. Some of the key myths include those of the Aztecs and Mayans, Native North Americans, the Sumerians and the Gnostics. The first few weeks of the course will provide an introduction to folklore. It will then provide insight into the social, psychological and aesthetic nature of mythology and an introduction to the theoretical approaches to understanding mythology.

ENG 253 Survey American Literature I (4 Credits)

Recommended preparation: WR 121.

Reading and interpretation of writings from the diverse cultures which inhabited, colonized or developed this country through material from the Civil War period. Includes the Native American oral tradition, the journals of Columbus and other explorers, the diaries of settlers in the British colonies, and more traditional forms of literature through the mid-19th century. Need not be taken in sequence.

ENG 254 Survey American Literature II (4 Credits)

Recommended preparation: WR 121.

Covers selected works of American literature written during the late 19th century and the 20th century. Covers the transition from Realism and Naturalism to Modernism, the Jazz Age, the Harlem Renaissance, the Confessional and "Beat" poets and writers and late 20th century short fiction. Need not be taken in sequence.

ENG 256 Folklore and US Popular Culture (4 Credits)

Recommended preparation: WR 121.

Explores the relationship between folklore and popular culture, with special emphasis on the analysis of legends, myths, icons, stereotypes, heroes, rituals, and celebrations.

ENG 260 Introduction to Women Writers (4 Credits)

Recommended preparation: WR 121.

Focuses on the achievements and perspectives of women writers through critical analysis of their literary works and literary strategies. Uses a chronological, stylistic or thematic approach.

ENG 288 Special Studies: Literature (1-4 Credits)

Explores topics of current interest in the discipline.

ENG 299 Selected Topics: Literature (1-4 Credits)

This course is in development.

FA 101 Introduction to Film (4 Credits)

Recommended preparation: WR 121.

Focuses on audio-visual narratives, with an emphasis on how the collaborative process of combining cinematography, editing, sound, mise-en-scene, and acting constructs meaning and communicates ideas.

FA 125 World Cinema (4 Credits)

Recommended preparation: WR 121.

Introduction to comparative study of compelling feature films and their directors from around the globe, analyzing subject matter, theme, genre, narrative structure, character, film style and technique as expressions of diverse cultural worldviews and distinctive artistic visions.

FA 257 Literature Into Film (4 Credits)

Recommended preparation: WR 121.

Implements analysis of the structure of motion pictures to teach about structure of literature, allowing students to see the comparative strengths of each form. Aspects of narrative to be compared include plot and structure, character development, point of view, figurative discourse, symbol and allegory and means of controlling and expressing passage of time.

FA 288 Special Studies: Film Arts (1-4 Credits)

Explores topics of current interest in the discipline.

FA 298 Independent Study: Film Arts (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: Prior coursework in the discipline.

Individualized, advanced study in film arts to focus on outcomes not addressed in existing courses or of special interest to a student.

FA 299 Selected Topics: Film Arts (1-4 Credits)

This course is in development.

HUM 105 Italian Life and Culture (2 Credits)

Offered as a required course in the Florence Quarter study abroad program. The student will gain a broad overview of contemporary Italian society by examining cultural traditions and values. Besides topical lectures by native guest lecturers, the course engages students in experiential learning through field trips to such historic and cultural sites as Etruscan Fiesole, the Uffizi Gallery, the Accademia Museum and the Medici Pitti Palace. (Elective only; Does not satisfy general education requirement)

HUM 106 British Life and Culture (3 Credits)

Offered as a required course in the London Quarter study abroad program. The student will gain a broad overview of contemporary British culture and society by examining traditions and institutions that impact the British way of life in the twenty-first century. Besides topical presentations by native guest lecturers, the course engages students in experiential learning through field trips to such historic and cultural sites as the Museum of London, the National Gallery, Shakespeare's Globe Theatre and the Houses of Parliament.

HUM 107 Spanish Life and Culture (3 Credits)

Offered as a required course in the Barcelona Quarter study abroad program. The student will gain a broad overview of contemporary Spanish society by examining cultural traditions and values. Besides topical lectures by native guest lecturers, the course engages students in experiential learning through field trips to such historic and cultural sites as Gaudi's Barcelona, the Gothic quarter, and the Dali museum. (Elective credit only; Does not satisfy general education requirements)

HUM 188 Special Studies: Humanities (1-4 Credits)

Explores topics of current interest in the discipline.

HUM 199 Selected Topics: Humanities (1-4 Credits)

This course is in development.

HUM 210 Culture And Literature Of Asia (4 Credits)

Recommended preparation: WR 121.

Introductory study of representative literary texts, films and related language arts, in English or in translation, of Asian regions and countries, such as China, India and Japan, examined in the context of their histories and cultural traditions.

HUM 211 Culture and Literature of Africa (4 Credits)

Recommended preparation: WR 121.

Introductory study of representative oral arts, literature, film and related creative arts, in English or in translation, of sub-Saharan African peoples, examined in context of their histories and cultural traditions.

HUM 212 Culture and Literature of the Americas (4 Credits)

Recommended preparation: WR 121.

Interdisciplinary study of representative literary and historical texts (and other media) from Hispanic and Afro-Caribbean cultures of traditional, colonial and post-colonial origin.

HUM 213 Culture and Literature of Middle East (4 Credits)

Recommended preparation: WR 121.

Introductory study of representative Arabic, Persian and Hebrew literary texts in translation, placed in the context of films and other cultural media of the Middle East and Northern Africa.

HUM 230 Immigrant Experience American Literature (4 Credits)

Recommended preparation: WR 121.

Introductory survey of the immigrant experience in the United States as reflected in literature, autobiography and film.

HUM 240 Native American Literature and Culture (4 Credits)

Recommended preparation: WR 121.

Introduction to traditional oral and contemporary Native American texts with an emphasis on cultural contexts and continuity.

HUM 255 Cultural Diversity in Contemporary American Literature (4 Credits)

Recommended preparation: WR 121.

This course examines cultural diversity as recorded in American literature since 1965, emphasizing literary and cultural values in poetry, fiction, and drama. Readings focus on writers' views of life within historically marginalized groups based on ethnicity, gender, and sexual identity.

HUM 256 Introduction to African-American Literature (4 Credits)

Recommended preparation: WR 121.

Survey of African-American literature (selected fiction, autobiography, poetry and drama of the 19th and 20th centuries), placed in the context of major African-American achievements in the visual arts, music and film.

HUM 261 Popular Culture: Science Fiction (4 Credits)

Recommended preparation: WR 121.

Focuses on the significance of science, technology and on such topics as the idea of the future and the "limits of the human" as revealed in popular culture through genres such as fiction, film, music, comics, anime and manga and advertising.

HUM 262 Popular Culture: The American Western (4 Credits)

Recommended preparation: WR 121.

Historical study of the Western story and the cowboy hero in American culture through genres such as fiction, film, song, art and advertising.

HUM 263 Popular Culture: Detective Stories (4 Credits)

Recommended preparation: WR 121.

Historical study of crime stories and the detective figure as revealed in popular culture through genres such as fiction, film, television, comics and journalism.

HUM 264 Popular Culture: Spy Thriller (4 Credits)

Recommended preparation: WR 121.

Thematic study of espionage stories and the spy figure, as revealed in popular culture through genres such as fiction, film, advertising and journalism.

HUM 265 Popular Culture: Noir Film and Fiction (4 Credits)

Recommended preparation: WR 121.

Historical, thematic and technical study of film noir and related fiction as a subversive force in popular culture.

HUM 266 Popular Culture: Travel Literature (4 Credits)

Recommended preparation: WR 121.

Cross-cultural study of travel as exploration, personal narrative, anthropological inquiry and social criticism of places and peoples represented as "other" or "exotic." Examines popular culture as depicted in genres such as travel memoirs, journalism, advertising, educational videos and feature films that critique touristic assumptions.

HUM 268 Digital Games Culture (4 Credits)

Recommended preparation: WR 121.

This course will approach digital games through an academic socio-cultural lens, identifying key elements of evolving game studies theory, which considers digital game design, digital games play and digital games as a cultural practice that, in addition to play/entertainment, offers a new and developing medium for story-telling and learning.

HUM 269 Popular Culture Graphic Novels (4 Credits)

Recommended preparation: WR 121.

Examines the role of comic books and graphic novels as cultural and artistic creations in popular culture and literature. Identifies a vocabulary for discussing, explaining, writing, and analyzing comics. Explores relevant social and historical events in the development of comics. May include comics to film comparisons or principal author studies.

HUM 280 Co-op Work Experience Humanities (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

HUM 298 Independent Study: Humanities (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

HUM 299 Selected Topics: Humanities (1-4 Credits)

This course is in development.

RD 099 Selected Topics: Reading (1-4 Credits)

This course is in development.

RD 117 College Reading (3 Credits)

Offers instruction in flexible reading skills. Focuses on building reading speed and comprehension, and acquiring a repertoire of reading strategies suitable for understanding and retaining information acquired in typical college reading.

RD 199 Selected Topics: Reading (1-4 Credits)

This course is in development.

WR 060 Rhetoric and Critical Thinking I (4 Credits)

Recommended preparation: Minimum placement into WR 060.

Introduce concepts of rhetorical reading, thinking, and writing as tools for college-level study. Establish an understanding and basic familiarity with key rhetorical concepts, such as audience and purpose, for both reading and writing. Reflect on their reading and writing as processes in order to understand their own practice as readers and writers. Demonstrate familiarity with using MLA conventions for format and citations in writing. Produce at least 1,500 words of revised, final draft copy, including at least one thesis-driven, minimum 750-word academic essay. P/NP grading.

WR 065 Rhetoric and Critical Thinking II (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Develop rhetorical reading, thinking, and writing skills as tools for success in reading and writing college level texts. Develop an understanding and basic fluency with key rhetorical concepts, such as audience and purpose, for both reading and writing. Evaluate their reading and writing as processes in order to examine and develop their own practice. Employ MLA conventions for format and citations in writing. Produce at least 2,000 words of revised, final draft copy, including at least one thesis-driven, minimum 1,000-word academic essay. P/NP grading.

WR 095 Basic Writing II (3 Credits)

Recommended preparation: WR 065 or minimum placement into WR 121.

Provides instruction and practice in basic essay structures and development. Students learn effective options for introductions, transitions, body paragraphs and conclusions. Includes brief review of sentence mechanics and paragraphing principles within the context of student's own writing. Also provides practice and instruction in the writing process, including peer review and analysis. WR 095 is an optional course in the developmental writing sequence for students who need or want additional preparation for WR 121. This course is not suitable for students who place into WR 060 or WR 065.

WR 098 Writing Seminar (2 Credits)

Prerequisites: Minimum placement into WR 098.

Corequisites: WR 121.

A companion course to WR 121 for students who place into WR 98. Supports students by incrementally breaking down assignments while building self-efficacy and growth mindset to increase academic success. P/NP grading.

WR 099 Selected Topics: Writing (1-4 Credits)

This course is in development. P/NP grading.

WR 121 Academic Composition (4 Credits)

Prerequisites: WR 065 or WR 095 or minimum placement into WR 121.

WR 121 focuses on rhetorical reading, thinking, and writing as a means of inquiry. Students will gain fluency with key rhetorical concepts and utilize these in a flexible and collaborative writing process, reflecting on their writing process with the goal of developing metacognitive awareness. They will employ conventions, including formal citations, appropriate for a given writing task, attending to the constraints of audience, purpose, genre, and discourse community. Students will compose in two or more genres.

WR 122 Argument, Research, and Multimodal Composition (4 Credits)

Prerequisites: WR 121.

WR 122 continues the focus of WR 121 in its review of rhetorical concepts and vocabulary, in the development of reading, thinking, and writing skills, along with metacognitive competencies understood through the lens of a rhetorical vocabulary. Specifically, students will identify, evaluate, and construct chains of reasoning, a process that includes an ability to distinguish assertion from evidence, recognize and evaluate assumptions, and select sources appropriate for a rhetorical task. Students will employ a flexible, collaborative, and appropriate composing process, working in multiple genres, and utilizing at least two modalities.

WR 170 Documentation (1 Credit)

Instruction emphasizes what constitutes plagiarism and how to avoid it by applying college-level documentation practices, using accepted discipline-appropriate academic and professional styles, in research-based writing assignments across the curriculum.

WR 188 Special Studies: Writing (1-4 Credits)

Explores topics of current interest in the discipline.

WR 199 Selected Topics: Writing (1-4 Credits)

This course is in development.

WR 227 Technical Writing (4 Credits)

Prerequisites: WR 121.

Prepares students to produce instructive, informative, and persuasive technical documents. Grounded in rhetorical theory, the course focuses on producing usable, reader-centered content that is clear, concise, and ethical. Students will engage in current best practices and work individually and in groups to learn strategies for effective communication in the digital and networked, global workplace.

WR 240 Introduction to Creative Writing: Nonfiction (4 Credits)

Recommended preparation: WR 121.

Introduces the many forms and purposes of creative nonfiction such as science or nature writing, travel writing, memoir, biography, and journalistic essay. Requires individual and collaborative workshop activities to develop skills in drafting and revision. Examines topics, purposes for writing, and elements of craft, including voice, scene, description, and structure. Requires creation of a portfolio of works reflecting various stages of their writing process.

WR 241 Introduction to Creative Writing: Fiction (4 Credits)

Recommended preparation: WR 121.

Practical study of effective strategies for creating vivid, dramatic stories. Students learn the basic craft of generating conflict and plot, openings that grab the reader, complications that build tension, and details that reveal character. Critical reading of published authors, prose craft exercises and responding constructively to other student work are essential learning processes.

WR 242 Introduction to Creative Writing: Poetry (4 Credits)

Recommended preparation: WR 121.

Introduces students to the craft of poetry through study of the poetry and notebooks of established writers for writing techniques, forms, styles and work processes and through the writing and submission of approximately one complete poem per week for class discussion and analysis.

WR 243 Introduction to Creative Writing: Scriptwriting (4 Credits)

Recommended preparation: WR 121.

Introduces students to dramatic writing for both stage and screen. Essential learning processes in the course include scene and dialogue craft exercises, developing strong characters and viable narrative structures, critical reading of plays, screenplays, and/or teleplays and responding constructively to other student work.

WR 280 Co-op Work Experience Writing (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

WR 288 Special Studies: Writing (1-4 Credits)

Explores topics of current interest in the discipline.

WR 299 Selected Topics: Writing (1-4 Credits)

This course is in development.

WS 101 Introduction to Women's and Gender Studies (4 Credits)

Recommended preparation: WR 121.

Explores the impact of women's and gender studies in many academic fields. Examines women's status and achievements, and the issues raised for men and women by feminism and the women's movement.

English/Literature - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer (AAOT) degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division English/Literature major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

English majors with a solid humanities foundation and strong writing, reading, critical thinking and research skills, are sought after in many careers, including advertising, business, public administration, communication and media, computer-based information and education, software and web development, social services, government civil service, law and criminal justice, and teaching/education.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits	¹	3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes	²	9-12
Recommend: ENG 204 and ENG 205 or ENG 253 and ENG 254		
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39

Recommend: ENG 201, ENG 202, ENG 204, ENG 205, ENG 253, ENG 254

Total Credits 90-106

- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² Plus one additional course from the Arts and Letters Discipline Studies list with a different prefix.

Advising Notes

Lower-division requirements for majors, minors and related specializations in English/Literature vary among four-year institutions. To make wise elective course choices, students are advised to work closely with their advisors, consult college catalogs of the destination institution to which they wish to transfer and determine whether one or more of the following courses should be elected to fulfill their degree objectives.

Education programs may require or recommend:

ENG 221 Introduction to Children's Literature

English/Literature and Humanities degree programs may also require or recommend one of more courses in:

Western World Literature

ENG 107 Western World Literature: Ancient, ENG 108 Western World Literature: Middle Ages, ENG 109 Western World Literature: Modern

Non-Western World Literature

HUM 210 Culture And Literature Of Asia, HUM 211 Culture and Literature of Africa, HUM 212 Culture and Literature of the Americas, HUM 213 Culture and Literature of Middle East

American Multiculturalism

HUM 210 Culture And Literature Of Asia, HUM 230 Immigrant Experience American Literature, HUM 240 Native American Literature and Culture, HUM 255 Cultural Diversity in Contemporary American Literature, HUM 256 Introduction to African-American Literature

Introductory genre courses in Literature, Film, Popular Culture and/or Women's Studies courses

ENG 104 Introduction to Literature: Fiction, ENG 105 Introduction to Literature: Drama, ENG 106 Introduction to Literature: Poetry, ENG 212 Autobiography, ENG 250 Introduction to Folklore and Mythology, ENG 256 Folklore and US Popular Culture, ENG 260 Introduction to Women Writers, FA 101 Introduction to Film, FA 125 World Cinema, FA 257 Literature Into Film, HUM 105 Italian Life and Culture, HUM 106 British Life and Culture, HUM 261 Popular Culture: Science Fiction, HUM 262 Popular Culture: The American Western, HUM 263 Popular Culture: Detective Stories, HUM 264 Popular Culture: Spy Thriller, HUM 265 Popular Culture: Noir Film and Fiction, HUM 268 Digital Games Culture, HUM 269 Popular Culture Graphic Novels, WS 101 Introduction to Women's and Gender Studies

Creative Writing Courses

WR 240 Introduction to Creative Writing: Nonfiction, WR 241 Introduction to Creative Writing: Fiction, WR 242 Introduction to Creative Writing: Poetry, WR 243 Introduction to Creative Writing: Scriptwriting

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards:

- All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
Elective (recommend ENG 201)		4
Health (3 credits with HHP or HHPA prefix) ¹		3
Mathematics: (p. 399)		4
WR 121	Academic Composition	4
	Credits	15
Second Term		Credits
Discipline Studies Science/Math/Computer Science		3-4
Elective		4
Oral Communication: (p. 399)		3-4
WR 122	Argument, Research, and Multimodal	4
or WR 227	Composition Technical Writing	
	Credits	14-16
Third Term		Credits
Discipline Studies Arts & Letters (recommend ENG 204) ²		4
Discipline Studies Social Science		3-4
Discipline Studies Science/Math/Computer Science		3-5
Elective (recommend ENG 253)		4
Elective		3-4
	Credits	17-21
Fourth Term		Credits
Discipline Studies Arts & Letters (recommend ENG 205) ²		4
Discipline Studies Social Science		3-4
Elective (recommend ENG 254)		3-4
Elective		4
Elective		4
	Credits	18-20
Fifth Term		Credits
Discipline Studies Arts & Letters ²		3-4
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		3-4
	Credits	12-17
Sixth Term		Credits
Discipline Studies Social Science		3-4
Discipline Studies Science/Math/Computer Science		3-5
Elective		4
Elective		4
	Credits	14-17
	Total Credits	90-106

Humanities - Associate of Arts Oregon Transfer (AAOT)

Description

The humanities encompass diverse subjects concerned with study of human experience and communication; philosophy, values, and beliefs;

language arts and cultural traditions -- of the past, present, and future, in Western and non-Western cultures. The Associate of Arts Oregon Transfer (AAOT) with a focus in humanities includes courses that are commonly required for this major and meets lower division general education requirements at all Oregon public universities.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

Transfer students seeking a bachelor's degree in specific or interdisciplinary humanities fields are advised to select general education/discipline studies and elective courses that will also fulfill major and minor requirements at the destination university to which they intend to transfer. COCC transfer students are encouraged to consult college catalogs and work closely with their advisors.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters	3-4
Mathematics: (p. 399)	4
Oral Communication: (p. 399)	3-4
WR 121	4
Academic Composition	4
Credits	14-16
Second Term	Credits
Discipline Studies Social Science	3-4
Discipline Studies Arts & Letters	3-4
Health (3 credits with HHP or HHPA prefix) ¹	3
Elective	3
WR 122 or WR 227	4
Argument, Research, and Multimodal Composition Technical Writing	4
Credits	16-18
Third Term	Credits
Discipline Studies Arts & Letters	3-4
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
Credits	17-21
Fourth Term	Credits
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
Credits	14-17
Fifth Term	Credits
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
Credits	14-17
Sixth Term	Credits
Discipline Studies Science/Math/Computer Science	3-5
Elective	4
Elective	4
Elective	4
Credits	15-17
Total Credits	90-106

Liberal Arts/Liberal Studies - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer (AAOT) degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

Liberal studies, also known as liberal arts, is a program of study in higher education that varies between institutions but generally encompasses a broad array of arts and letters, social science, and science courses. As a major, liberal studies frequently encourages connections between the disciplines and includes a focus on strong communication and critical thinking skills. Some schools define a variety of liberal studies choices for students, while others, like Oregon State University-Cascades, support students to self-design a major around a theme. This major is a good choice for students who have specific career or personal goals, who enjoy a wide range of disciplines, and who appreciate the flexibility provided.

The flexibility in the degree makes it difficult to provide guidance without identifying a transfer institution. For this reason, students should check with each school to ensure that the latest transfer information is used when designing their program. The guidance below focuses on general education requirements and using electives to meet BA/BS requirement and begin to build a theme.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline studies		
Cultural Literacy: (p. 401)		

One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).

Arts and Letters: (p. 399)	
Choose three courses from at least two prefixes	9-12
Social Science: (p. 404)	
Choose four courses from at least two prefixes	12-16
Science/Math/Computer Science: (p. 403)	
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science	12-20
Electives	
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.	39
Total Credits	90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated

Advising Notes

Students are encouraged to consider meeting BA or BS requirements for their transfer institution in the first two years. This requirement varies, but frequently the BA requirement is one or two years of a foreign language and the BS requirement is additional math (or math, science and computer science).

In choosing electives, students should consider their future liberal studies theme.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters	3-4
Mathematics: (p. 399)	4
Oral Communication: (p. 399)	3-4
WR 121 Academic Composition	4
Credits	14-16

Second Term	Credits
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Elective	3
Health (3 credits with HHP or HHPA prefix) ¹	3
WR 122 Argument, Research, and Multimodal or WR 227 Composition Technical Writing	4
Credits	16-18

Third Term	Credits
Discipline Studies Arts & Letters	3-4
Discipline Studies Science/Math/Computer Science	3-5

Discipline Studies Social Science	3-4
Elective	4
Elective	4
Credits	17-21

Fourth Term	Credits
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
Credits	14-17

Fifth Term	Credits
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
Credits	14-17

Sixth Term	Credits
Discipline Studies Science/Math/Computer Science	3-5
Elective	4
Elective	4
Elective	4
Credits	15-17
Total Credits	90-106

Manufacturing Technology

Industrial manufacturing is a diverse sector closely connected with engineering and industrial design. COCC's manufacturing programs train students for immediate employment in central Oregon industry, provides continuing skills training for employees of local industry in a format designed for working adults, and provides customized skills training at the request of local employers.

<https://www.cocc.edu/programs/manufacturing-technology/> (<https://www.cocc.edu/programs/manufacturing-technology/default.aspx>)

Contact:

Joseph Huddleston
541-504-2937
Redmond Campus, Building 3, Room #313A

Department: Natural and Industrial Resources
Department Chair: Paula Simone

Programs

Career and Technical Education

- CNC Machining - Two Year Certificate of Completion (CC2) (p. 215)
- Industrial Maintenance - Two Year Certificate of Completion (CC2) (p. 217)
- Manual Machining - Two Year Certificate of Completion (CC2) (p. 218)
- Manufacturing Technician - Career Pathway Certificate of Completion (CPCC) - Pending Approval (p. 219)
- Manufacturing Technology - Associate of Applied Science (AAS) (p. 220)

- Manufacturing Technology I - One Year Certificate of Completion (CC1) (p. 222)
- Manufacturing Technology II - Two Year Certificate of Completion (CC2) (p. 223)
- Quality Assurance - Two Year Certificate of Completion (CC2) (p. 224)
- Welding - Associate of Applied Science (AAS) - Pending Approval (p. 226)
- Welding - One Year Certificate of Completion (CC1) - Pending Approval (p. 228)
- Welding Technician- Career Pathway Certificate of Completion (CPCC) - Pending Approval (p. 229)

Courses

MFG 100 MFG Orientation (1 Credit)

Provides new MATC students with the required information before participating in self-directed learning at MATC. Includes understanding MATC procedures, safety, manufacturing careers, introduction to lean manufacturing and computer login procedures. P/NP grading.

MFG 101 Blueprint Reading (3 Credits)

Prerequisites with concurrency: MTH 020 or higher or minimum placement into MTH 060/085.

Provides student with training to read and interpret various types of industrial blueprints used in manufacturing/fabrication. Includes interpretation of line types, geometric tolerancing and dimensioning, surface finish callouts, auxiliary views and orthographic projection.

MFG 102 Blueprint Reading Sheet Metal (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Provides student with training to read and interpret various types of sheet metal blueprints. Covers line and print development, sheet metal layout, pattern drafting and bend allowances, maximum utilization of material, identification of sheet metal types and grades, correct use of sheet metal for the application and sheet metal bend and shear strengths.

MFG 103 Welding Technology I (4 Credits)

Recommended preparation: MFG 100.

First course in a three-course sequence focused on introductory level skills used in structural plate welding in accordance to AWS D1.1 Structural Steel Welding code. Introduces basic welding processes, safety, nomenclature, and equipment operation for introduction to perform 1F and 2F weldments using shielded metal arc welding (SMAW) welding and gas metal arc welding (GMAW) on mild steel.

MFG 105 Welding Technology II (4 Credits)

Prerequisites: MFG 103.

Recommended preparation: MFG 100.

Second course in a three-course sequence focused on introductory level skills used in structural plate welding in accordance to AWS D1.1 Structural Steel Welding code. Introduces intermediate welding processes, safety, nomenclature, and equipment operation for the advancement of more difficult weldments in the 3F and 4F position using shielded metal arc welding (SMAW) and gas metal arc welding (GMAW) on mild steel.

MFG 107 Welding Technology III (4 Credits)

Prerequisites: instructor approval.

Prerequisites with concurrency: MFG 105.

Final course in a three-course sequence focused on introductory level skills used in structural plate welding in accordance to AWS D1.1 Structural Steel Welding code. Advancing to more difficult weld joints such as 1G and 2G V-groove butt joint on plate using the SMAW and GMAW process and destructive bend test. Perform outside corner joints in all positions. Introduces the GTAW process in 1F and 2F positions on mild steel and aluminum.

MFG 109 Lean Practices (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Lean practices are methods used to eliminate waste in any process to which they are applied. This course provides students with an understanding of lean practices commonly used in industry including: value stream mapping, standardized work, 5S, structured problem solving, visual factory, Kanban/pull systems other lean tools.

MFG 110 Manufacturing Processes I (4 Credits)

Recommended preparation: MFG 100.

Introduces material removal operations emphasizing safe operational practices. Includes basic part layout, hand tools, drill press, bandsaw, manual milling, and manual lathe processes with an emphasis on production speeds and feeds.

MFG 112 Manufacturing Processes II (3 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Continued student proficiency development in machining operation including speed and feed calculations, milling machine and lathe practice.

MFG 114 Manufacturing Processes III (3 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Final course in the basic manufacturing processes series. Continued student proficiency development in the operation of basic machine tools, introduction to computer numerical control programming and operations, and a capstone project to demonstrate machining proficiency.

MFG 115 Design Processes I (4 Credits)

Recommended preparation: CIS 070 or CIS 120.

Introduces solid modeling software (CAD) used in design and manufacturing. Includes practical applications using the software to capture design intent through part development and to create assemblies using these parts. Adheres to engineering and manufacturing standards and formats.

MFG 116 Manufacturing Electrical Systems (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Studies electrical circuitry and components used in manufacturing applications. Includes introductory AC/DC electrical circuit construction and Ohm's Law.

MFG 118 Fluid Power Systems I (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Introductory fluid power class. Includes single/double-acting cylinder operations, directional control valve operations, fluid power symbols and the creating of operational hydraulic and pneumatic circuits.

MFG 119 Manufacturing Design and Drafting Techniques (4 Credits)**Recommended preparation:** CIS 070 or CIS 120.

Introduces solid modeling software (CAD) used in design and manufacturing. Includes practical applications using the software to capture design intent through part development and to create assemblies using these parts. Adheres to engineering and manufacturing standards and formats.

MFG 119M Mechanical Drawing Techniques (4 Credits)

Introduces Mechanical Drawing Techniques used in design and manufacturing. Includes practical applications using drafting techniques to capture design intent through part development and to create assemblies using these parts. Adheres to engineering and manufacturing standards and formats.

MFG 133 Quality Assurance (3 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

An introductory quality control course that includes precision and semi-precision measuring, digital measuring tool operations, measuring practice using digital gauges, micrometers, depth gauge and height gauge measuring tools. The course also includes an introduction to statistical process control and pneumatic gauging topics.

MFG 160 Materials Engineering (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

A continuation of Quality Assurance topics focused on materials. Includes shear, hardness, tensile and compression testing and other material analyzing techniques.

MFG 188 Special Studies: Manufacturing Technology (1-4 Credits)

Explores topics of current interest in the discipline.

MFG 199 Selected Topics: Manufacturing (1-3 Credits)**Prerequisites:** instructor approval.

This course is in development.

MFG 201 Bench Work (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Using hand tools, files, hacksaw, chisels and coated abrasives. Includes shop safety, hand tapping, thread measurement, arbor press operations, micrometer and vernier caliper reading.

MFG 202 Metals Preparation (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Bandsaw, cold saw auto stop operations, ironworker hole punching and abrasive power tool operations. Includes safety, profile cutting, shearing, material identification, blade welding, blade selection and offhand grinding operations.

MFG 203 Layout (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Semi-precision and precision layout practices. Includes height gauge operations, surface plate set-ups, bolt circle layout, and the use of hand and power tools to produce accurate workpiece profiles.

MFG 205 Drill Press (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Drill press operations training. Includes safety, machine nomenclature, measuring and sharpening drills, machine set-up, cutting tool selection, magnetic based drill, electric drill motor and radial arm drill operations.

MFG 206 Surface Grinding I (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Horizontal grinding machine operations. Includes machine nomenclature, chucking methods, wheel dressing, workpiece setups and cutting operations.

MFG 210 Vertical Milling (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Vertical milling machine operations. Includes safety, work holding, table set-ups, power feeds, digital read-out operation, cutter selections, climb and conventional cutting and spindle speed changes.

MFG 211 CNC Mill Operator (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Computer numerical control machining center operator training. Includes safety, machine maintenance, tool offsets, controller editing and operations, cutting tool set-ups, carbide insert and holders and part running.

MFG 213 CNC Turning Operator (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Computer numerical control turning center operator training. Includes safety, machine maintenance, coordinate systems, tool length offsets, controller editing and operations, overrides, tool set-ups and loading, carbide insert and holder selections, tool vectors and part running.

MFG 214 Lathe Operator I (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Introductory manual lathe operations training. Includes safety, machine maintenance, quick-change tooling, chuck set-ups, compound taper cutting, general turning and drilling operations.

MFG 216 Lathe Operator II (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Advanced lathe operations training. Four-jaw chucking, taper turning, carbide cutting tool selections, boring, single point threading, thread measurement and other precision turning operations.

MFG 230 CNC Programming Mill (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Programming computer numerical control mills and machining centers. Includes G & M programming, canned cycles, subroutines, profile milling, cutter diameter compensation, part proofing.

MFG 232 CNC Programming Lathe (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Programming computer numerical control turning center. Includes G & M manual programming, canned cycles, subroutines, profile shaping, TNR, tool vectors, cutter selection and part proofing.

MFG 234 CAD/CAM Mill (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

CAD/CAM operations related to programming a computer numerical control machining center. Includes drilling 2 1/2 D and 3-D milling operations using wire frame and solids model geometry. A student considering this course should be familiar with CNC milling machine operations and G & M programming.

MFG 236 CAD/CAM Lathe (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

CAD/CAM operations related to programming computer numerical control turning centers. Includes drilling, grooving and threading operations using wire frame and solids model geometry. A student considering this course should be familiar with CNC lathe operations and G & M programming.

MFG 238 Optical Comparator (1 Credit)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Optical comparator operations. Includes operation of H-14 metrology controller, stage set-up and fixturing, inspection of rectangular and round workpieces.

MFG 239 Coordinate Measurement Machine (1 Credit)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Coordinate measuring machine operations. Includes establishment of part coordinate systems, touch probe calibration procedures and measuring workpiece geometry.

MFG 241 Electric Motor Control (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Peripheral devices used to control motors. Includes study of components used to control industrial motors and automated systems.

MFG 242 Programmable Logic Controllers I (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Introduction to programmable logic controller programming. Includes ladder logic, sealing circuits and event sequencing.

MFG 243 Industrial Sensors (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Sensor applications. Includes study of mechanical, electronic and proximity sensor applications found in a typical manufacturing environment.

MFG 244 Programmable Logic Controllers II (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Continuation of Programmable Logic Controller training. Includes advanced programming problems, discrete IO interfacing, PLC timers and counters.

MFG 245 Electrical Control/Fluid Power (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Electrical control of pneumatic and hydraulic circuits. Includes pressure valves, sensors, interfacing with PLC, control sequencing, timing and circuit design.

MFG 246 Mechanical Troubleshooting (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

This course is an overview of mechanical drive systems and safety, key fasteners, power transmission systems, lubrication concepts, plain bearings, ball bearings, roller bearings, and gaskets and seals.

MFG 250 Additive Manufacturing (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100 and CIS135S1.

This course provides students with a basic understanding of Additive Manufacturing concepts including various processes used in rapid prototyping. Students will be able to design and create sample parts using a 3-D printing process.

MFG 254 Manufacturing Jigs and Fixtures (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Jig and fixture design practices. Includes clamps, locators, degrees of freedom, radial and conical locators, templates, automated clamping and modular fixturing.

MFG 262 Welding Inspection/Quality Control (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Studies quality control issues related to weld joint inspection. Includes student exposure to visual and nondestructive inspection techniques that are utilized by welders and inspectors to interpret and monitor AWS quality standards.

MFG 263A Welding Inspection I (3 Credits)**Prerequisites:** MFG 271; MFG 272; MFG 281; and MFG 282.

First of two courses based on gaining the knowledge to be prepared for the Certified Welding Inspector (CWI) Exam, which is administered by the American Welding Society once the qualification criteria has been achieved. This course focuses on the CWI part A (Body of Knowledge) exam; it is a comprehensive overview of the fundamental concepts and principles every CWI should know.

MFG 263B Welding Inspection II (3 Credits)**Prerequisites:** MFG 263A.

Second and final of two courses based on gaining the knowledge to be prepared for the Certified Welding Inspector (CWI) Exam, which is administered by the American Welding Society once the qualification criteria has been achieved. This course is focused on the CWI part B (Practical: hands-on examination), and PART C (Code Book Applications) exam. This course develops student skill with weld inspection procedures, welding codes and standards, destructive and non-destructive inspection techniques.

MFG 264 Automated Cutting (3 Credits)**Prerequisites:** MFG 119 or MFG 119M.

Utilize CAD tools to lay out and generate code for efficiently cutting material using a CNC plasma table or other 2D CNC tool. Includes design, tool set-up, tool maintenance, code editing, and safe operation of tools to create a final product.

MFG 266 Manufacturing Cost Estimation (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Cost estimation techniques used in the analysis and planning of manufacturing projects. Includes software estimates, manufacturing costs, standard vs. actual costs, fixturing and welding-related topics.

MFG 267 Oxygen-Fuel and Plasma Cutting (3 Credits)**Prerequisites:** MFG 100 and (MTH 020 or higher or minimum placement into MTH 060/MTH 085).

Gas torch, air carbon arc and plasma gas cutting. Includes torch set-up and maintenance, flame setting, diagnostics, track torch operations, circle cutting and carbon arc scarfing practice.

MFG 271 SMAW I (3 Credits)**Prerequisites:** MFG 107.

Includes SMAW butt welding of mild steel plate in all positions with and without backing as well as various configurations and progressions.

MFG 272 GMAW I (3 Credits)**Prerequisites:** MFG 107.

Includes GMAW butt welding of mild steel plate in all positions with and without backing as well as various configurations and progressions.

MFG 273 SMAW II (3 Credits)**Prerequisites:** MFG 271.

Includes SMAW welding complete joint penetration welds on 2" and 6" pipe in 2G and 5G positions.

MFG 274 GMAW II (3 Credits)**Prerequisites:** MFG 272.

Includes GMAW welding complete joint penetration welds on 2" and 6" pipe in 2G and 5G positions.

MFG 275 SMAW III (3 Credits)**Prerequisites:** MFG 273.

Includes SMAW welding complete joint penetration welds of 2" and 6" pipe in 6G, qualification test practice, and construction of saddle tees.

MFG 276 GMAW III (3 Credits)**Prerequisites:** MFG 274.

Includes GMAW welding complete joint penetration welds of 2" and 6" pipe in 6G, qualification test practice, and construction of saddle tees.

MFG 280 Co-op Work Experience Manufacturing (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** MFG 100.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

MFG 281 GTAW I (3 Credits)**Prerequisites:** MFG 107.

Includes GTAW butt joint weldments with mild steel and stainless steel sheet along with mild steel and aluminum plate in various positions.

MFG 282 FCAW I (3 Credits)**Prerequisites:** MFG 107.

Includes FCAW butt welding of mild steel plate in all positions with and without backing as well as various configurations and progressions.

MFG 283 GTAW II (3 Credits)**Prerequisites:** MFG 281.

GTAW welding complete joint penetration welds on 2" and 6" pipe in 2G and 5G positions.

MFG 284 FCAW II (3 Credits)**Prerequisites:** MFG 282.

Includes FCAW welding complete joint penetration welds on 2" and 6" pipe in 2G and 5G positions.

MFG 285 GTAW III (3 Credits)**Prerequisites:** MFG 283.**Recommended preparation:** MFG 100.

GTAW welding complete joint penetration welds of 2" and 6" pipe in 6G position.

MFG 286 FCAW III (3 Credits)**Prerequisites:** MFG 284.

Includes FCAW welding complete joint penetration welds of 2" and 6" pipe in 6G, qualification test practice, and construction of saddle tees.

MFG 287 CNC Press Brake and Shearing (3 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Covers safety and operation of equipment utilized in parting, forming and fabricating sheet metal.

MFG 288 Industrial Fabrication (3 Credits)**Prerequisites with concurrency:** MFG 273; MFG 274; MFG 283; and MFG 284.

Includes metal fabrication focusing on blueprint interpretation, proper fit techniques, length and width allowances, welding processes, utilization of jigs and fixtures, and performance evaluation.

MFG 289 Material Handling-Fork Lift Safety (1 Credit)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Focuses on identifying and ordering sheet metal materials plus the safe storage and handling of those materials. Includes OSHA safety regulations and fork lift operation and safety.

MFG 290 Certification Test Preparation AWS I (1 Credit)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Testing materials preparation for Level One Weld Certification Testing.

Includes materials test sample preparation, set-up, testing, grinding samples and evaluation. P/NP grading.

MFG 291 Certification Test Preparation NIMS I (1 Credit)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Testing materials preparation for Level One NIMS Certification Testing.

Includes materials test workpiece preparation, set-up, testing and evaluation activities. P/NP grading.

MFG 298 Independent Study: Manufacturing (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended Preparation:** Prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

CNC Machining - Two Year Certificate of Completion (CC2)

Description

The CNC Machining Two Year Certificate of Completion program is a self-directed, outcome-based program designed to prepare students for technician-level employment in manufacturing environments using CNC equipment.

Learning Outcomes

1. Demonstrate appropriate basic technical knowledge and practical skills necessary for entry-level employment in Computer Numeric Control Machining including but not limited to:
 - a. Demonstrate the ability to safely perform routine workplace tasks in a manufacturing environment on advanced machinery.
 - b. Demonstrate the ability to perform routine service of typical CNC machinery, tooling, equipment, and software applications.
 - c. Demonstrate entry-level technical CNC machining skills consistent with industry/manufacture standards.
 - d. Demonstrate the ability to inspect, evaluate, and document manufactured component within compliance of industry specifications or code by utilization of software applications.

- e. Demonstrate the acquisition of workplace human dimension skills, computer aided drafting (CAD), computer aided machining (CAM), and applicable computer software applications.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED
 - Minimum placement scores resulting in MTH 020 Pre-Algebra placement or prior completion of MTH 010 Developmental Mathematics or higher ("C" or higher)
 - Successful completion of or current enrollment in MATC new-student orientation class MFG 100 MFG Orientation
 - Recommended completion of CIS 070 Introduction to Computers: Windows or equivalent skills

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Welding personal protective equipment and tools, approximately \$400.

Enrollment Fees

- Fees on specific MFG courses (\$410 total).

Course Requirements

Course	Title	Credits
Core Courses ¹		
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 112	Manufacturing Processes II	3
MFG 114	Manufacturing Processes III	3
MFG 115	Design Processes I	4
MFG 133	Quality Assurance	3
MFG 202	Metals Preparation	2
MFG 211	CNC Mill Operator	2
MFG 213	CNC Turning Operator	2
MFG 230	CNC Programming Mill	2
MFG 232	CNC Programming Lathe	2
MFG 234	CAD/CAM Mill	2
MFG 236	CAD/CAM Lathe	2
Other Required Courses		
CIS 070	Intro to Computers: Windows (or higher)	2
MTH 085	Technical Mathematics I (or higher)	4
WR 060	Rhetoric/Critical Thinking I (or higher)	4
Total Credits		49

¹ Most manufacturing courses carry a \$25-\$75 fee to cover software or lab materials (see class schedule for individual courses and fees).

Advising Notes

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - None

Sample Plan

First Term		Credits
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 202	Metals Preparation	2
MTH 085	Technical Mathematics I (higher)	4
Credits		18
Second Term		
MFG 112	Manufacturing Processes II	3
MFG 115	Design Processes I	4
MFG 133	Quality Assurance	3
WR 060	Rhetoric/Critical Thinking I (higher)	4
Credits		14
Third Term		
CIS 070	Intro to Computers: Windows (higher)	2
MFG 114	Manufacturing Processes III	3
MFG 211	CNC Mill Operator	2
MFG 213	CNC Turning Operator	2
Credits		9
Fourth Term		
MFG 230	CNC Programming Mill	2
MFG 232	CNC Programming Lathe	2
MFG 234	CAD/CAM Mill	2

MFG 236	CAD/CAM Lathe	2
	Credits	8
	Total Credits	49

Industrial Maintenance - Two Year Certificate of Completion (CC2)

Description

The Industrial Maintenance Two Year Certificate of Completion program is a self-directed, outcome-based program designed to prepare students for technician-level employment in industrial maintenance in a manufacturing environment.

Learning Outcomes

1. Demonstrate appropriate basic technical knowledge and practical skills necessary for entry-level employment in the Industrial Maintenance field, including but not limited to:
 - a. Demonstrate the ability to safely perform routine workplace tasks in an industrial environment.
 - b. Demonstrate the ability to perform routine service of typical machinery and equipment.
 - c. Demonstrate entry level technical maintenance skills consistent with industry, and manufacture standard
 - d. Demonstrate the ability to inspect and evaluate maintenance evaluations, and inspections within compliance of industry specifications or code.
 - e. Demonstrate the acquisition of workplace human dimension skills.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in MTH 020 Pre-Algebra placement or prior completion of MTH 010 Developmental Mathematics or higher.
 - Successful completion of or current enrollment in MATC new-student orientation class MFG 100 MFG Orientation
 - Recommended completion of CIS 070 Introduction to Computers: Windows or equivalent skills.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Welding personal protective equipment and tools, approximately \$400.

Enrollment Fees

- Fees on specific MFG courses (\$150 total).

Course Requirements

Course	Title	Credits
Core Courses ¹		
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 102	Blueprint Reading Sheet Metal	2
MFG 103	Welding Technology I	4
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	4
MFG 116	Manufacturing Electrical Systems	2
MFG 118	Fluid Power Systems I	2
MFG 160	Materials Engineering	2
MFG 241	Electric Motor Control	2
MFG 242	Programmable Logic Controllers I	2
MFG 243	Industrial Sensors	2
MFG 244	Programmable Logic Controllers II	2
MFG 245	Electrical Control/Fluid Power	2
MFG 246	Mechanical Troubleshooting	2
MFG 267	Oxygen-Fuel and Plasma Cutting	3
MFG 289	Material Handling-Fork Lift Safety	1
Other Required Courses		
CIS 070	Intro to Computers: Windows (or higher)	2
MTH 085	Technical Mathematics I (or higher)	4
WR 060	Rhetoric/Critical Thinking I (or higher)	4
Total Credits		48

¹ Most manufacturing courses carry a \$25-\$75 fee to cover software or lab materials (see class schedule for individual courses and fees).

Advising Notes

Nearly all manufacturing courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The Manufacturing and Applied Technology Center (MATC) hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

This two year certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.

- All courses in the program must be completed with a grade of C or higher.

- Demonstrate the ability to inspect and evaluate machined component by use of traditional and new technology inspection tools within compliance of industry specifications or code.
- Demonstrate the acquisition of workplace human dimension skills.

Sample Plan

First Term		Credits
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	4
MTH 085	Technical Mathematics I (higher)	4
Credits		18
Second Term		
MFG 102	Blueprint Reading Sheet Metal	2
MFG 116	Manufacturing Electrical Systems	2
MFG 118	Fluid Power Systems I	2
MFG 160	Materials Engineering	2
WR 060	Rhetoric/Critical Thinking I (higher)	4
Credits		12
Third Term		
MFG 241	Electric Motor Control	2
MFG 242	Programmable Logic Controllers I	2
MFG 243	Industrial Sensors	2
MFG 245	Electrical Control/Fluid Power	2
MFG 267	Oxygen-Fuel and Plasma Cutting	3
MFG 289	Material Handling-Fork Lift Safety	1
Credits		12
Fourth Term		
CIS 070	Intro to Computers: Windows (higher)	2
MFG 244	Programmable Logic Controllers II	2
MFG 246	Mechanical Troubleshooting	2
Credits		6
Total Credits		48

Manual Machining - Two Year Certificate of Completion (CC2)

Description

The Manual Machining Two Year Certificate of Completion program is a self-directed, outcome-based program designed to prepare students for technician-level employment in manufacturing environments using manual machining equipment.

Learning Outcomes

- Demonstrate appropriate basic technical knowledge and practical skills necessary for entry-level employment in Manual Machining including but not limited to:
 - Demonstrate the ability to safely perform routine workplace tasks in a traditional manual machining environment.
 - Demonstrate the ability to perform routine service of typical manual machinery, tooling and equipment.
 - Demonstrate entry-level technical manual machining skills consistent with industry standards.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in MTH 020 Pre-Algebra placement or prior completion of MTH 010 Developmental Mathematics.
 - Successful completion of or current enrollment in MATC new-student orientation class MFG 100 MFG Orientation.
 - Recommended completion of CIS 070 Introduction to Computers: Windows or equivalent skills.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Welding personal protective equipment and tools, approximately \$400.

Enrollment Fees

- Fees on specific MFG courses (\$450 total).

Course Requirements

Course	Title	Credits
Core Courses ¹		
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 112	Manufacturing Processes II	3
MFG 114	Manufacturing Processes III	3
MFG 115	Design Processes I	4
MFG 133	Quality Assurance	3
MFG 202	Metals Preparation	2
MFG 203	Layout	2
MFG 205	Drill Press	2
MFG 210	Vertical Milling	2
MFG 214	Lathe Operator I	2
MFG 216	Lathe Operator II	2
Other Required Courses		
CIS 070	Intro to Computers: Windows (or higher)	2
MTH 085	Technical Mathematics I (or higher)	4
WR 060	Rhetoric/Critical Thinking I (or higher)	4
Total Credits		47

¹ Most manufacturing courses carry a \$25-\$75 fee to cover software or lab materials (see class schedule for individual courses and fees).

Advising Notes

Nearly all MFG courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The Manufacturing and Applied Technology Center (MATC) hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

This two year certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Prior to starting any manufacturing program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 202	Metals Preparation	2
MTH 085	Technical Mathematics I (higher)	4
	Credits	18
Second Term		
MFG 112	Manufacturing Processes II	3
MFG 115	Design Processes I	4
MFG 133	Quality Assurance	3
WR 060	Rhetoric/Critical Thinking I (higher)	4
	Credits	14
Third Term		
MFG 114	Manufacturing Processes III	3
MFG 203	Layout	2
MFG 205	Drill Press	2
MFG 210	Vertical Milling	2
MFG 214	Lathe Operator I	2
	Credits	11
Fourth Term		
CIS 070	Intro to Computers: Windows (higher)	2
MFG 216	Lathe Operator II	2
	Credits	4
	Total Credits	47

Manufacturing Technician - Career Pathway Certificate of Completion (CPCC) - Pending Approval

Description

The Manufacturing Technician Career Pathway Certificate provides entry-level skills to students in various manufacturing trades.

Learning Outcomes

- Demonstrate the ability to safely perform routine workplace tasks in a manufacturing/fabrication environment.
- Demonstrate introductory level skills with the standard tools found in a manufacturing/fabrication environment. (blueprint reading, engine lathe, vertical mill, SMAW, GMAW, CAD/3D modeling)

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in MTH 020 Pre-Algebra placement.
 - Successful completion of, or concurrent enrollment in MFG 100 MFG Orientation.
 - Skills equivalent to CIS 070 Introduction to Computers: Windows.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Welding personal protective equipment and tools: \$250.
- Textbook/Coursepack: \$20

Enrollment Fees

- Fees on specific MFG courses: \$200

Course Requirements

Course	Title	Credits
Core Courses		
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 119	MFG Design/Drafting Techniques	4
	or MFG 119M Mechanical Drawing Techniques	
Total Credits		15

Advising Notes

Nearly all MFG courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than many other COCC programs.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is

identified for them. This is particularly important if developmental work is needed.

This career pathway certificate is designed for students planning to enter the manufacturing workforce upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Prior to starting any manufacturing program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

Most of the skills development courses in this program require 2 hours a week in the welding lab for each credit. This normally means students will need to schedule 24 hrs or more each week in the lab. The welding lab is staffed M-Th 9 am to 8 pm (40 hrs/week).

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

First Term		Credits
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 119 or MFG 119M	MFG Design/Drafting Techniques Mechanical Drawing Techniques	4
Credits		15
Total Credits		15

Manufacturing Technology - Associate of Applied Science (AAS)

Description

The Manufacturing Technology Associate of Applied Science (AAS) degree is designed to prepare students for technician-level employment in a variety of manufacturing environments.

Learning Outcomes

1. Communicate effectively, both orally and in writing, using appropriate technical language. Perform group problem solving, decision-making and conflict management activities to function effectively in society.
2. Select and apply proper critical thinking techniques that are utilized in most manufacturing environments including but not limited to physical skills, business ethics, and applicable industry specifications and codes.
3. Correctly use the math and computer techniques and skills necessary for employment in Manufacturing.
4. Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Manufacturing including but not limited to:
 - a. Demonstrate the ability to perform routine manufacturing workplace tasks safely.

- b. Demonstrate the ability to perform routine service of typical machinery and equipment.
 - c. Demonstrate entry level technical manufacturing skills consistent with industry standards.
 - d. Demonstrate the ability to inspect and evaluate manufactured component within compliance of industry specifications or code.
 - e. Demonstrate the acquisition of workplace human dimension skills.
5. Demonstrate advanced technical skills and knowledge within selected advanced manufacturing specialties.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High School Diploma or GED
 - Minimum placement scores resulting in MTH 020 Pre-Algebra placement or prior completion of MTH 010 Developmental Mathematics or higher.
 - Successful completion of or current enrollment in MATC new-student orientation class MFG 100 MFG Orientation.
 - Recommended completion of CIS 070 Introduction to Computers: Windows or equivalent skills.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Welding personal protective equipment and tools, approximately \$400.

Enrollment Fees

- Fees on specific MFG courses (estimated \$1100 total).

Course Requirements

Course	Title	Credits
Core Requirements ¹		
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 105	Welding Technology II	4
MFG 107	Welding Technology III	4
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	4
MFG 112	Manufacturing Processes II	3
MFG 114	Manufacturing Processes III	3
MFG 115	Design Processes I	4
MFG 116	Manufacturing Electrical Systems	2
MFG 118	Fluid Power Systems I	2
MFG 133	Quality Assurance	3
MFG 160	Materials Engineering	2
MFG 280	CWE Manufacturing	3
Manufacturing Electives: ¹		
Choose 38 elective credits from the list below.		38

CIS 135S1, MFG 102, MFG 201, MFG 202, MFG 203, MFG 205, MFG 210, MFG 211, MFG 213, MFG 214, MFG 216, MFG 230, MFG 232, MFG 234, MFG 236, MFG 238, MFG 239, MFG 241, MFG 242, MFG 243, MFG 244, MFG 245, MFG 246, MFG 250, MFG 254, MFG 262, MFG 264, MFG 266, MFG 267, MFG 271, MFG 272, MFG 273, MFG 274, MFG 275, MFG 276, MFG 281, MFG 282, MFG 283, MFG 284, MFG 285, MFG 286, MFG 287, MFG 288, MFG 289, MFG 290, MFG 291

Other Requirements

BA 285	Business Human Relations	3
or PSY 101	Applied Psychology	
or COMM 218	Interpersonal Communication	
CIS 070	Intro to Computers: Windows (or higher)	2
CIS 120	Computer Concepts (or higher)	4
COMM 219	Small Group Communication	4
COMM 250	Listening	1
or COMM 252	Team Skills	
or COMM 253	Conflict Management	
HHP 252A	Fitness/First Aid	3
MTH 085	Technical Mathematics I (or higher)	4
WR 060	Rhetoric/Critical Thinking I (or higher)	4
Total Credits		107

¹ Most manufacturing courses carry a \$25-\$75 fee to cover software or lab materials (see class schedule for individual courses and fees).

Advising Notes

Nearly all MFG courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The Manufacturing and Applied Technology Center (MATC) hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

The AAS is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Prior to starting any manufacturing program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
CIS 070	Intro to Computers: Windows	2
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MTH 085	Technical Mathematics I (higher)	4
Credits		18
Second Term		
MFG 105	Welding Technology II	4
MFG 109	Lean Practices	2
MFG 112	Manufacturing Processes II	3
MFG 115	Design Processes I	4
MFG 116	Manufacturing Electrical Systems	2
WR 060	Rhetoric/Critical Thinking I (higher)	4
Credits		19
Third Term		
BA 285	Business Human Relations	3
or PSY 101	Applied Psychology	
or COMM 218	Interpersonal Communication	
COMM 250	Listening	1
or COMM 252	Team Skills	
or COMM 253	Conflict Management	
MFG 107	Welding Technology III	4
MFG 114	Manufacturing Processes III	3
MFG 118	Fluid Power Systems I	2
MFG 133	Quality Assurance	3
MFG 160	Materials Engineering	2
Credits		18
Fourth Term		
CIS 120	Computer Concepts (higher)	4
MFG Elective		2
MFG Elective		2
MFG Elective		2
MFG Elective		2
MFG Elective		2
MFG Elective		2
MFG Elective		1
Credits		17
Fifth Term		
COMM 219	Small Group Communication	4
MFG Elective		2
MFG Elective		2
MFG Elective		2
MFG Elective		2
MFG Elective		2
MFG Elective		2
MFG Elective		1
Credits		17
Sixth Term		
HHP 252A	Fitness/First Aid	3

MFG 280	CWE Manufacturing	3
MFG Elective		2
MFG Elective		2
MFG Elective		2
MFG Elective		2
MFG Elective		2
MFG Elective		2
Credits		18
Total Credits		107

Manufacturing Technology I - One Year Certificate of Completion (CC1)

Description

The Manufacturing Technology I One Year Certificate of Completion is designed to prepare students for technician-level employment in a variety of manufacturing environments.

Learning Outcomes

1. Demonstrate appropriate basic technical knowledge and practical skills necessary for entry-level employment in Manufacturing including but not limited to:
 - a. Demonstrate the ability to safely perform routine workplace tasks in a manufacturing environment.
 - b. Demonstrate the ability to perform routine service of typical machinery and equipment.
 - c. Demonstrate entry-level technical manufacturing skills consistent with industry standards.
 - d. Demonstrate the ability to inspect and evaluate manufactured component within compliance of industry specifications or code.
 - e. Demonstrate the acquisition of workplace human dimension skills.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in MTH 020 Pre-Algebra placement or prior completion of MTH 010 Developmental Mathematics or higher.
 - Successful completion of or current enrollment in MATC new-student orientation class MFG 100 MFG Orientation.
 - Recommended completion of CIS 070 Introduction to Computers: Windows or equivalent skills.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Welding personal protective equipment and tools, approximately \$400.

Enrollment Fees

- Fees on specific MFG courses (\$740 total).

Course Requirements

Course	Title	Credits
Core Courses ¹		
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 105	Welding Technology II	4
MFG 107	Welding Technology III	4
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	4
MFG 112	Manufacturing Processes II	3
MFG 114	Manufacturing Processes III	3
MFG 115	Design Processes I	4
MFG 116	Manufacturing Electrical Systems	2
MFG 118	Fluid Power Systems I	2
MFG 133	Quality Assurance	3
MFG 160	Materials Engineering	2
Other Required Courses		
BA 285	Business Human Relations	3
or PSY 101	Applied Psychology	
or COMM 218	Interpersonal Communication	
CIS 070	Intro to Computers: Windows (or higher)	2
MTH 085	Technical Mathematics I (or higher)	4
WR 060	Rhetoric/Critical Thinking I (or higher)	4
Total Credits		54

¹ Most manufacturing courses carry a \$25-\$75 fee to cover software or lab materials (see class schedule for individual courses and fees).

Advising Notes

Nearly all MFG courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The Manufacturing and Applied Technology Center (MATC) hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

This one year certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.

- All courses in the program must be completed with a grade of C or higher.

- e. Demonstrate the acquisition of workplace human dimension skills, including communication and appropriate workplace behavior.

2. Demonstrate advanced and more in depth technical knowledge and skills while studying more advanced disciplines of Manufacturing.

Sample Plan

First Term		Credits
CIS 070	Intro to Computers: Windows	2
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MTH 085	Technical Mathematics I (higher)	4
Credits		18
Second Term		
MFG 105	Welding Technology II	4
MFG 109	Lean Practices	2
MFG 112	Manufacturing Processes II	3
MFG 115	Design Processes I	4
MFG 116	Manufacturing Electrical Systems	2
WR 060	Rhetoric/Critical Thinking I (higher)	4
Credits		19
Third Term		
BA 285 or PSY 101 or COMM 218	Business Human Relations Applied Psychology Interpersonal Communication	3
MFG 107	Welding Technology III	4
MFG 114	Manufacturing Processes III	3
MFG 118	Fluid Power Systems I	2
MFG 133	Quality Assurance	3
MFG 160	Materials Engineering	2
Credits		17
Total Credits		54

Manufacturing Technology II - Two Year Certificate of Completion (CC2)

Description

The Manufacturing Technology II Two Year Certificate of Completion program is a self-directed, outcome-based program designed to prepare students for technician-level employment in a variety of manufacturing environments.

Learning Outcomes

1. Demonstrate appropriate basic technical knowledge and practical skills necessary for employment in Manufacturing including but not limited to:
 - a. Demonstrate the ability to perform routine manufacturing workplace tasks safely.
 - b. Demonstrate the ability to perform routine service of typical machinery and equipment.
 - c. Demonstrate entry-level technical manufacturing skills consistent with industry standards.
 - d. Demonstrate the ability to inspect and evaluate manufactured component within compliance of industry specifications or code.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in MTH 020 Pre-Algebra placement or prior completion of MTH 010 Developmental Mathematics.
 - Successful completion of or current enrollment in MATC new-student orientation class MFG 100 MFG Orientation.
 - Recommended completion of CIS 070 Introduction to Computers: Windows or equivalent skills.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Welding personal protective equipment and tools, approximately \$400.

Enrollment Fees

- Fees on specific MFG courses (estimate \$1100 total).

Course Requirements

Course	Title	Credits
Core Courses ¹		
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 105	Welding Technology II	4
MFG 107	Welding Technology III	4
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	4
MFG 112	Manufacturing Processes II	3
MFG 114	Manufacturing Processes III	3
MFG 115	Design Processes I	4
MFG 116	Manufacturing Electrical Systems	2
MFG 118	Fluid Power Systems I	2
MFG 133	Quality Assurance	3
MFG 160	Materials Engineering	2
Manufacturing Electives: ¹		
Choose at least 38 credits from the list below.		38

CIS 135S1, MFG 102, MFG 201, MFG 202, MFG 203, MFG 205, MFG 210, MFG 211, MFG 213, MFG 214, MFG 216, MFG 230, MFG 232, MFG 234, MFG 236, MFG 238, MFG 239, MFG 241, MFG 242, MFG 243, MFG 244, MFG 245, MFG 246, MFG 250, MFG 254, MFG 262, MFG 264, MFG 266, MFG 267, MFG 271, MFG 272, MFG 273, MFG 274, MFG 275, MFG 276, MFG 281, MFG 282, MFG 283, MFG 284, MFG 285, MFG 286, MFG 287, MFG 288, MFG 289, MFG 290, MFG 291

Other Required Courses

BA 285	Business Human Relations	3
or PSY 101	Applied Psychology	
or COMM 218	Interpersonal Communication	
CIS 070	Intro to Computers: Windows (or higher)	2
MTH 085	Technical Mathematics I (or higher)	4
WR 060	Rhetoric/Critical Thinking I (or higher)	4
Total Credits		92

¹ Most manufacturing courses carry a \$25-\$75 fee to cover software or lab materials (see class schedule for individual courses and fees).

Advising Notes

Nearly all MFG courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The Manufacturing and Applied Technology Center (MATC) hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

This two year certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Prior to starting any manufacturing program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
CIS 070	Intro to Computers: Windows (higher)	2
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MTH 085	Technical Mathematics I (higher)	4
Credits		18
Second Term		
MFG 105	Welding Technology II	4
MFG 109	Lean Practices	2
MFG 112	Manufacturing Processes II	3
MFG 115	Design Processes I	4
MFG 116	Manufacturing Electrical Systems	2

WR 060	Rhetoric/Critical Thinking I (higher)	4
Credits		19

Third Term

BA 285	Business Human Relations	3
or PSY 101	Applied Psychology	
or COMM 218	Interpersonal Communication	
MFG 107	Welding Technology III	4
MFG 114	Manufacturing Processes III	3
MFG 118	Fluid Power Systems I	2
MFG 133	Quality Assurance	3
MFG 160	Materials Engineering	2
Credits		17

Fourth Term

MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	1	
Credits		13

Fifth Term

MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	1	
Credits		13

Sixth Term

MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
MFG Elective	2	
Credits		12
Total Credits		92

Quality Assurance - Two Year Certificate of Completion (CC2)

Description

The Quality Assurance Two Year Certificate of Completion program is a self-directed, outcome-based program designed to prepare students for technician-level employment in manufacturing in the quality assurance field.

Learning Outcomes

1. Demonstrate appropriate basic technical knowledge and practical skills necessary for entry-level employment in the Quality Assurance field, including but not limited to:

- Demonstrate the ability to safely perform routine workplace tasks in a manufacturing environment.
- Demonstrate the ability to perform routine service, calibration, and inspection of typical machinery and equipment.
- Demonstrate entry-level technical manufacturing skills consistent with industry standards and process improvement.
- Demonstrate the ability to inspect and evaluate manufactured component by use of traditional and new technology inspection tools within compliance of industry specifications or code.
- Demonstrate the acquisition of workplace human dimension skills as well as inspection documentation and reporting forms.

MFG 254	Manufacturing Jigs and Fixtures	2
MFG 262	Welding Inspection/Quality Control	2
Other Required Courses		
CIS 070	Intro to Computers: Windows (or higher)	2
MTH 085	Technical Mathematics I (or higher)	4
WR 060	Rhetoric/Critical Thinking I (or higher)	4
Total Credits		48

¹ Most manufacturing courses carry a \$25-\$75 fee to cover software or lab materials (see class schedule for individual courses and fees).

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in WR 095 Basic Writing II placement or prior completion of WR 060 Rhetoric and Critical Thinking I or higher.
 - Minimum placement scores resulting in MTH 020 Pre-Algebra placement or prior completion of MTH 010 Developmental Mathematics or higher.
 - Successful completion of or current enrollment in MATC new-student orientation class MFG 100 MFG Orientation.
 - Recommended completion of CIS 070 Introduction to Computers: Windows or equivalent skills.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Welding personal protective equipment and tools, approximately \$400.

Enrollment Fees

- Fees on specific MFG courses (\$260 total).

Course Requirements

Course	Title	Credits
Core Courses ¹		
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 102	Blueprint Reading Sheet Metal	2
MFG 103	Welding Technology I	4
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	4
MFG 112	Manufacturing Processes II	3
MFG 115	Design Processes I	4
MFG 133	Quality Assurance	3
MFG 160	Materials Engineering	2
MFG 202	Metals Preparation	2
MFG 203	Layout	2
MFG 238	Optical Comparator	1
MFG 239	Coordinate Measurement Machine	1

Advising Notes

Nearly all MFG courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The Manufacturing and Applied Technology Center (MATC) hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

This two year certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Prior to starting any manufacturing program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 202	Metals Preparation	2
MTH 085	Technical Mathematics I (higher)	4
Credits		18
Second Term		Credits
MFG 112	Manufacturing Processes II	3
MFG 115	Design Processes I	4
MFG 133	Quality Assurance	3
WR 060	Rhetoric/Critical Thinking I (higher)	4
Credits		14
Third Term		Credits
MFG 102	Blueprint Reading Sheet Metal	2

MFG 109	Lean Practices	2
MFG 160	Materials Engineering	2
MFG 203	Layout	2
MFG 238	Optical Comparator	1
MFG 239	Coordinate Measurement Machine	1
	Credits	10
Fourth Term		
CIS 070	Intro to Computers: Windows	2
MFG 254	Manufacturing Jigs and Fixtures	2
MFG 262	Welding Inspection/Quality Control	2
	Credits	6
	Total Credits	48

Welding - Associate of Applied Science (AAS) - Pending Approval

Description

The Welding AAS program at Central Oregon Community College provides training in the following areas:

- SMAW (shielded metal arc welding)
- GTAW (gas tungsten arc welding)
- GMAW (gas metal arc welding)
- FCAW (flux-cored arc welding)
- OAW (oxy-acetylene welding)
- OAC (oxy-acetylene cutting)
- CNC plasma cutting
- Basic fabrication
- Non-destructive testing

The program is structured to provide workforce ready skills, along with hands-on experience in the above specialties. You will receive training in blueprint reading, welding principles, welding metallurgy, and welding inspection.

Learning Outcomes

1. Demonstrate the ability to safely perform routine (advanced/expert) workplace tasks in a welding/fabrication environment.
2. Demonstrate the ability to perform routine service of typical welding and fabrication equipment for advanced/expert level weldments.
3. Perform advanced/expert level welds to industry standards for a range of processes, weldments, and orientations. (SMAW, GMAW, FCAW, GTAW)
4. Apply visual and destructive examination principles and practices in accordance with industry standards for advanced/expert level weldments.
5. Demonstrate the acquisition of workplace (soft) skills. (numerical, communication, interpersonal)

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in MTH 020 Pre-Algebra or prior completion of MTH 010 Developmental Mathematics or higher.
 - Successful completion of, or concurrent enrollment in, MFG 100 MFG Orientation.
 - Recommended completion of CIS 070 Introduction to Computers: Windows or equivalent skills.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required:
 - Welding personal protective equipment and tools, approximately \$250.
 - Textbook/Coursepack, \$220
 - (8-32 GB usb/flash drive, basic office supplies, notebooks), \$100
- Recommended:
 - A home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$600. Contact program instructors for specifics.

Enrollment Fees

- Fees on specific MFG courses (estimated \$1100 total).

Course Requirements

Course	Title	Credits
Core Courses		
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 105	Welding Technology II	4
MFG 107	Welding Technology III	4
MFG 110	Manufacturing Processes I	4
MFG 119 or MFG 119M	MFG Design/Drafting Techniques Mechanical Drawing Techniques	4
MFG 263A	Welding Inspection I	3
MFG 263B	Welding Inspection II	3
MFG 264	Automated Cutting	3
MFG 267	Oxygen-Fuel and Plasma Cutting	3
MFG 271	SMAW I	3
MFG 272	GMAW I	3
MFG 273	SMAW II	3
MFG 274	GMAW II	3
MFG 281	GTAW I	3
MFG 282	FCAW I	3
MFG 283	GTAW II	3
MFG 284	FCAW II	3
MFG 288	Industrial Fabrication	3

MFG 289	Material Handling-Fork Lift Safety	1
MFG 280	CWE Manufacturing	1-4
Welding Program Electives		15
MFG 102	Blueprint Reading Sheet Metal	
MFG 109	Lean Practices	
MFG 112	Manufacturing Processes II	
MFG 114	Manufacturing Processes III	
MFG 116	Manufacturing Electrical Systems	
MFG 118	Fluid Power Systems I	
MFG 133	Quality Assurance	
MFG 160	Materials Engineering	
MFG 202	Metals Preparation	
MFG 201	Bench Work	
MFG 206	Surface Grinding I	
MFG 210	Vertical Milling	
MFG 211	CNC Mill Operator	
MFG 213	CNC Turning Operator	
MFG 214	Lathe Operator I	
MFG 216	Lathe Operator II	
MFG 230	CNC Programming Mill	
MFG 232	CNC Programming Lathe	
MFG 234	CAD/CAM Mill	
MFG 236	CAD/CAM Lathe	
MFG 241	Electric Motor Control	
MFG 242	Programmable Logic Controllers I	
MFG 243	Industrial Sensors	
MFG 244	Programmable Logic Controllers II	
MFG 245	Electrical Control/Fluid Power	
MFG 246	Mechanical Troubleshooting	
MFG 250	Additive Manufacturing	
MFG 254	Manufacturing Jigs and Fixtures	
MFG 266	Manufacturing Cost Estimation	
MFG 275	SMAW III	
MFG 276	GMAW III	
MFG 285	GTAW III	
MFG 286	FCAW III	
Other Required Courses		
COMM 218	Interpersonal Communication	3
MTH 085	Technical Mathematics I (or higher math class, min. 3 cr)	4
WR 065	Rhetoric/Critical Thinking II (or writing course WR 121 or higher)	3-4
or BA 214	Business Communications	
Total Credits		90-94

Advising Notes

Nearly all MFG courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than many other COCC programs.

Upon starting their program, students review their desired degree outcome with their advisor and a sequence of coursework is identified for them. This is particularly important if developmental work is needed.

This program is designed for students planning to enter the manufacturing workforce upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Prior to starting any manufacturing program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

Most of the skills development courses in this program require two hours a week in the welding lab for each credit. This normally means students will need to schedule 24 hrs or more each week in the lab. The welding lab is staffed M-Th 9 am to 8 pm (40 hrs/week).

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year		
First Term		Credits
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 119 or MFG 119M	MFG Design/Drafting Techniques Mechanical Drawing Techniques	4
Credits		16
Second Term		
MFG 105	Welding Technology II	4
MFG 107	Welding Technology III	4
MFG 264	Automated Cutting	3
MFG 267	Oxygen-Fuel and Plasma Cutting	3
Credits		14
Third Term		
MFG 271	SMAW I	3
MFG 272	GMAW I	3
MFG 281	GTAW I	3
MFG 282	FCAW I	3
Welding program elective		4
Credits		16
Second Year		
First Term		
MFG 263A	Welding Inspection I	3
MFG 273	SMAW II	3
MFG 274	GMAW II	3
MTH 085	Technical Mathematics I	4
Welding program elective (recommend MFG 254)		2
Credits		15
Second Term		
MFG 263B	Welding Inspection II	3
MFG 283	GTAW II	3
MFG 284	FCAW II	3

WR 065 or BA 214	Rhetoric/Critical Thinking II Business Communications	3-4
Welding program elective (recommend MFG 275)		3
Credits		15-16
Third Term		
COMM 218	Interpersonal Communication	3
MFG 280	CWE Manufacturing	1-4
MFG 288	Industrial Fabrication	3
MFG 289	Material Handling-Fork Lift Safety	1
Welding program elective (recommend MFG 276)		3
Welding program elective (recommend MFG 285)		3
Credits		14-17
Total Credits		90-94

Welding - One Year Certificate of Completion (CC1) - Pending Approval

Description

The Welding One Year Certificate of Completion is a self-directed, outcome-based program designed to prepare students for technician level employment in manufacturing environments using welding equipment.

Learning Outcomes

1. Demonstrate the ability to safely perform routine (intermediate level) workplace tasks in a welding/fabrication environment.
2. Demonstrate the ability to perform routine service of typical welding and fabrication equipment for intermediate level weldments.
3. Perform intermediate level welds to industry standards for a range of processes, weldments, and orientations. (SMAW, GMAW, FCAW, GTAW)
4. Apply visual and destructive examination principles and practices in accordance with industry standards for intermediate level weldments.
5. Demonstrate the acquisition of workplace (soft) skills. (numerical, communication, interpersonal)

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in MTH 020 Pre-Algebra placement or prior completion of MTH 010 Developmental Mathematics or higher ("C" or higher).
 - Successful completion of, or concurrent enrollment in, MFG 100 MFG Orientation.
 - Recommended completion of CIS 070 Introduction to Computers: Windows or equivalent skills.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required:
 - Welding personal protective equipment and tools, approximately \$250.
 - Textbook/Coursepack, \$220

Enrollment Fees

- Fees on specific MFG courses: \$600

Course Requirements

Course	Title	Credits
Core Courses		
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 105	Welding Technology II	4
MFG 107	Welding Technology III	4
MFG 110	Manufacturing Processes I	4
MFG 119 or MFG 119M	MFG Design/Drafting Techniques Mechanical Drawing Techniques	4
MFG 264	Automated Cutting	3
MFG 267	Oxygen-Fuel and Plasma Cutting	3
MFG 271	SMAW I	3
MFG 272	GMAW I	3
MFG 281	GTAW I	3
MFG 282	FCAW I	3
Other Required Courses		
COMM 218	Interpersonal Communication	3
MTH 085	Technical Mathematics I (or higher math class, min. 3 cr)	4
WR 065 or BA 214	Rhetoric/Critical Thinking II (or writing course WR 121 or higher) Business Communications	3-4
Total Credits		52-53

Advising Notes

Nearly all MFG courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than many other COCC programs.

Upon starting their program, students review their desired certificate outcome with their advisor and a sequence of coursework is identified for them. This is particularly important if developmental work is needed.

This program is designed for students planning to enter the manufacturing workforce upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Prior to starting any manufacturing program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

Most of the skills development courses in this program require two hours a week in the welding lab for each credit. This normally means students

will need to schedule 24 hrs or more each week in the lab. The welding lab is staffed M-Th 9 am to 8 pm (40 hrs/week).

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

First Term		Credits
MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 119 or MFG 119M	MFG Design/Drafting Techniques Mechanical Drawing Techniques	4
Credits		16
Second Term		
MFG 105	Welding Technology II	4
MFG 107	Welding Technology III	4
MFG 264	Automated Cutting	3
MFG 267	Oxygen-Fuel and Plasma Cutting	3
Credits		14
Third Term		
MFG 271	SMAW I	3
MFG 272	GMAW I	3
MFG 281	GTAW I	3
MFG 282	FCAW I	3
MTH 085	Technical Mathematics I	4
Credits		16
Fourth Term		
COMM 218	Interpersonal Communication	3
WR 065 or BA 214	Rhetoric/Critical Thinking II Business Communications	3-4
Credits		6-7
Total Credits		52-53

Welding Technician- Career Pathway Certificate of Completion (CPCC) - Pending Approval

Description

The Career Pathway Welding Certificate is structured to provide workforce ready skills in the welding trades. The program is a self-directed, outcome-based program designed to prepare students for technician level employment in manufacturing environments using welding equipment.

Learning Outcomes

- Demonstrate the ability to safely perform routine (intermediate level) workplace tasks in a welding/fabrication environment.
- Demonstrate the ability to perform routine service of typical welding and fabrication equipment for intermediate level weldments.
- Perform intermediate level welds to industry standards for a range of processes, weldments, and orientations. (SMAW, GMAW, FCAW, GTAW)
- Apply visual and destructive examination principles and practices in accordance with industry standards for intermediate level weldments.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Minimum placement scores resulting in MTH 020 Pre-Algebra placement.
 - Successful completion of, or concurrent enrollment in, MFG 100 MFG Orientation.
 - Skills equivalent to CIS 070 Introduction to Computers: Windows.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required:
 - Welding personal protective equipment and tools, \$250
 - Textbook/Coursepack, \$60

Enrollment Fees

- Fees on specific MFG courses: \$600

Course Requirements

Course	Title	Credits
Core Courses		
MFG 100	MATC Orientation	1
MFG 105	Welding Technology II	4
MFG 107	Welding Technology III	4
MFG 264	Automated Cutting	3
MFG 267	Oxygen-Fuel and Plasma Cutting	3
MFG 271	SMAW I	3
MFG 272	GMAW I	3
MFG 281	GTAW I	3
MFG 282	FCAW I	3
Total Credits		27

Advising Notes

Nearly all MFG courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than many other COCC programs.

Upon starting their program, students review their desired certificate outcome with their advisor and a sequence of coursework is identified for them. This is particularly important if developmental work is needed.

This program is designed for students planning to enter the manufacturing workforce upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Prior to starting any manufacturing program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

Most of the skills development courses in this program require two hours a week in the welding lab for each credit. This normally means students will need to schedule 24 hrs or more each week in the lab. The welding lab is staffed M-Th 9 am to 8 pm (40 hrs/week).

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

First Term		Credits
MFG 100	MATC Orientation	1
MFG 105	Welding Technology II	4
MFG 107	Welding Technology III	4
MFG 264	Automated Cutting	3
MFG 267	Oxygen-Fuel and Plasma Cutting	3
Credits		15
Second Term		
MFG 271	SMAW I	3
MFG 272	GMAW I	3
MFG 281	GTAW I	3
MFG 282	FCAW I	3
Credits		12
Total Credits		27

Massage Therapy

Massage therapy is a popular health care treatment with ancient origins. Massage therapists work with doctors, nurses, physical therapists, psychologists, chiropractors, naturopaths, acupuncturists, sport teams, veterinarians and in wellness programs at corporate sites. In addition to private practice, they are employed at hospitals, athletic clubs, family health centers, cruise ships, vacation resorts and spas and salons.

COCC's massage programs qualify students to sit for the licensing exams required by the Oregon Board of Massage Therapists as well as provide instruction in a variety of techniques and modalities and in methods to maintain client and business records.

<https://www.cocc.edu/programs/massage/> (<https://www.cocc.edu/programs/massage/default.aspx>)

Contact:

Alan Nunes
541-318-3757
Health Careers Center, Bend Campus

Department: Allied Health
Department Chair: Deborah Malone

Programs

Career and Technical Education

- Massage Therapy - Associate of Applied Science (AAS) (p. 232)
- Massage Therapy - Two Year Certificate of Completion (CC2) (p. 234)

Courses

LMT 101 Intro Massage Therapy Career (1 Credit)

Explore the education and academic requirements of the LMT program and the requirements for massage therapy licensure in Oregon.

LMT 113 Kinesiology for Massage Therapy I (4 Credits)

Prerequisites: WR 065 or higher or minimum placement into WR 121; MTH 010 or higher or minimum placement into MTH 020.

Corequisites: LMT 130, LMT 155, LMT 170.

Recommended preparation: BI 121 or BI 122 or BI 231.

Provides an introduction and overview of the basic principles of kinesiology. Emphasizes anatomical terminology, skeletal anatomy and function, the study of joints and their functions, and palpation skills. This is the first in a three-part series of kinesiology for massage therapists.

LMT 118 Kinesiology for Massage Therapy II (4 Credits)

Prerequisites: LMT 113.

Continues study of the muscles that will include attachments, actions, nerves, joints and the boney landmarks. Second course in a three-part series of kinesiology for massage therapist.

LMT 124 Kinesiology for Massage Therapy III (4 Credits)

Prerequisites: LMT 118.

Continues a study of muscles that will include attachments, actions, nerves, joints, and the boney landmarks; emphasizes palpation skills. Third course in a three-part series of kinesiology for massage therapists.

LMT 130 Massage Fundamentals (2 Credits)

Prerequisites: WR 065 or higher or minimum placement into WR 121; MTH 010 or higher or minimum placement into MTH 020.

Corequisites: LMT 113, LMT 155, LMT 170.

Recommended preparation: BI 121 or BI 122 or BI 231.

Introduction to the history of massage, self-care, proper body mechanics, basic medical terminology, universal sanitation precautions, draping, communication, and the effects of Swedish massage strokes.

LMT 135 Managing a Massage Practice (3 Credits)

Managing a Massage Practice will explore business structures, legal, and tax documentation requirements for a massage therapy practice. Students will formulate a marketing plan including advertising, market analysis, and professional goals.

LMT 140 Pathology for Massage Therapy (4 Credits)

Prerequisites: BI 121 or BI 231.

The effects of massage therapy on the body systems will be discussed including the indications and contraindications to massage. The basic mechanisms of the disease process and medical terminology will be reviewed.

LMT 145 Massage I (5 Credits)

Prerequisites: LMT 130 and LMT 170.

The theory of Swedish massage, physiological effects, and the practical application will be incorporated into the development of a massage therapy routine. Basic Subjective Objective Action Plan (SOAP) charting skills and prenatal massage techniques are introduced.

LMT 150 Massage II (5 Credits)**Prerequisites:** LMT 118 and LMT 145.

The theory and practice of various modalities including deep tissue, trigger point therapy, muscle energy technique, and stretching are introduced. Incorporates client assessment and treatment planning for a massage session.

LMT 155 Eastern Theory & Practice (2 Credits)**Prerequisites:** WR 065 or higher or minimum placement into WR 121; MTH 010 or higher or minimum placement into MTH 020.**Corequisites:** LMT 113, LMT 130, LMT 170.**Recommended preparation:** BI 121 or BI 122 or BI 231.

This course is philosophically neutral and will focus on Chinese Medicine as the primary model which includes an introduction to eastern philosophy and its complimentary healing techniques.

LMT 160 Hydrotherapy (1 Credit)**Prerequisites:** LMT 145.

The principles and techniques of water as it relates to a massage therapy session in its three forms; solid, liquid and vapor.

LMT 170 Professional Ethics and Rules (2 Credits)**Prerequisites:** WR 065 or higher or minimum placement into WR 121; MTH 010 or higher or minimum placement into MTH 020.**Corequisites:** LMT 113, LMT 130, LMT 155.**Recommended preparation:** BI 121 or BI 122 or BI 231.

The professional and ethical boundaries that govern the practice of massage therapy will be explored. The Oregon Administrative Rules and Statutes that apply to licensed massage therapists will be examined and discussed.

LMT 175 Swedish Relaxation Clinic (2 Credits)**Prerequisites:** LMT 145.

Swedish Relaxation Clinic will perform basic Swedish relaxation massage therapy techniques on the general public while demonstrating professionalism, client communication, and client consent during supervised public clinics.

LMT 180 Therapeutic Clinic (3 Credits)**Prerequisites:** LMT 150.

Therapeutic Clinic offers relaxation and treatment massage therapy techniques to the general public. Subjective Objective Action Plan (SOAP) charting, professionalism, client communication, and client consent will be performed during supervised public clinics. P/NP grading.

LMT 188 Special Studies: LMT (1-4 Credits)

Specific modules that relate to first year courses.

LMT 199 Selected Topics: Licensed Massage Therapy (1-4 Credits)

Selected Topics related to Massage Therapy.

LMT 205 Movement for Massage (1 Credit)

The student will explore their body mechanics and body awareness through the practice of Qigong to meet the physical demands of a massage therapy career.

LMT 206 The Spirit of Massage (1 Credit)

The Spirit of Massage will explore a holistic view of massage and facilitate a self-awareness of one's personal connection to the massage therapy session and client goals. P/NP grading.

LMT 210 Community Outreach (2 Credits)

Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

Massage therapy research and case studies topics will be explored using methods of assessment of the benefits of massage. Internships and externships may be included.

LMT 216 Aromatherapy I (2 Credits)

An introduction to the properties and benefits of essential oils and their effects on the body when used in clinical and holistic settings.

LMT 217 Aromatherapy II (2 Credits)**Prerequisites:** LMT 216.

Advanced exploration of the essential oils examined in Aromatherapy I and utilization in a massage therapy session.

LMT 226 Thai Massage I (2 Credits)**Prerequisites:** LMT 130 and LMT 155.

Traditional fundamentals of Thai bodywork techniques will be explored. A basic Thai floor massage routine will be practiced using traditional Thai equipment. Students should have the ability to kneel and move around on their feet and knees. P/NP grading.

LMT 227 Thai Massage II (2 Credits)**Prerequisites:** LMT 226.

Students will explore the deeper roots of Thai bodywork and the "Sen". Advanced techniques and stretches will be practiced in a Thai bodywork routine using traditional Thai equipment. Students should have the ability to kneel and move around on their feet and knees. P/NP grading.

LMT 228 Foot Reflexology (1 Credit)

Students will practice reflexology routines, pressure points, and techniques that combine to make a unique foot massage similar to those enjoyed throughout the world. P/NP grading.

LMT 229 Japanese Facial Massage (1 Credit)

Japanese Facial Massage combines massage and acupressure to reduce muscular tensions, increase blood and energy flow, while restoring elasticity to the skin. P/NP grading.

LMT 240 Neuromuscular Treatments I (5 Credits)**Prerequisites:** LMT 145, LMT 150, LMT 175.

This is advanced myofascial coursework that focuses on the treatment of specific conditions and injuries using neuromuscular massage therapy treatment protocols.

LMT 245 Effective Office Decisions (2 Credits)

Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

This course will explore insurance billing, retail selling, target marketing, bookkeeping, credentialing and other issues a massage practice may encounter.

LMT 250 Cranial Sacral Level I (5 Credits)

Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

This course will offer a cranio sacral approach to massage therapy with an emphasis on relevant anatomy.

LMT 255 Zen Shiatsu (4 Credits)**Recommended preparation:** LMT 155 and LMT 130.

Zen Shiatsu history, basic theory and techniques used in this massage modality will be introduced. This class will offer hands-on experience while working with a clothed client in the style of Shizuto Masunaga.

LMT 257 Chinese Medicine Theory (3 Credits)**Prerequisites:** LMT 155.

Chinese Medicine Theory will provide a deeper understanding of Eastern/Asian foundational elements and the application of the elements as it relates to therapeutic massage therapy and bodywork.

LMT 258 Eastern Clinic (2 Credits)**Prerequisites:** LMT 255 or LMT 226.

Students will practice Shiatsu and/or Thai bodywork techniques on the general public during the supervised clinic. P/NP grading.

LMT 259 Introductory Spa Treatments (1 Credit)

Prerequisites: LMT 145 and LMT 150 or department approval based on proof of massage therapist license.

Spa treatment commonly used in spa facilities will be explored. A variety of spa treatments will be practiced in class. Contraindications, hygiene, sanitation, and spa etiquette will be examined.

LMT 265 Sports Massage (4 Credits)

Prerequisites: LMT 150.

The principles of deep tissue massage, neuromuscular therapies, and muscle energy techniques will be applied to target athletic performance and recovery, as well integrating techniques to aide in rehabilitation of athletic related injuries.

LMT 266 Sports Massage Clinic (2 Credits)

Prerequisites: LMT 265.

Students will practice sports massage techniques targeting athletic performance, exercise recovery, and soft tissue rehabilitation of athletic related injuries. P/NP grading.

LMT 270 Clinical Assessments (4 Credits)

Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

This is a nontreatment course that will evaluate and assess ROM, posture, gait and soft tissue injury when determining massage therapy treatment options. Students taking Advanced Treatment courses are advised to enroll.

LMT 271 Pregnancy Massage (1 Credit)

Prerequisites: LMT 145.

Advanced massage training when working with pregnant clients that will include precautions, draping, positioning and how massage can support women in labor.

LMT 288 Special Studies: LMT (1-4 Credits)

Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

Specific coursework related to massage therapy.

LMT 298 Independent Study: Massage Therapy (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

LMT 299 Selected Topics: LMT (1-7 Credits)

Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

Selected topics related to massage therapy.

Massage Therapy - Associate of Applied Science (AAS)

Description

The Massage Therapy Associate of Applied Science (AAS) program focuses on integrating the sciences relating to the human body with the theories and practice of massage therapy. Massage therapy students develop many skills that include a variety of massage techniques and modalities, methods to maintain client and business records, understanding the importance of client/practitioner boundaries, client communication skills and the use of universal sanitation practices.

The AAS degree includes the two year certificate in massage therapy and will qualify a student to sit for the licensing exams as required by the Oregon Board of Massage Therapists. The AAS builds skills for graduates

to perform a wide variety of massage therapy modalities as well as business competencies.

Learning Outcomes

1. Implement a wide variety fundamental and specialty skills related to massage therapy.
2. Exhibit characteristics of guidelines for professional practice.
3. Conduct client assessment, reassessment & treatment planning.
4. Understand the benefits and physiological effects of techniques that manipulate soft tissue.

Entrance Requirements

- Required:
 - Minimum placement score into MTH 020 Pre-Algebra or complete MTH 010 Developmental Mathematics or higher.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
- Recommended:
 - BI 121 Anatomy and Function I or BI 122 Anatomy and Function II or BI 231 Human Anatomy and Physiology I.

Other Entrance Requirements

- Required:
 - Must be a minimum of 18 years of age.
 - Earned high school diploma or GED.

Additional Program Costs

Material Costs

- Massage table (\$400-\$700)
- Black COCC logo polo shirt (\$40)

Enrollment Fees

- \$17 per credit for first year LMT prefix courses
- \$25 per credit for all other LMT prefix courses

Course Requirements

Course	Title	Credits
Core Courses		
Choose one option from the following:		8-12
Option 1:		
BI 121 & BI 122	Anatomy and Function I and Anatomy and Function II	
Option 2:		
BI 231 & BI 232 & BI 233	Human Anatomy and Physiology I and Human Anatomy and Physiology II and Human Anatomy and Physiology III	
BA 214	Business Communications	3
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
LMT 113	Kinesiology: Massage Ther I	4
LMT 118	Kinesiology for Massage Therapy II	4
LMT 124	Kinesiology for Massage Therapy III	4
LMT 130	Massage Fundamentals	2
LMT 135	Managing a Massage Practice	3

LMT 140	Pathology for Massage Therapy	4
LMT 145	Massage I	5
LMT 150	Massage II	5
LMT 155	Eastern Theory & Practice	2
LMT 160	Hydrotherapy	1
LMT 170	Professional Ethics & Rules	2
LMT 175	Swedish Relaxation Clinic	2
LMT 180	Therapeutic Clinic	3
LMT 200 level electives		17
LMT 210	Community Outreach	2
LMT 245	Effective Office Decisions	2
Other Required Courses		
Two Courses from the Discipline Studies List		6-10
Choose one of the following:		3-5
HHP 252A	Fitness/First Aid	
Any one course listed below and an activity/health module:		
HHP 231	Human Sexuality	
HHP 242	Stress Management	
HHP 258	Holistic Wellness	
HHP 266	Nutrition for Health	
HHP 295	Health and Fitness	
COMM 218	Interpersonal Communication	3
or BA 178	Customer Service	
MTH 020	Pre-Algebra (or higher)	4
WR 121	Academic Composition	4
Total Credits		93-107

Advising Notes

Students are offered two opportunities to enter the massage therapy program each year including a fall day-program start and a spring evening-program start. Each program start requires the block of courses to be completed before moving to the next sequence of related courses. Students may take non-massage therapy courses (any course that does not begin with a LMT prefix) at any time prior to enrollment into the LMT program or during enrollment in the LMT program if time is available.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Verification of contact hours is required by the Oregon Board of Massage Therapists licensing requirements. Students must meet the Oregon Board of Massage Therapists attendance requirement of 90% contact hour completion for each LMT course contact hours as identified on all LMT course syllabi.
 - Students are required to adhere to the professional conduct standards outlined within the student handbook.

Sample Plan

First Year

First Term		Credits
BI 121	Anatomy and Function I	4
or BI 231	Human Anatomy and Physiology I	
MTH 020	Pre-Algebra	4
WR 121	Academic Composition	4
Credits		12

Second Term

BI 122	Anatomy and Function II	4
LMT 113	Kinesiology: Massage Ther I	4
LMT 130	Massage Fundamentals	2
LMT 155	Eastern Theory & Practice	2
LMT 170	Professional Ethics & Rules	2
Credits		14

Third Term

LMT 118	Kinesiology for Massage Therapy II	4
LMT 145	Massage I	5
BI 233	Human Anatomy and Physiology III (if needed)	0-4
Credits		9-13

Fourth Term

LMT 124	Kinesiology for Massage Therapy III	4
LMT 140	Pathology for Massage Therapy	4
LMT 150	Massage II	5
LMT 175	Swedish Relaxation Clinic	2
Credits		15

Second Year

First Term

LMT 135	Managing a Massage Practice	3
LMT 160	Hydrotherapy	1
LMT 180	Therapeutic Clinic	3
COMM 218	Interpersonal Communication	3
or BA 178	Customer Service	
Credits		10

Second Term

BA 214	Business Communications	3
CIS 120	Computer Concepts (computer competency test)	4
Course from Discipline Studies List		3-5
LMT 200 level electives		3-5
Credits		13-17

Third Term

Course from the Discipline Studies List		3-5
Choose one of the following:		3-5
HHP 252A	Fitness/First Aid	
Any one course listed below and an activity/health module:		
HHP 231	Human Sexuality	
HHP 242	Stress Management	
HHP 258	Holistic Wellness	
HHP 266	Nutrition for Health	
HHP 295	Health and Fitness	

LMT 200 level electives		3-5
LMT 245	Effective Office Decisions	2
	Credits	11-17
Fourth Term		
LMT 200 level electives		4-9
LMT 210	Community Outreach	2
	Credits	6-11
	Total Credits	90-109

Massage Therapy - Two Year Certificate of Completion (CC2)

Description

The Massage Therapy Two Year Certificate of Completion focuses on integrating the sciences relating to the human body with the theories and practice of massage therapy. Massage therapy students develop many skills that include a variety of massage techniques and modalities, methods to maintain client and business records, understanding the importance of client/practitioner boundaries, client communication skills and the use of universal sanitation practices.

This massage therapy program will qualify a student to sit for the licensing exams as required by the Oregon Board of Massage Therapists.

Learning Outcomes

1. Identify the benefits and physiological effects of techniques that manipulate soft tissue
2. Pathology: Recognize medical conditions in which massage therapy is contraindicated and/or hazardous to the client.
3. Kinesiology: Define the bones and muscles of the body, where they are located and their articulations.
4. Create an accurate treatment plan that incorporates chart notes, reflecting client assessment and reassessment.
5. Demonstrate awareness of appropriate ethics, boundaries, laws and regulations in accordance with National standards.
6. Describe professional practice standards.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Minimum placement score into MTH 020 Pre-Algebra or complete MTH 010 Developmental Mathematics or higher.
 - Minimum placement scores resulting in WR 121 Academic Composition placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
- Recommended:
 - BI 121 Anatomy and Function I or BI 122 Anatomy and Function II, or BI 231 Human Anatomy and Physiology I.

Other Entrance Requirements

- Required:
 - Must be a minimum of 18 years of age.
 - Earned high school diploma or GED.

Additional Program Costs

Material Costs

- Massage table (\$400-\$700)
- Black COCC logo polo shirt (\$40)

Enrollment Fees

- \$17 per credit for first year LMT prefix courses
- \$25 per credit for all other LMT prefix courses

Course Requirements

Course	Title	Credits
Core Courses		
Choose one option from the following:		8-12
Option 1:		
BI 121 & BI 122	Anatomy and Function I and Anatomy and Function II	
Option 2:		
BI 231 & BI 232 & BI 233	Human Anatomy and Physiology I and Human Anatomy and Physiology II and Human Anatomy and Physiology III	
LMT 113	Kinesiology: Massage Ther I	4
LMT 118	Kinesiology for Massage Therapy II	4
LMT 124	Kinesiology for Massage Therapy III	4
LMT 130	Massage Fundamentals	2
LMT 135	Managing a Massage Practice	3
LMT 140	Pathology for Massage Therapy	4
LMT 145	Massage I	5
LMT 150	Massage II	5
LMT 155	Eastern Theory & Practice	2
LMT 160	Hydrotherapy	1
LMT 170	Professional Ethics & Rules	2
LMT 175	Swedish Relaxation Clinic	2
LMT 180	Therapeutic Clinic	3
Other Required Courses		
COMM 218 or BA 178	Interpersonal Communication Customer Service	3
MTH 020	Pre-Algebra (or higher)	4
WR 121	Academic Composition	4
Total Credits		60-64

Advising Notes

Students are offered two opportunities to enter the massage therapy program each year including a fall day-program start and a spring evening-program start. Each program start requires the block of courses to be completed before moving to the next sequence of related courses. Students may take non-massage therapy courses (any course that does not begin with a LMT prefix) at any time prior to enrollment into the LMT program or during enrollment in the LMT program if time is available.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.

- All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Verification of contact hours is required by the Oregon Board of Massage Therapists licensing requirements. Students must meet the Oregon Board of Massage Therapists attendance requirement of 90% contact hour completion for each LMT course contact hours as identified on all LMT course syllabi.
 - Students must adhere to the professional conduct standards outlined within the student handbook.

industry, government, research, and business. In addition, math courses serve as the foundation for many related STEM programs.

COC Math Department Webpage (<https://www.cocc.edu/departments/math/default.aspx>)

Contact:

Renee' Brazeau-Asher (rasher@cocc.edu)

541-383-7720

Grandview Hall, Bend Campus

Department: Mathematics

Department Chair: Kathy Smith (kmsmith@cocc.edu)

Sample Plan

First Year

First Term		Credits
BI 121 or BI 231	Anatomy and Function I Human Anatomy and Physiology I	4
MTH 020	Pre-Algebra	4
WR 121	Academic Composition	4
	Credits	12
Second Term		
BI 122 or BI 232	Anatomy and Function II Human Anatomy and Physiology II	4
LMT 113	Kinesiology: Massage Ther I	4
LMT 130	Massage Fundamentals	2
LMT 155	Eastern Theory & Practice	2
LMT 170	Professional Ethics & Rules	2
	Credits	14
Third Term		
BI 233	Human Anatomy and Physiology III (if needed)	0-4
LMT 118	Kinesiology for Massage Therapy II	4
LMT 145	Massage I	5
	Credits	9-13
Fourth Term		
LMT 124	Kinesiology for Massage Therapy III	4
LMT 140	Pathology for Massage Therapy	4
LMT 150	Massage II	5
LMT 175	Swedish Relaxation Clinic	2
	Credits	15
Second Year		
First Term		
COMM 218 or BA 178	Interpersonal Communication Customer Service	3
LMT 135	Managing a Massage Practice	3
LMT 160	Hydrotherapy	1
LMT 180	Therapeutic Clinic	3
	Credits	10
	Total Credits	60-64

Programs

Transfer

- Mathematics - Associate of Arts Oregon Transfer (AAOT) (p. 238)

Courses

MTH 001 Adjust My Placement (AMP) (1 Credit)

Provides a structured setting to refresh and review math skills. Participate in problem-solving activities designed to strengthen critical thinking skills. Provides an opportunity for students to be successful in a higher-level math class than they originally placed. Math advising is also part of this course. Intended for students to strengthen previously-learned mathematical skills and problem-solving abilities. To receive the maximum benefit of this course, it is important to enroll in a math course the term immediately following. Meets twice a week for 7 weeks, beginning the second week of the term.

MTH 010 Developmental Mathematics (4 Credits)

Introduces mathematics and its application; explains language and symbols used in math; develops concepts in whole number, fraction, and decimal operations and applications; and develops analytical thinking while emphasizing study and learning skills necessary for success in math courses and overcoming anxiety toward math.

MTH 020 Pre-Algebra (4 Credits)

Recommended preparation: MTH 010.

Emphasizes applications of basic arithmetic skills. Equips students to handle everyday arithmetic problems and lays a foundation for algebra. Topics include ratio, proportion, percent, measurement, perimeter, area, volume and integers.

MTH 029 Fraction Review Workshop (2 Credits)

Provides a concentrated experience for students needing a review of fractions and associated number theory skills. This course is not a replacement for students who place into or need to take MTH 10. May be taken concurrently with another math class. P/NP grading.

MTH 031 Health Care Math (3 Credits)

Recommended preparation: MTH 010.

This is a three-credit course designed for students majoring in Addiction Studies, Massage Therapy, Health Information Technology, among others. Includes topics from pre-algebra and descriptive statistics. MTH 031 is not designed to serve as a prerequisite to MTH 060.

Mathematics

The study of mathematics develops analytic and quantitative skills which are valuable in today's data-driven economy. A bachelor's degree with a major in math is great preparation for graduate school (such as schools of law, medicine, education, or business) as well as direct employment in

MTH 058 Math Literacy I (4 Credits)

Recommended preparation: MTH 010 or minimum placement into MTH 020.

Designed for non-math and non-science majors: integrating numeracy, proportional reasoning, algebraic reasoning and beginning data presentation and analysis. Develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. Introduces pattern recognition, estimation and number sense, working with units, and making accurate inferences and conclusions based upon data presented in graphical or tabular format. Explores how to clearly communicate arguments supported by quantitative evidence using words, tables, graphs, and mathematical equations.

MTH 060 Beginning Algebra I (4 Credits)

Recommended preparation: Math 020 or higher or minimum placement into MTH 060.

Introduction to algebra, integers, rational and real numbers, algebraic expressions, linear equations in one and two variables, and graphical representations with a focus on modeling and applications.

MTH 065 Beginning Algebra II (4 Credits)

Recommended preparation: MTH 060 or higher or minimum placement into MTH 065.

Continues development of manipulative algebra skills from MTH 060. Includes algebraic expressions and polynomials, factoring algebraic expressions, rational expressions, roots and radicals, and quadratic equations.

MTH 085 Technical Mathematics I (4 Credits)

Recommended preparation: MTH 020 and/or MTH 060.

First in a two-term sequence designed for majors in forest technology, fire science, CADD and GIS, among others. Includes introduction to algebra and geometry with a focus on units of measurement, formula manipulation, solving linear and literal equations, exponents, three-dimensional geometry and preparation for trigonometry. Real-world applications are emphasized.

MTH 086 Technical Mathematics II (4 Credits)

Recommended preparation: MTH 085.

Second in a two-term sequence designed for majors in forest technology, fire science, CADD and GIS, among others. Includes a review of geometry and a thorough discussion of trigonometry with an introduction to vectors and their applications. The second half of the term includes an introduction to functions and their applications including graphing equations, developing equations from graphs, analysis of linear and non-linear functions and functions as models. Students will work in teams to develop and analyze a complex, real-world application and submit a technical report detailing the results. A graphing calculator is required. TI-83 or TI-84 recommended.

MTH 095 Intermediate Algebra (4 Credits)

Recommended preparation: MTH 065.

Continues the algebra foundation necessary to study college-level mathematics and statistics. Includes systems of equations and inequalities, linear and quadratic regressions, functions and function notation, equation solving through manual and graphical means, inequalities and complex numbers. Graphing calculator required. TI-83 or TI-84 recommended.

MTH 098 Math Literacy II (4 Credits)

Recommended preparation: MTH 058.

Covers modeling, graphing and solving linear equations in context. Explores how to clearly communicate sophisticated arguments supported by quantitative evidence using words, tables, graphs, and mathematical equations as appropriate. Covers dimensional analysis as it arises contextually in applications.

MTH 099 Selected Topics: Mathematics (1-4 Credits)

Offers selected topics in mathematics for courses generally available only once. Topics and credits to be arranged. P/NP grading.

MTH 105 Math in Society (4 Credits)

Prerequisites: MTH 095 or higher or minimum placement into MTH 105. Math in Society is a rigorous mathematics course designed for students in Liberal Arts and Humanities majors. The course provides a solid foundation in quantitative reasoning, symbolic reasoning, and problem solving techniques needed to be a productive, contributing citizen in the 21st century.

MTH 111 College Algebra (4 Credits)

Recommended preparation: MTH 095.

Introduces graphs and functions (linear, quadratic, polynomial, rational, exponential and logarithmic) using a graphing calculator. First term of a precalculus sequence for science students. Graphing calculator required. TI-83 or TI-84 recommended.

MTH 112 Trigonometry (4 Credits)

Recommended preparation: MTH 111.

Examines the applied, real-world and theoretical mathematical implications of the trigonometric functions. The symbolic, numerical, and graphical representations of these functions and their applications form the core of the course. Emphasizes solving problems symbolically, numerically and graphically and understanding the connections among these methods in interpreting and analyzing results. Graphing calculator required. TI-83 or TI-84 recommended.

MTH 113 Topics in Precalculus (4 Credits)

Recommended preparation: MTH 112.

Examines topics chosen from the applied, real-world and theoretical mathematical implications of analytic geometry, nonrectangular coordinate systems, vectors, matrices and sequences. The symbolic, numerical, and graphical representations of these functions and their applications form the core of the course. Emphasizes solving problems symbolically, numerically and graphically and understanding the connections among these methods in interpreting and analyzing results. The primary focus is preparation for Calculus. Graphing calculator required. TI-83 or TI-84 recommended.

MTH 188 Special Studies: Mathematics (1-4 Credits)

Explores topics of current interest in the discipline.

MTH 198 Practicum in Mathematics (2 Credits)

Allows students to gain exposure to an elementary classroom setting, gain experience in teaching/tutoring math to elementary-school-age children and gain an understanding of learning theory and processes as they apply to mathematics education.

MTH 199 Selected Topics: Mathematics (1-4 Credits)

This course is in development.

MTH 211 Fundamentals of Elementary Mathematics I (4 Credits)

Recommended preparation: MTH 095.

Introduces problem-solving, sets, natural and whole numbers, number theory and fractions. First term of a sequence for students planning to become elementary teachers but open to any students wanting to study the foundations of mathematics.

MTH 212 Fundamentals of Elementary Mathematics II (4 Credits)**Recommended preparation:** MTH 211.

Covers decimals, percents, ratio and proportion, integers, rational and real numbers, and statistics and probability. Second term of a sequence for students planning to become elementary teachers but open to any student wanting to study the foundations of mathematics.

MTH 213 Fundamentals of Elementary Mathematics III (4 Credits)**Recommended preparation:** MTH 211.

Covers geometric shapes, measurement, congruence and similarity, and coordinate and transformational geometry. Third term of a sequence for students planning to become elementary teachers but open to any student wanting to study the foundations of mathematics.

MTH 231 Discrete Mathematics (4 Credits)**Recommended preparation:** MTH 112.

Topics in the course will examine in detail the applied, real-world and theoretical mathematical implications of the mathematical concepts elementary logic and set theory, functions, direct proof techniques, contradiction and contraposition, mathematical induction and recursion, elementary combinatorics, basic graph theory, minimal spanning trees. The symbolic, numerical and graphical representations of the mathematical concepts will be expanded and explored. Emphasis will be on solving problems symbolically, numerically and graphically and understanding the connections among these methods in interpreting and analyzing results.

MTH 241 Calculus for Management/Social Science (4 Credits)**Recommended preparation:** MTH 111.

Introduces basic concepts of differential and integral calculus for students majoring in management and social science. Includes elementary differential and integral calculus of polynomial, logarithmic and exponential functions, and their applications to business, management and social sciences. A graphing calculator is required. TI-83 or TI-84 recommended.

MTH 243 Introduction to Probability and Statistics I (4 Credits)**Recommended preparation:** MTH 111 (for those needing MTH 241 or MTH 251), MTH 105.

Introduces probability and descriptive statistics. Includes critical readings of graphs and data, basic probability theory, random variables, and binomial and normal probability distributions. Culminates with the Central Limit Theorem. A graphing calculator is required. TI -83 or TI -84 recommended.

MTH 244 Introduction to Probability and Statistics 2 (4 Credits)**Prerequisites:** MTH 243.

Introduces methods of inferential statistical analysis. Includes sampling techniques, confidence intervals, hypothesis testing, tests of association, linear regression and categorical analysis. Basic computer skills (especially spreadsheet knowledge) are desirable. A graphing calculator is required. TI -83 or TI -84 recommended.

MTH 245 Mathematics for Management, Life, and Social Sciences (4 Credits)**Recommended preparation:** MTH 111.

This is a Finite Math course that covers techniques of counting, probability and elements of statistics including binomial and normal distributions, introductory matrix algebra, and elements of linear programming.

MTH 251 Calculus I (4 Credits)**Recommended preparation:** MTH 112 or MTH 113.

Introduces concepts of differential calculus for science, mathematics and engineering students. Includes limits and continuity; the derivative; rates of change; derivatives of polynomial, rational and trigonometric, log, and exponential functions; applications including related rates and optimization; and antiderivatives. Graphing calculator required.

MTH 252 Calculus II (4 Credits)**Recommended preparation:** MTH 251.

Introduces concepts of integral calculus to science, mathematics and engineering students. Includes antidifferentiation, the Fundamental Theorem of Calculus, integration techniques, numerical methods, improper integrals and mathematical modeling with applications to geometry, physics, economics and population dynamics. Graphing calculator required.

MTH 253 Calculus III (4 Credits)**Recommended preparation:** MTH 252.

Introduces additional calculus concepts to science, mathematics, and engineering students. Includes selected topics in linear algebra, parametric and polar functions, applications of calculus to parametric and polar functions, infinite series, and Taylor series and polynomials.

MTH 254 Vector Calculus I (4 Credits)**Recommended preparation:** MTH 253.

Introduces concepts of vector calculus to science and engineering students. Includes vectors and vector functions, parametric curves, functions of several variables, partial derivatives, gradients, directional derivatives and optimization problems. A graphing calculator is required. TI-83 or TI-84 is recommended. Computer skills required.

MTH 255 Vector Calculus II (4 Credits)**Recommended preparation:** MTH 254.

Continuation of the study of vector analysis for science and engineering students. Includes double and triple integrals with applications to area, volume and center of mass; introduction to vector analysis including divergence, curl, line integrals and work, surface integrals; conservative fields and the theorems of Green and Stokes. A graphing calculator is required. TI-83 or TI-84 recommended. Basic computer skills required.

MTH 256 Applied Differential Equations (4 Credits)**Recommended preparation:** MTH 253.

Introduction to the application of differential equations for science and engineering students. Includes first- and second-order linear and nonlinear equations, systems of linear first-order differential equations and applications appropriate for science and engineering; numerical, graphical, series and analytical solutions are covered. Computer skills are recommended and a graphing calculator is required. TI-83 or TI-84 is recommended.

MTH 261A Introduction to Linear Algebra (2 Credits)**Recommended preparation:** MTH 252.

Provides an introduction to linear algebra concepts for science, math, and engineering majors. Topics include vectors, matrices, systematic solution to linear systems, determinants, linear dependence and independence, linear transformations, and eigenvalues and eigenvectors.

MTH 280 Co-op Work Experience Mathematics (1-4 Credits)**Prerequisites:** Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

MTH 298 Independent Study: Mathematics (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Mathematics - Associate of Arts Oregon Transfer (AAOT)

Description

The study of mathematics develops analytic and quantitative skills which are valuable in today's data-driven economy. The Associate of Arts Oregon Transfer (AAOT) with a focus in mathematics includes courses that are commonly required for a math major and meets lower division general education requirements at all Oregon public universities.

A bachelor's degree with a major in math is great preparation for graduate school (such as schools of law, medicine, education, or business) as well as direct employment in industry, government, research, and business.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose three credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Recommend: MTH 251		
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Recommend: MTH 252, PH 211, PH 212, PH 213		
Electives		

Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.

Recommend: MTH 253, MTH 254, MTH 255, MTH 256, MTH 261A ²	
Total Credits	90-106

- ¹ HHPA activity courses (1 credit each) are not to be duplicated
- ² Related courses to consider: CIS 120 Computer Concepts, CIS 122 Introduction to Programming, MTH 243 Introduction to Probability and Statistics I, MTH 244 Introduction to Probability and Statistics 2. Note: Some four year colleges require CIS 122 for math majors. See an advisor for details.

Advising Notes

- MTH 256 Applied Differential Equations and MTH 261A Introduction to Linear Algebra are only offered in fall and spring terms
- MTH 254 Vector Calculus I is only offered winter term and MTH 255 Vector Calculus II is only offered spring term.
- PH 211 General Physics I is only offered winter term, PH 212 General Physics II is only offered spring term and PH 213 General Physics III is only offered fall term.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters	3-4
Oral Communication: (p. 399)	3-4
Mathematics (recommend MTH 251)	4
WR 121 Academic Composition	4
Credits	14-16

Second Term	Credits
Discipline Studies Science/Math/Computer Science (recommend MTH 252)	4
Discipline Studies Science/Math/Computer Science (recommend PH 211)	5
Discipline Studies Social Science	3-4
WR 122 Argument, Research, and Multimodal or WR 227 Composition Technical Writing	4
Credits	16-17

Third Term	Credits
Discipline Studies Science/Math/Computer Science (recommend PH 212)	5
Elective (recommend MTH 253)	4
Elective (recommend MTH 261A)	2
Health (3 credits with HHP or HHPA prefix)	3
Credits	14

Fourth Term

Discipline Studies Science/Math/Computer Science (recommend PH 213)	5
Discipline Studies Social Science	3-4
Discipline Studies Arts & Letters	3-4
Elective (recommend MTH 256)	4
Credits	15-17

Fifth Term

Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Elective (recommend MTH 254)	4
Elective	3-4
Elective	3-4
Credits	16-20

Sixth Term

Discipline Studies Social Science	3-4
Elective (recommend MTH 255)	4
Elective	3-4
Elective	3-4
Elective	3-4
Credits	16-20
Total Credits	91-104

Medical Assistant

Medical assistants support health care providers in offices or clinical settings in a broad range of administrative and clinical skills. Duties might include taking a patient's medical history and vital signs, preparing patients for exams and medical procedures, plus administering select tests or medications as directed by clinicians. Administrative duties may require maintenance of medical records, patient scheduling, knowledge of insurance regulations, as well as basic secretarial and receptionist skills.

<https://www.cocc.edu/programs/medical-assistant/> (<https://www.cocc.edu/programs/medical-assistant/default.aspx>)

Contact:

Shannon Waller (swaller@cocc.edu)
541-318-3722
Health Careers Center, Bend Campus, HCC 250

Department: Allied Health
Department Chair: Deborah Malone

Programs

Career and Technical Education

- Medical Assistant - One Year Certificate of Completion (CC1) (p. 241)

Courses

MA 110 Introduction to Clinical Medical Assisting (7 Credits)

Prerequisites: AH 114; BI 105; CIS 120 (or computer competency test); choose either (BA 214 or WR 121); and choose either (AH 105 or MTH 105 or a higher math course).

Corequisites: MA 111.

First of two classes that introduce key cognitive, psychomotor and affective competencies related to the clinical responsibilities of the medical assistant as identified by the CAAHEP and the MAERB. Covered concepts include application of standard precautions and infection control, patient preparation and education, performance of vital signs, delivery of oral and parenteral medications, vision screening and application of skills to begin assisting with medical exams and procedures. Math component includes basic skills in preparation for understanding and calculating medication dosage. Body structure, function, pathology, and medical terminology are reviewed in relationship to their impact on various body systems.

MA 111 Introduction to Professional Medical Assisting (5 Credits)

Corequisites: MA 110.

First of two classes that introduce key competencies related to office practices and administrative responsibilities of the medical assistant as defined by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Medical Assisting Educational Review Board (MAERB). Includes concepts related to professionalism, diversity, confidentiality, written and oral communication, application of telephone techniques, legal concepts, introductory scheduling and triage skills, and office safety. See MA 110 for Medical Assisting program prerequisites.

MA 120 Clinical Medical Assisting II (7 Credits)

Prerequisites: MA 110 and MA 111.

Corequisites: MA 121.

Second of two classes covering key cognitive, psychomotor and affective competencies related to clinical responsibilities of the medical assistant as identified by the CAAHEP and the MAERB. Students will expand skills required to assist with diagnostic testing, outpatient procedures, and office-based lab testing. Students will demonstrate greater mastery of concepts such as standard precautions, infection control, medical and surgical asepsis, patient preparation, and delivery of oral and parenteral medications. Math components include basic skill review in preparation for understanding, calculating, and delivering oral and parenteral medications. Body structure, function, pathology, and medical terminology are reviewed in relationship to their impact on various body systems.

MA 121 Administrative Medical Assisting (5 Credits)

Prerequisites: MA 110 and MA 111.

Corequisites: MA 120.

Second of two courses that cover key competencies related to office practices and administrative responsibilities of the medical assistant as identified by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Medical Assisting Educational Review Board (MAERB). Includes concepts related to coding, billing, accounting, insurance, electronic medical records, practice management systems, office management and administrative communication.

MA 137 Application of Professional Medical Assisting (4 Credits)

Prerequisites: MA 110; MA 111; MA 120; MA 121; MA 140; and MA 150.

Corequisites: MA 147.

Final medical assisting lecture and lab class focusing on skills related to specialty practice, office management, national exam passage and job acquisition. Topics include assisting with specialty exams, management tools, and specialty-specific diagnostic procedures and treatments. Students will prepare resumes and practice job interview skills. National exam material is reviewed.

MA 140 Nutrition, CPR and First Aid for Medical Assistants (3 Credits)

Prerequisites with concurrency: MA 110.

This class is designed to cover key competencies for medical assistants related to nutritional interventions and office-based emergencies as identified by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Medical Education Review Board (MAERB). Students have the opportunity to obtain provider level CPR and first aid cards that meet MA program requirements during the course of this class.

MA 147 Medical Assistant Practicum I (5 Credits)

Prerequisites: instructor approval; see MA 137 for prerequisites.

Corequisites: MA 137.

The clinical practicum is a required, supervised, unpaid learning experience, which takes place on site at a prearranged clinical facility. It provides students with the opportunity to perform clearly identified competencies within the clinical setting. Students must have a total of five clinical credits. A minimum of 160 hours in the clinical setting is required. Students must be available during all potential weekday hours indicated in the class schedule to attend practicum as placements become available. Students must be able to provide transportation to sites in Central Oregon. Students must have updated adult/infant/child CPR and First Aid cards as well as updated background checks and immunization required by practicum sites. P/NP grading.

MA 150 Pharmacology for Medical Assistants (3 Credits)

Prerequisites with concurrency: MA 110.

This course introduces medical assistant students to the general principles of pharmacology as required by the standards adopted by the American Association of Medical Assistants (AAMA) and the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Drugs are discussed in the context of drug classes, mechanics of action, disease types and body systems. The goal is to provide medical assistants with sufficient background information so that they will be able to play a key role avoiding dispensing errors, as well as a basic understanding of pharmacologic categories and factors affecting drug kinetics.

MA 188 Special Studies: Medical Assisting (1-4 Credits)

Explores topics of current interest in the discipline.

MA 199 Selected Topics: Medical Assistant (1-4 Credits)

This course is in development.

MA 280 Co-op Work Experience Medical Assisting (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

MA 298 Independent Study: Medical Assisting (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Medical Assistant - One Year Certificate of Completion (CC1)

Description

The Medical Assistant One Year Certificate is a four term program that trains individuals to assist with clinical and administrative procedures in outpatient medical settings under the direction of a health care provider. Medical Assistant prefix (MA) courses begin once per year in the fall. All program courses offered each term must be taken together and in sequence. Upon successful completion of the program, students receive a one year certificate of completion from COCC and are eligible to submit an application to sit for the AAMA Certified Medical Assistant (CMA) certification examination. Upon passing the AAMA exam, medical assistants earn the CMA.

Learning Outcomes

1. Apply foundations of clinical practice to provide evidence-based, quality care for patients.
2. Implement concepts of applied communication to optimize patient care and promote positive interactions in the professional environment.
3. Utilize knowledge of medical business practices in the provision of patient care and services.
4. Demonstrate medical law and ethics in the application of medical assisting practice.
5. Implement safety and emergency practices in the course of patient care delivery and outpatient practice.
6. Display characteristics key to the provision of safe, quality patient care.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - A high school diploma, GED, or a high school transcript noting successful graduation.
 - Completion of all prerequisite classes with a grade of "C" or better.

Other Entrance Requirements

- Required:
 - Must be 18 years of age or older.
 - Criminal History Check and 10-Panel Drug Screen with vendor chosen by COCC. See COCC's medical assistant website (<https://www.cocc.edu/programs/medical-assistant/additional-requirements.aspx>) for more information.
 - Documentation of current immunizations: TB Blood Titer, MMR, Hep B, Varicella, Tdap, Flu.
 - American Heart Association Basic Life Support for Healthcare Providers" CPR (BLS) and first aid training will need to be completed prior to entrance into practicum if not completed in MA 140 Nutrition, CPR and First Aid for Medical Assistants. Students will be given the option to complete both CPR and first aid certification in MA 140 Nutrition, CPR and First Aid for Medical Assistants.
 - Additional immunizations, tracking fees or background checks may be required by practicum sites at the student's expense.

- Refer to COCC's medical assistant program technical standards (https://www.cocc.edu/programs/medical-assistant/ma_technical_standards.aspx) (physical, medical, safety, and other requirements that an individual must meet in order to be eligible for admission) for more information.

Re-entry

- Students who leave or are dropped from the program may re-enter the next fall with the permission of the program director. In rare cases, a student may re-enter at a different point in the program on a space available basis and with permission from the director of the program. Students may be required to repeat demonstrations of previous competencies to ensure they retained the required skills and knowledge to progress in the program.

Additional Program Costs

Material Costs

Due to the rapidly changing nature of health care and associated costs, the following are only estimates and are subject to change.

- Stethoscope \$30
- Blood pressure cuff \$20
- Uniform and watch with second hand \$75
- Immunizations & titers \$0-685 (some may be covered by insurance or subsidized by other funding sources)
- Immunizations tracking \$10
- Criminal background check \$65
- Urine drug screen \$45
- Tracking fee for students rotating through St. Charles \$36.50

Enrollment Fees

- Lab fees \$ 665-765

Course Requirements

Course	Title	Credits
Prerequisite Courses		
AH 105 or MTH 105	Calculations for Allied Health ¹ Math in Society	3-4
AH 114	Intro to Pathophysiology ²	5
BI 105	Essentials of Human Biology ³	3
BA 214 or WR 121	Business Communications Academic Composition	3-4
CIS 120	Computer Concepts (Computer Competency Exam)	0-4
Core Courses		
MA 110	Intro to Clinical Med Assist	7
MA 111	Introduction to Professional Medical Assisting	5
MA 120	Clinical Medical Assisting II	7
MA 121	Administrative Medical Assisting	5
MA 137	Applic of Prof Med Assist	4
MA 140	Nutrition, CPR and First Aid for Medical Assistants	3
MA 147	Medical Assisting Practicum	5
MA 150	Pharmacology for Medical Assistants	3
Other Required Courses		
AH 115	Cultural Responsiveness in AH	3-4

or PSY 215 Developmental Psychology

Total Credits 56-63

- ¹ Or a higher math course than MTH 105 Math in Society.
- ² Will accept (AH 111 Medical Terminology I and AH 112 Medical Terminology II and AH 113 Introduction Study of Disease).
- ³ Will accept (BI 231 Human Anatomy and Physiology I and BI 232 Human Anatomy and Physiology II and BI 233 Human Anatomy and Physiology III) or (BI 121 Anatomy and Function I and BI 122 Anatomy and Function II).

Advising Notes

Program (MA) courses begin once per year in fall term. Students wishing to register in the fall MA cohort must meet the basic prerequisite competencies and may register according to seat availability on a first-come, first-served basis, determined by the priority registration schedule.

This certificate is designed for students planning to enter their chosen career upon graduation. Often, only selected credits are considered transferable to public or private baccalaureate institutions.

Students are encouraged to choose the prerequisite pathway the best meets their goals from the following three options :

1. A rapid pathway for direct entry into the field. Prerequisites are condensed and focused on the needs of the students seeking CTE coursework (Total prerequisite credits 14-18).
 - a. AH 114 Introduction to Pathophysiology
 - b. AH 105 Calculations for Allied Health
 - c. BA 214 Business Communications
 - d. BI 105 Essentials of Human Biology
 - e. CIS 120 Computer Concepts or Computer Competency Test
2. A pathway with more transferable credits for those pursuing advanced degrees (Total prerequisite credits 25-29).
 - a. AH 114 Introduction to Pathophysiology
 - b. MTH 105 Math in Society or higher math
 - c. WR 121 Academic Composition
 - d. BI 231 Human Anatomy and Physiology I, BI 232 Human Anatomy and Physiology II and BI 233 Human Anatomy and Physiology III
 - e. CIS 120 Computer Concepts or Computer Competency Test
3. A single-course option for students who have completed the COCC Nursing AAS prerequisites (BI 231 Human Anatomy and Physiology I, BI 232 Human Anatomy and Physiology II, BI 233 Human Anatomy and Physiology III, CIS 120 Computer Concepts or Computer Competency Test, MTH 105 Math in Society, and WR 121 Academic Composition).
 - a. AH 114 Introduction to Pathophysiology

When possible, students opting for the rapid prerequisite pathway are encouraged to start prerequisite classes by spring term versus trying to complete all prerequisites during summer term.

Students who have time to complete the Human Relations requirement (AH 115 Cultural Responsiveness in Allied Health or PSY 215 Developmental Psychology) prior to entering core program classes, are encouraged to do so. The Human Relations requirement can technically be completed any time prior to completion of the certificate.

Students can substitute:

- Math classes higher than MTH 105 Math in Society to meet the math requirement.
- AH 111 Medical Terminology I, AH 112 Medical Terminology II, and AH 113 Introduction Study of Disease for AH 114 Introduction to Pathophysiology.
- BI 231 Human Anatomy and Physiology I, BI 232 Human Anatomy and Physiology II, and BI 233 Human Anatomy and Physiology III OR BI 121 Anatomy and Function I and BI 122 Anatomy and Function II for BI 105 Essentials of Human Biology.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
- Additional Requirements:
 - Students must maintain an average of 75% on tests and 75% overall in each class to progress to subsequent core program classes. Students must pass 75% of lab skills check-offs on the first attempt to progress to subsequent core program classes. Students must demonstrate medication administration proficiency through a high score on a drug calculation exam prior to entering practicum. Students must complete 100% of psychomotor and affective competencies as identified by the program's accrediting body and complete a minimum of 160 hours of practicum to complete the program.

Sample Plan

First Year		Credits
Summer		
AH 105 or MTH 105	Calculations for Allied Health Math in Society	3-4
AH 114	Intro to Pathophysiology	5
BA 214 or WR 121	Business Communications Academic Composition	3-4
BI 105	Essentials of Human Biology	3
CIS 120	Computer Concepts (computer competency test)	0-4
Credits		14-20
Second Year		
Fall		
MA 110	Intro to Clinical Med Assist	7
MA 111	Introduction to Professional Medical Assisting	5
MA 150	Pharmacology for Medical Assistants	3
Credits		15
Winter		
MA 120	Clinical Medical Assisting II	7
MA 121	Administrative Medical Assisting	5
MA 140	Nutrition, CPR and First Aid for Medical Assistants	3
Credits		15
Spring		
MA 137	Applic of Prof Med Assist	4
MA 147	Medical Assisting Practicum	5

AH 115 or PSY 215	Cultural Responsiveness in AH Developmental Psychology	3-4
	Credits	12-13
	Total Credits	56-63

Music

The music discipline at COCC offers classes that increase understanding and skill. It serves as a stepping stone for students interested in a transfer degree as well as those who want to develop their talents as instrumental and vocal musicians. It also plays a vital role in our local community, offering performances by the Central Oregon Symphony, the Cascade Chorale, the College Choir, Central Singers Vocal Jazz Ensemble, Cascade Winds and Big Band Jazz. Whether you enjoy music as a performer or listener, the music program at COCC offers something for you.

<https://www.cocc.edu/programs/music/> (<https://www.cocc.edu/programs/music/default.aspx>)

Contact:

Colette Hansen
541-383-7510
Pence Hall

Department: Fine Arts and Communication
Department Chair: Michael Gesme
Department Administrative Assistant: Colette Hansen

Programs

Transfer

- Music - Associate of Arts Oregon Transfer (AAOT) (p. 246)

Courses

MUP 105 Jazz Combo (2 Credits)

Performance of wide range of jazz styles in a small-group setting with an emphasis on developing knowledge and skills in improvising. Students should have some previously developed proficiency on an instrument or voice. May be repeated, no limit.

MUP 111 Woodwind Ensemble (2 Credits)

Prerequisites: instructor approval.

The study and performance of chamber music for woodwind instruments in an ensemble such as a woodwind or a clarinet quartet. May be repeated, no limit.

MUP 114 Vocal Ensemble (2 Credits)

A select group of singers that focuses on various jazz idioms: blues, funk, Latin and straight-ahead. Enrollment is by audition. Recommended to be taken with MUS 197A, College Choir. Contact choral program director for information about required audition. May be repeated, no limit.

MUP 146 String Ensemble (2 Credits)

Prerequisites: Instructor approval.

Study and performance of chamber music for bowed string instruments in a group such as string quartet or for string ensembles including a keyboard instrument. May be repeated, no limit.

MUP 171 Applied Piano (1 Credit)

Prerequisites: Instructor approval.

Provides individual private piano instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to piano performance. Additional fee required. Repeatable for credit.

MUP 174 Applied Voice (1 Credit)

Prerequisites: Instructor approval.

Provides individual private voice instruction. Develops applied performance skills using repertory and pedagogical techniques from classical, jazz and popular traditions. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, diction, sight-reading and other aspects of musicianship as applied to vocal performance. Additional fee required. Repeatable for credit.

MUP 175 Applied Violin (1 Credit)

Prerequisites: Instructor approval.

Provides individual private violin instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to violin performance. Additional fee required. Repeatable for credit.

MUP 176 Applied Viola (1 Credit)

Prerequisites: Instructor approval.

Provides individual private viola instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to viola performance. Additional fee required. Repeatable for credit.

MUP 177 Applied Cello (1 Credit)

Prerequisites: Instructor approval.

Provides individual private cello instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to cello performance. Additional fee required. Repeatable for credit.

MUP 178 Applied Bass (1 Credit)

Prerequisites: Instructor approval.

Provides individual private bass instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to bass performance. Additional fee required. Repeatable for credit.

MUP 180 Applied Guitar (1 Credit)

Prerequisites: Instructor approval.

Provides individual private guitar instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical, jazz and popular traditions. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to guitar performance. Additional fee required. Repeatable for credit.

MUP 181 Applied Flute (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private flute instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to flute performance. Additional fee required. Repeatable for credit.

MUP 182 Applied Oboe (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private oboe instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to oboe performance. Additional fee required. Repeatable for credit.

MUP 186 Applied Trumpet (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private trumpet instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to trumpet performance. Additional fee required. Repeatable for credit.

MUP 187 Applied French Horn (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private French horn instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to French horn performance. Additional fee required. Repeatable for credit.

MUP 188 Applied Trombone (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private trombone instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to trombone performance. Additional fee required. Repeatable for credit.

MUP 271 Applied Piano (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private piano instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to piano performance. Additional fee required. Repeatable for credit.

MUP 274 Applied Voice (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private voice instruction. Develops applied performance skills using repertory and pedagogical techniques from classical, jazz and popular traditions. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, diction, sight-reading and other aspects of musicianship as applied to vocal performance. Additional fee required. Repeatable for credit.

MUP 276 Applied Viola (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private viola instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to viola performance. Additional fee required. Repeatable for credit.

MUP 277 Applied Cello (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private cello instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to cello performance. Additional fee required. Repeatable for credit.

MUP 280 Applied Guitar (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private guitar instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical, jazz and popular traditions. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to guitar performance. Additional fee required. Repeatable for credit.

MUS 101 Music Fundamentals (3 Credits)

Presents the fundamentals of music making, including notation of pitch, rhythm, music terminology, scales, key signatures, intervals and chord spelling. Requires no previous musical experience. This course is an ideal preparation for students who intend to enroll in MUS 111, Music Theory. Students interested in learning about music history, styles and composers (Baroque, Classical, Romantic, etc.) should consider MUS 201, MUS 202 or MUS 203.

MUS 111 Music Theory IA (3 Credits)**Recommended preparation:** MUS 101; recommended to be taken with MUS 114.

Harmony of the common-practice period with attention to part writing, and analysis. An entrance placement exam will be given during the first class session. This sequence of courses should be taken by all students who intend to major or minor in music.

MUS 112 Music Theory IB (3 Credits)**Recommended preparation:** MUS 111; recommended to be taken with: MUS 115.

Harmony of the common-practice period with attention to part writing and analysis.

MUS 113 Music Theory IC (3 Credits)**Recommended preparation:** MUS 112; recommended to be taken with: MUS 116.

Harmony of the common-practice period with attention to part writing and analysis.

MUS 114 Musicianship IA (2 Credits)

Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work. Recommended to be taken with: MUS 111.

MUS 115 Musicianship IB (2 Credits)

Recommended preparation: MUS 114; recommended to be taken with MUS 112.

Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work.

MUS 116 Musicianship IC (2 Credits)

Recommended preparation: MUS 115; recommended to be taken with MUS 113.

Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work.

MUS 123 Opera Performance (1 Credit)

Study, rehearsal and performance of operas for vocalists, instrumentalists and production technicians. An audition is required before enrollment. May be repeated, no limit.

MUS 131 Piano Class I (2 Credits)

Teaches fundamentals of piano performance in a class format.

MUS 132 Piano Class II (2 Credits)

Teaches fundamental piano skills in a class format.

MUS 133 Piano Class III (2 Credits)

Teaches fundamental piano skills in a class format.

MUS 134 Voice Class I (2 Credits)

Teaches fundamentals of vocal performance in a class format.

MUS 135 Voice Class II (2 Credits)

Teaches fundamental vocal skills in a class format.

MUS 136 Voice Class III (2 Credits)

Teaches fundamental vocal skills in a class format.

MUS 137 Class Guitar I (2 Credits)

Teaches fundamentals of guitar performance in a class format.

MUS 138 Class Guitar II (2 Credits)

Teaches fundamental guitar skills in a class format.

MUS 139 Class Guitar III (2 Credits)

Teaches fundamental guitar skills in a class format.

MUS 161 Jazz Improvisation (2 Credits)

Introduces students to jazz improvisation in a laboratory (performance) setting. No previous experience or knowledge about jazz or improvisation necessary. Students should have some previously developed proficiency on an instrument or voice. May be repeated, no limit.

MUS 188 Special Studies: Music (1-4 Credits)

MUS 194 Big Band Jazz (1 Credit)

Study and performance of music for large jazz band. One major concert is presented each term. May be repeated, no limit. Contact ensemble conductor for information about required audition.

MUS 195 Concert Band (1 Credit)

Study and performance of music for the concert band. One major concert is presented each term. May be repeated; no limit. Contact ensemble conductor for information about required audition.

MUS 196 Symphony (1 Credit)

The study and performance of music for symphony orchestra. One major concert is presented each term. May be repeated, no limit. Contact ensemble conductor for information about required audition.

MUS 197 Cascade Chorale (1 Credit)

Study, rehearsal and performance of choral literature. Meets Tuesday evenings and welcomes both college students and community members. Performs a major concert each term. May be repeated; no limit. Please note: purchase of concert dress outfit required. Contact choral program director for information about required audition.

MUS 197A College Choir (2 Credits)

Focuses on preparation and performance of choral literature from a wide variety of styles and periods. Performs one major concert each term and occasionally other concerts off campus. May be repeated, no limit.

MUS 199 Selected Topics: Music (1-3 Credits)

This course is in development.

MUS 201 Understanding Music (3 Credits)

Introduces the history of Western fine-art music and its literature. Encompasses the study of musical vocabulary, style, form, principal composers and the historical development of music in various style periods. The content of each course varies somewhat from term to term, but typically MUS 201 covers Medieval, Renaissance, Baroque and Classical era music while MUS 202 discusses music and composers from the Romantic, 20th century and Contemporary periods. MUS 203 typically diverges from Western fine-art music and focuses on various musical styles from around the world. The classes need not be taken in sequence and do not require any previous musical experience. Students interested in learning how to read musical notation (rhythm, notes) should enroll in MUS 101.

MUS 202 Understanding Music (3 Credits)

Introduces the history of Western fine-art music and its literature. Encompasses the study of musical vocabulary, style, form, principal composers and the historical development of music in various style periods. The content of each course varies somewhat from term to term, but typically MUS 201 covers Medieval, Renaissance, Baroque and Classical era music while MUS 202 discusses music and composers from the Romantic, 20th century and Contemporary periods. MUS 203 typically diverges from Western fine-art music and focuses on various musical styles from around the world. The classes need not be taken in sequence and do not require any previous musical experience. Students interested in learning how to read musical notation (rhythm, notes) should enroll in MUS 101.

MUS 203 Understanding Music (3 Credits)

Introduces the history of Western fine-art music and its literature. Encompasses the study of musical vocabulary, style, form, principal composers and the historical development of music in various style periods. The content of each course varies somewhat from term to term, but typically MUS 201 covers Medieval, Renaissance, Baroque and Classical era music while MUS 202 discusses music and composers from the Romantic, 20th century and Contemporary periods. MUS 203 typically diverges from Western fine-art music and focuses on various musical styles from around the world. The classes need not be taken in sequence and do not require any previous musical experience. Students interested in learning how to read musical notation (rhythm, notes) should enroll in MUS 101.

MUS 205 Introduction to Jazz History (3 Credits)

Introduction to the history of jazz. Major styles and significant jazz artists are studied in depth. No previous musical knowledge required.

MUS 207 History of Rock Music (3 Credits)

Students will learn the history of rock music from its beginnings in earlier forms of popular music to the present; to understand the relationship of this music to larger cultural, political, and economic formations; and to become familiar with aspects of musical structure that have been used in rock music. Students will communicate their knowledge through participation with discussion groups, activities, listening examples, and a written project about an artist or rock band that came out of Rock Music.

MUS 211 Music Theory IIA (3 Credits)

Recommended preparation: MUS 113; recommended to be taken with MUS 214.

A continuation of common-practice period harmony (Music Theory I) with stress on chromatic resources, musical form, and style analysis including an introduction to harmonic practices of the 20th and 21st centuries.

MUS 212 Music Theory IIB (3 Credits)

Recommended preparation: MUS 211; recommended to be taken with MUS 215.

A continuation of common-practice period harmony (Music Theory I) with stress on chromatic resources, musical form, and style analysis including an introduction to harmonic practices of the 20th and 21st centuries.

MUS 213 Music Theory IIC (3 Credits)

Recommended preparation: MUS 212; recommended to be taken with MUS 216.

A continuation of common-practice period harmony (Music Theory I) with stress on chromatic resources, musical form, and style analysis including an introduction to harmonic practices of the 20th and 21st centuries.

MUS 214 Musicianship IIA (2 Credits)

Recommended preparation: MUS 116; recommended to be taken with MUS 211.

Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work.

MUS 215 Musicianship IIB (2 Credits)

Recommended preparation: MUS 214; recommended to be taken with MUS 212.

Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work.

MUS 216 Musicianship IIC (2 Credits)

Recommended preparation: MUS 215; recommended to be taken with MUS 213.

Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work.

MUS 280 Co-op Work Experience Music (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

MUS 298 Independent Study: Music (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Music - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer (AAOT) degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. An AAOT with a focus on music includes many of the core courses typically required during the first two years of a program leading to a bachelor's degree in music.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While the music program has no formal entrance requirements, individual courses may have prerequisites and individual ensembles may have audition requirements, which must be met prior to enrollment. Consult with individual ensemble directors for audition information.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses chosen from at least two prefixes		9-12
Recommend: MUS 101, MUS 201, MUS 111		²
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		³ 39
Total Credits		90-106

- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² Additional MUS courses are related courses to consider and will be applied to the AAOT as elective credits.
- ³ Music majors should participate in a performing ensemble each term and take Musicianship IA, IB, IC, IIA, IIB and IIC, Music Theory IA, IB, IC, IIA, IIB and IIC and have proficient keyboard skills, which can be gained by taking Piano Class I, II and III.

Advising Notes

MUS 201 Understanding Music, MUS 202 Understanding Music and MUS 203 Understanding Music, while not required, are excellent survey courses of music history, providing a solid background for future in-depth studies of music history.

Private lessons, (applied voice, violin, trombone, et cetera), while not required for the AAOT degree, are an integral part of the music major. Studying with a private teacher will foster individual growth, technique development, provide a solid background in solo repertoire, proper language enunciation as well as in-depth studies of music genres.

A second year of a world language is also recommended.

All music schools have slightly different requirements and expectations of their music majors. While it is true that an Oregon college or university will accept the AAOT degree as a package, which allows students to transfer with junior class status, most music schools will not accept a direct transfer of credits for courses intended specifically for music majors, such as Music Theory. Instead, they will test students upon arrival to see what they have learned in their previous courses and then place them at the appropriate level for their program. It has been our experience that students who perform well in COCC music theory and musicianship courses regularly meet or exceed the requirements to continue on with the next level of study at the transfer institution (i.e., students who have completed the first year of theory typically test into the second year of theory at their new school).

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters	3-4
Mathematics: (p. 399)	4
Oral Communication: (p. 399)	3-4
WR 121	Academic Composition
	Credits
	14-16
Second Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Elective	3
Health (3 credits with HHP or HHPA prefix)	¹ 3

WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		16-18
Third Term		
Discipline Studies Arts & Letters		3-4
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4
Elective		4
Credits		17-21
Fourth Term		
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4
Elective		4
Credits		14-17
Fifth Term		
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4
Elective		4
Credits		14-17
Sixth Term		
Discipline Studies Science/Math/Computer Science		3-5
Elective		4
Elective		4
Elective		4
Credits		15-17
Total Credits		90-106

Nursing

Nursing is a diverse health care profession focused on the care of individuals, families, and communities. COCC offers both the curriculum to prepare students to transfer into a bachelor's degree program as well as the training required to sit for exams to be a licensed practical nurse (LPN) or registered nurse (RN) and enter a nursing career immediately upon licensure.

<https://www.cocc.edu/programs/nursing/> (<https://www.cocc.edu/programs/nursing/default.aspx>)

Contact:

Jane Morrow
541-383-7417
Health Careers Center, Bend Campus

Department: Nursing
Department Chair: Jane Morrow

Programs

Career and Technical Education

- Nursing (RN) - Associate of Applied Science (AAS) (p. 249)
- Practical Nursing - Two Year Certificate of Completion (CC2) (p. 253)

Transfer

- Nursing - Associate of Arts Oregon Transfer (AAOT) (p. 251)

Courses

NUR 088 Special Studies: Nursing (1-8 Credits)

Allows nursing students to pursue a special content area. Special study arrangements must be made through the nursing program coordinator.

NUR 099 Special Topics: Nursing (1-8 Credits)

This course is in development.

NUR 106 Nursing I (12 Credits)

Prerequisites: department approval based on admission to the nursing program.

Introduces fundamental concepts of nursing practice including nursing process, critical thinking, therapeutic communication, and cultural considerations. Students will have the opportunity to begin learning about patients with altered states of health. Students will become familiar with the major drug classifications and develop a working knowledge of pharmacological principles. The skills lab focuses on assessment and development of a core set of beginning level nursing skills. The clinical practicum provides students with the opportunity to apply knowledge and clinical skills to the adult patient with basic nursing care needs. First term of the practical nurse sequence and of the nursing program.

NUR 107 Nursing II (10 Credits)

Prerequisites: NUR 106.

Introduces students to the knowledge and skills that are necessary in providing nursing care to individual patients experiencing an altered state of health. The clinical lab focuses on developing skills in the areas of medication administration, intravenous therapy, and simple wound management. The clinical practicum provides students with the opportunity to apply knowledge and clinical skills to the adult patient with medical-surgical nursing needs. Second term of the practical nursing certificate and the nursing degree.

NUR 108 Nursing III (11 Credits)

Prerequisites: NUR 107.

Provides students with the opportunity to obtain the knowledge and skills that are necessary to implement the role of a practical nurse in providing care to acutely ill patients across the lifespan. Concepts of mental health and maternal child nursing are introduced. The ability to communicate effectively, therapeutically and professionally is emphasized. The learning resource center lab focuses on developing skills in parenteral, and nutritional therapies. Students will also complete a simulation experience and a comprehensive assessment of a complete set of core nursing skills from the first year of the Nursing program. The clinical practicum provides the opportunity for patient-centered care based on established standards and contributes to nursing care delivery at the practical nurse level. Final term of the practical nursing certificate and third term of the nursing degree.

NUR 188 Special Studies: Nursing I (1-8 Credits)

Allows first-year nursing students to pursue a special content area in nursing. Special study arrangements must be made through the designated Nursing Department Special Studies Coordinator.

NUR 199 Selected Topics: Nursing I (1-8 Credits)

Presents selected topics of study in the field of nursing offered on a temporary or experimental basis for first year Nursing students.

NUR 206 Nursing IV (11 Credits)

Prerequisites: NUR 108.

Focuses on the integration of knowledge and skills acquired in the first year of the nursing program as the student transitions from the practical nurse to the registered nurse role. Nursing curriculum expands on the concepts of nursing process, caring, holism and professionalism at the registered nurse level. Emphasis is on the development of competency in critical thinking and caring interventions toward individuals and families. The learning resource center lab focuses on the development of higher-level assessment and intravenous medication and fluid therapy. Clinical practicum provides the students with an opportunity to provide holistic, individualized nursing care for complex medical-surgical and mentally ill clients. Fourth term of the nursing degree, first term of the registered nurse sequence.

NUR 207 Nursing V (10 Credits)

Prerequisites: NUR 206.

Introduces community-based nursing care of individuals and families, care of the critically ill patient, as well as maternal child care of the high-risk patient. The nursing curriculum continues to expand on the role of the registered nurse to promote critical thinking and clinical decision-making. Students further develop their skills in patient teaching, patient care planning, and management. A simulation experience allows the students to manage the care of a patient through multiple stages of an illness using a team approach. The clinical practicum focuses on mastering the nursing process to provide and direct holistic and individualized patient care to increasingly complex patients. Students are provided additional experiences in the community-based and mental health settings. Fifth term of the nursing degree, second term of the registered nurse sequence.

NUR 208 Nursing VI (9 Credits)

Prerequisites: NUR 207.

Focuses on refining clinical decision-making skills related to the complex health care needs of patients across the lifespan in a variety of health care settings. Concepts of quality nursing care, legal and ethical issues, professional communication, leadership and management of care, and collaborative practice are addressed in relation to nursing practice. Students participate in a four-week, full-time capstone clinical experience focusing on managing groups of patients or individual patients with high-level needs. The course concludes with a capstone case study presentation and a national board preparation exam. Sixth term of the nursing degree, third term of the registered nurse sequence.

NUR 218 Basic EKG (1 Credit)

Basic three-lead electrocardiograph interpretation. Open to allied health, exercise science, and nursing students.

NUR 280A CWE Nursing I (1-4 Credits)

Prerequisites: admission to the nursing program and certified nursing assistant status and department approval.

Provides an opportunity for first year Nursing students who also possess their CNA license to obtain college credit while providing direct patient care in acute or long-term care facility. P/NP grading.

NUR 280B CWE Nursing II (1-4 Credits)

Prerequisites: admission to the nursing program and LPN status and department approval.

Provides an opportunity for second year Nursing students who also possess their LPN license to obtain college credit for providing direct patient care while employed in a long-term or acute-care facility. P/NP grading.

NUR 288 Special Studies: Nursing (1-8 Credits)

Allows second-year nursing students to pursue a special content area in nursing. Special study arrangements must be made through the Nurse Administrator.

NUR 298 Independent Study: Nursing (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

NUR 299 Selected Topics: Nursing (1-3 Credits)

Presents selected topics of study in the field of nursing offered on a temporary or experimental basis for second year Nursing students.

Nursing (RN) - Associate of Applied Science (AAS)

Description

The Nursing Associate of Applied Science degree provides students with preparation to be a registered nurse (RN).

Learning Outcomes

1. Nurse as Health Promoter and Care Provider: Apply the nursing process to provide holistic, individualized, and clinically competent patient care within family and community context across the care continuum.
2. Nurse as Care Manager: Deliver nursing care to diverse patient and family populations demonstrating organization, time management, delegation, supervision, and leadership in nursing practice.
3. Nurse as Professional Colleague: Model professional behaviors within the scope of practice of the registered nurse.
4. Nurse as Quality Care Advocate: Integrates concepts of evidence-based practice and quality improvement to enhance patient care outcomes.
5. Nurse as User of Technology and Informatics: Integrates science with technology to identify, synthesize, and communicate data to inform nursing practice.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - This program has selective admission based on the nursing program application, scores from the Test of Essential Academic Skills (TEAS-V)[™], Health Sciences Reasoning test (HSRT), and completion of program prerequisite courses.
 - Applications are accepted annually during spring term for admission to the nursing program the following fall term.
 - Must be completed with a "C" grade or better, with a cumulative GPA of 3.0 or higher.
 - BI 231 Human Anatomy and Physiology I
 - BI 232 Human Anatomy and Physiology II

- BI 233 Human Anatomy and Physiology III
- BI 234 Microbiology
- MTH 105 Math in Society (or higher)
- WR 121 Academic Composition
- CIS 120 Computer Concepts or Computer Competency Test
- Chemistry, biology (anatomy and physiology and microbiology) and computer and information systems courses must be no older than five years at the time of application.
- Recommended:
 - Students are recommended to complete the following courses prior to admission to be better prepared for nursing courses and because points are awarded for completion of these additional courses during the application process. Students must complete these courses with a "C" grade or better.
 - CH 104 Introduction to Chemistry I or CH 221 General Chemistry I
 - FN 225 Human Nutrition or HHP 240 Science of Nutrition
 - PSY 215 Developmental Psychology
 - WR 122 Argument, Research, and Multimodal Composition or WR 227 Technical Writing

Other Entrance Requirements

- Required:
 - Must have in-district residency status.
 - Must provide documentation of completion of immunizations and screenings listed on COCC's nursing program web site (<https://www.cocc.edu/programs/nursing/default.aspx>).
 - Must have current healthcare provider CPR certification (and must be maintained throughout the duration of the program).
 - Complete Criminal History Checks (CHC) as a condition of acceptance into the nursing program; see COCC's nursing program web site (<https://www.cocc.edu/programs/nursing/default.aspx>) for details.
 - Must complete a 10 panel urine drug screen with Verified Credentials, Inc.

Additional Program Costs

Material Costs

- Nursing textbooks and software \$1,700
- Specialized clothing or uniform \$150
- Tools and equipment \$150
- State exam/licensure fee \$520 (\$160 LPN-OR, \$160 RN-OR, \$200 NCLEX exam cost)
- State fingerprinting fee \$129 (\$64.50 LPN, \$64.50 RN)
- My Clinical Exchange (mCE) \$37.00 first year, \$37.00 second year
- Background check (VCI) & Drug screen (VCI) \$120
- Immunizations & screenings (VCI) \$300
- CPR certification \$90

Enrollment Fees

- Nursing courses \$450 per term fee.

Course Requirements

Course	Title	Credits
Prerequisite Courses		
BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4
BI 234	Microbiology	4
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
MTH 105	Math in Society (or higher)	4
WR 121	Academic Composition	4
Support Courses		
CH 104 or CH 221	Introduction to Chemistry I General Chemistry I	5
FN 225 or HHP 240	Human Nutrition Science of Nutrition	3-4
PSY 215	Developmental Psychology	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Core Courses		
NUR 106	Nursing I	12
NUR 107	Nursing II	10
NUR 108	Nursing III	11
NUR 206	Nursing IV	11
NUR 207	Nursing V	10
NUR 208	Nursing VI	9
Total Credits		103-108

Advising Notes

Students seeking transfer admission into COCC's nursing program must meet with the pre-admission advisor and advanced placement program coordinator to determine eligibility prior to entry. Students transferring out of COCC should know that often only selected credits from a community college program are considered transferrable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.
 - Greater than or equal to a 3.0 cumulative GPA for BI 231 Human Anatomy and Physiology I, BI 232 Human Anatomy and Physiology II, BI 233 Human Anatomy and Physiology III, BI 234 Microbiology, WR 121 Academic Composition and MTH 105 Math in Society (or higher).
 - Once admitted to the Nursing program, students must pass Nursing Theory greater than or equal to a 76.55 percent or 77 percent to pass the Nursing course and pass practicum (LRC and Clinical) to remain in the Nursing program.
- Additional Requirements:

- Must adhere to the Nurse Practice Act of the state of Oregon.
- Additionally, students are required to consistently meet the outcomes, technical standards, policies and/or safety standards of the program and College. Failure to do so may result in probation or removal from the program. It is the COCC student's responsibility to know and abide by the Nursing Program and College policies including Student Rights and Responsibilities (<https://www.cocc.edu/departments/student-life/student-policies.aspx>).

Sample Plan

First Year

Fall		Credits
BI 231	Human Anatomy and Physiology I	4
MTH 105	Math in Society	4
PSY 215	Developmental Psychology	4
WR 121	Academic Composition	4
	Credits	16

Winter

BI 232	Human Anatomy and Physiology II	4
CH 104 or CH 221	Introduction to Chemistry I General Chemistry I	5
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
	Credits	13

Spring

BI 233	Human Anatomy and Physiology III	4
BI 234	Microbiology	4
CIS 120	Computer Concepts	0-4
FN 225 or HHP 240	Human Nutrition Science of Nutrition	3-4
	Credits	11-16

Second Year

Fall		Credits
NUR 106	Nursing I	12
	Credits	12

Winter

NUR 107	Nursing II	10
	Credits	10

Spring

NUR 108	Nursing III	11
	Credits	11

Third Year

Fall		Credits
NUR 206	Nursing IV	11
	Credits	11

Winter

NUR 207	Nursing V	10
	Credits	10

Spring

NUR 208	Nursing VI	9
	Credits	9
	Total Credits	103-108

Nursing - Associate of Arts Oregon Transfer (AAOT)

Description

COCC students may choose from several paths to transfer into upper-division Bachelor of Science in Nursing (BSN) programs. This AAOT path includes nursing school prerequisites for applying to the majority of Oregon's BSN programs.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and

2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Recommend: HHP 295		
Mathematics: (p. 399)		
Choose one course		4
Recommend: MTH 111		
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Recommend: ARH 201 or ARH 202 or ARH 203, ENG 107 or ENG 108 or ENG 109, PHL 202		
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Recommend: ANTH 103, PSY 201, PSY 215, SOC 201		
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Recommend: BI 231, BI 232, BI 233, FN 225 or HHP 240		
Electives		

Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable. ²

Recommend: BI 101, BI 234, CH 104, CIS 120, MTH 243

Total Credits 90-106

- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² Students should take two terms of the same world language. Students who completed two years of the same world language in high school with a "C" or better, may choose 8 elective credits numbered 100+ instead of world language

Advising Notes

Oregon has six baccalaureate degree programs (offered at nine universities or colleges). For specific information, contact the school. The following programs are approved by the Oregon State Board of Nursing.

- Concordia University (<https://admission.cu-portland.edu/info/undergraduate/nursing/>)
- George Fox University (<https://www.georgefox.edu/nursing/nursing-major/>)
- Linfield-Good Samaritan School of Nursing (<https://www.linfield.edu/portland.html>) - also offers an online RN-to-BSN program
- Oregon Health & Science University (OHSU) School of Nursing-Portland (<https://www.ohsu.edu/xd/education/schools/school-of-nursing/>)
- OHSU School of Nursing at Eastern Oregon University (<https://www.eou.edu/ohsu/>)
- OHSU School of Nursing at Oregon Institute of Technology (<https://www.oit.edu/academics/degrees/nursing/>)
- OHSU School of Nursing at Southern Oregon University (<https://www.ohsu.edu/xd/education/schools/school-of-nursing/about/campuses/ashland-campus-page.cfm>)
- OHSU School of Nursing at Western Oregon University (<https://www.ohsu.edu/xd/education/schools/school-of-nursing/about/campuses/monmouth-campus.cfm>)
- University of Portland School of Nursing (<https://nursing.up.edu/>)
- Walla Walla University School of Nursing (<https://www.wallawalla.edu/academics/areas-of-study/nursing/>)

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters (recommend PHL 202)	4
Mathematics (recommend MTH 111)	4
Oral Communication: (p. 399)	3-4
WR 121 Academic Composition	4
Credits	15-16

Second Term

Discipline Studies Arts & Letters (recommend ARH 201 or ARH 202 or ARH 203)	4
Elective (recommend BI 101)	4
Health (recommend HHP 295)	3
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing
	Credits
	15

Third Term

Discipline Studies Science/Math/Computer Science (recommend BI 231)	4
Discipline Studies Social Science (recommend PSY 201)	4
Elective (recommend MTH 243)	4
Elective (recommend CIS 120)	4
	Credits
	16

Fourth Term

Discipline Studies Science/Math/Computer Science (recommend BI 232)	4
Discipline Studies Social Science (recommend PSY 215)	4
Elective (recommend CH 105)	5
Elective (recommend world language course)	4
	Credits
	17

Fifth Term

Discipline Studies Science/Math/Computer Science (recommend BI 233)	4
Discipline Studies Social Science (recommend SOC 201)	4
Elective (recommend BI 234)	4
Elective (recommend world language course)	4
	Credits
	16

Sixth Term

Discipline Studies Science/Math/Computer Science (recommend FN 225 or HHP 240)	3-4
Discipline Studies Social Science (recommend ANTH 103)	4
Discipline Studies Arts & Letters (recommend ENG 107 or ENG 108 or ENG 109)	4
	Credits
	11-12
	Total Credits
	90-92

Practical Nursing - Two Year Certificate of Completion (CC2)

Description

Students admitted to the nursing program can exit after the first year with preparation to be a practical nurse (PN) or after the second year with preparation to be a registered nurse (RN). The Practical Nursing Two Year Certificate qualifies students to take the NCLEX-PN national licensure examination and apply for licensure as a practical nurse (PN) from a state board of nursing. Students who successfully complete the first year of nursing courses may continue into the RN sequence of courses without additional application requirements.

Learning Outcomes

1. Nurse As Health Promoter and Care Provider: Provide patient-centered care based on established standards, and contribute to and participate in nursing care delivery. Communicate effectively, therapeutically, and professionally with a diverse group of individuals.
2. Nurse As Care Manager: Set priorities, organize and deliver nursing care to groups of patients.
3. Nurse As Learner and Teacher: Demonstrate initial steps toward self-directed learning. Participate in the development of patient teaching plans.
4. Nurse As Professional Colleague: Incorporate the PN Scope of Practice in the delivery of patient care.
5. Nurse As Quality Care Advocate: Provide holistic nursing care based on ethical/legal principles of healthcare within the scope of practice of the practical nurse.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - This program has selective admission based on a nursing program application, scores from the Test of Essential Academic Skills (TEAS-V)[™], short-answer essay questions, and completion of program prerequisite courses.
 - Applications are accepted annually during spring term for admission to the nursing program the following fall term.
 - Must be completed with a "C" grade or better, with a cumulative GPA of 3.0 or higher:
 - BI 231 Human Anatomy and Physiology I
 - BI 232 Human Anatomy and Physiology II
 - BI 233 Human Anatomy and Physiology III
 - BI 234 Microbiology
 - MTH 105 Math in Society (or higher)
 - WR 121 Academic Composition
 - CIS 120 Computer Concepts or Computer Competency Test
 - Chemistry, Biology (Anatomy and Physiology and Microbiology) and Computer and Information Systems courses must be no older than five years at the time of application.
- Recommended:
 - Students are recommended to complete the following courses prior to admission to be better prepared for nursing courses and because points are awarded for completion of these additional courses during the application process. Students must complete these courses with a "C" grade or better.
 - CH 104 Introduction to Chemistry I or CH 221 General Chemistry I
 - FN 225 Human Nutrition or HHP 240 Science of Nutrition
 - PSY 215 Developmental Psychology
 - WR 122 Argument, Research, and Multimodal Composition or WR 227 Technical Writing

Other Entrance Requirements

- Required:
 - Must have in-district residency status
 - Must provide documentation of completion of immunizations and screenings listed on the web site.
 - Must have current Healthcare provider CPR certification (and must be maintained throughout the duration of the program).

- Complete Criminal History Checks (CHC) as a condition of their acceptance into the Nursing program; see web site for details.
- Must complete a 10 panel urine drug screen with Verified Credentials, Inc.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Nursing textbooks \$1,300
- Specialized clothing or uniform \$150
- Tools and equipment \$150
- State exam/licensure fee \$520 (\$160 LPN-OR, \$200 NCLEX exam cost)
- State fingerprinting fee \$64.50 LPN
- Background check (VCI) & Drug screen (VCI) \$120
- My Clinical Exchange (mCE) \$37.00
- Immunizations & screenings (VCI) \$300
- CPR certification \$90

Enrollment Fees

- Nursing courses \$450 per term fee

Course Requirements

Course	Title	Credits
Prerequisite Courses		
BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4
BI 234	Microbiology	4
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
MTH 105	Math in Society (or higher)	4
WR 121	Academic Composition	4
Support Courses		
PSY 215	Developmental Psychology	4
Core Courses		
NUR 106	Nursing I	12
NUR 107	Nursing II	10
NUR 108	Nursing III	11
Other Required Courses		
Total Credits		61-65

Advising Notes

Students seeking transfer admission into COCC's nursing program must meet with the pre-admission advisor and advanced placement program coordinator to determine eligibility prior to entry. Students transferring out of COCC should know that often only selected credits from a community college program are considered transferable to public or private baccalaureate institutions.

Upon completion of this certificate program, students may continue to the second year of COCC's nursing program or seek admission or advanced placement at other Oregon community colleges with whom COCC has partnerships.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.
 - Greater than or equal to a 3.0 cumulative GPA for BI 231 Human Anatomy and Physiology I, BI 232 Human Anatomy and Physiology II, BI 233 Human Anatomy and Physiology III, BI 234 Microbiology, WR 121 Academic Composition and MTH 105 Math in Society or higher.
 - Once admitted to the Nursing program, students must pass Nursing Theory greater than or equal to a 76.55 percent or 77 percent to pass the Nursing course and pass practicum (LRC and Clinical) to remain in the Nursing program.
- Additional Requirements:
 - Must adhere to the Nurse Practice Act of the state of Oregon.
 - Additionally, students are required to consistently meet the outcomes, technical standards, policies and/or safety standards of the program and College. Failure to do so may result in probation or removal from the program. It is the COCC student's responsibility to know and abide by the Nursing Program and College policies including Student Rights and Responsibilities (<https://www.cocc.edu/departments/student-life/student-policies.aspx>).

Sample Plan

First Term		Credits
BI 231	Human Anatomy and Physiology I	4
MTH 105	Math in Society (higher)	4
WR 121	Academic Composition	4
Credits		12
Second Term		
BI 232	Human Anatomy and Physiology II	4
CIS 120	Computer Concepts (Or Computer Competency Test)	0-4
PSY 215	Developmental Psychology	4
Credits		8-12
Third Term		
BI 233	Human Anatomy and Physiology III	4
BI 234	Microbiology	4
Credits		8
Fourth Term		
NUR 106	Nursing I	12
Credits		12
Fifth Term		
NUR 107	Nursing II	10
Credits		10
Sixth Term		
NUR 108	Nursing III	11
Credits		11
Total Credits		61-65

Nursing Assistant

The nursing assistant area of study prepares students to be certified nursing assistants (CNAs) who are members of a healthcare team who help patients with activities of daily living and other healthcare needs under the direct supervision of a registered nurse (RN) or licensed practical nurse (LPN).

<https://www.cocc.edu/programs/nursing/nursing-assistant-certificate-program> (<https://www.cocc.edu/programs/nursing/nursing-assistant-certificate-program.aspx>)

Contact:

Kari McDaniel
541-383-7586
Health Careers Center, Bend Campus

Department: Nursing
Department Chair: Jane Morrow

Programs

Career and Technical Education

- Nursing Assistant - One Year Certificate of Completion (CC1) (p. 255)

Courses

NUR 103 Nursing Assistant (7 Credits)

Prerequisites: Department approval.

Covers basic nursing assistant level one care and effective communication skills for clients in acute and longterm care facilities. Issues of confidentiality, client rights and role of the nursing assistant are discussed. Students are eligible to sit for the Oregon State Board of Nursing-sanctioned certified nursing assistant level one examination upon satisfactory performance of course outcomes and assessments; and completion of the minimum 155 mandatory student contact hours: 80 hours of lecture/lab and 75 hours of clinical experience. Clinic takes place in acute and long-term care facilities. To enroll in the course, students must hold a current American Heart Association, BLS Provider CPR card, pass a criminal history check, pass a urine drug screen and meet immunization and TB test requirements.

NUR 104 Certified Nursing Assistant: Level 2 (6 Credits)

Prerequisites: NUR 103 and department approval.

Provides an Oregon State Board of Nursing-approved standardized curriculum and competency evaluation for the designation of Certified Nursing Assistant Level 2. This course focuses on technical skills, interpersonal skills and communication, safety, infection control, and documentation with the outcome of demonstrated proficiency in knowledge, skills and abilities in these areas. The course has a clinical component to be scheduled at with a clinical partner. Requires that students hold a current, unencumbered Oregon CNA 1 certificate (verified prior to registration) as well as hold a current American Heart Association BLS Provider CPR card, pass a criminal history check, and meet immunization and TB test requirements (required after registration but prior to class participation).

Nursing Assistant - One Year Certificate of Completion (CC1)

Description

The Nursing Assistant One Year Certificate is a three-term program that trains individuals to perform authorized duties of the nursing assistant in acute care, sub-acute care and skilled nursing facilities and in other health care settings. Upon successful completion of all required courses and related certifications, students will be recognized by the Oregon State Board of Nursing as a Certified Nursing Assistant (CNA), a Certified Nursing Assistant Level 2, and will earn a one year certificate of completion from COCC.

Learning Outcomes

1. Demonstrate knowledge of and ability to apply nursing assistant skills proficiently and appropriately to authorized duties.
2. Identify the hallmarks of and provide holistic care for patients.
3. Communicate professionally and effectively with diverse individuals.

Entrance Requirements

Academic Entrance Requirements

- There are no formal academic entrance requirements for the nursing assistant program.

Other Entrance Requirements

- Required:
 - Documentation of current immunizations (CDC adult schedule) by the assigned due date.
 - Complete Criminal History Checks (CHC) as a condition of enrollment in NUR 103 Nursing Assistant and NUR 104 Certified Nursing Assistant: Level 2.
 - Students must complete a 10-panel urine drug screen, with Verified Credentials, Inc., prior to entry into the nursing assistant program. With the exception of certain prescribed medications, students with a positive drug screen which prevents them from attending clinical, will be disqualified from entering the program. Please refer to the nursing assistant website (<https://www.cocc.edu/programs/nursing/nursing-assistant-certificate-program.aspx>) for more information.
 - Successful acquisition of a current American Heart Association (ILCOR compliant) BLS Provider CPR card by the assigned due date.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Stethoscope \$30
- Uniform \$30-\$80
- Books \$500 per term
- Course and lab packets \$100 per term
- Immunizations & titers \$600
- Immunizations tracking \$10
- Criminal background check \$55
- Urine drug screen \$45
- Nursing Assistant Competency Examination \$106

- Electronic fingerprinting \$65
- AHA BLS Provider CPR card \$60

Course Requirements

Course	Title	Credits
Core Courses		
HD 100CS	College Success	3
HD 109	Effective Job Search Strategies	2
HHP 248 or HHP 210	Health Psychology Intro to Health Care System	3-4
NUR 103	Nursing Assistant	7
NUR 104	CNA Level 2	6
PSY 215	Developmental Psychology	4
Other Required Courses		
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
MTH 020 or MTH 058	Pre-Algebra ¹ Math Literacy I	4
COMM 218	Interpersonal Communication	3
WR 065 or WR 121	Rhetoric/Critical Thinking II ² Academic Composition	4
Total Credits		36-41

¹ Or higher than MTH 058 Math Literacy I.

² Or higher than WR 121 Academic Composition.

Advising Notes

This one year certificate is designed for students planning to enter the workforce upon graduation; most courses are not intended to transfer. However, some courses may be transferable to public or private baccalaureate institutions for students who choose to pursue higher degrees.

The courses in the nursing assistant program should be carefully planned. Students must successfully complete NUR 103 Nursing Assistant in order to take the Oregon State Board of Nursing (OSBN) test to become a Certified Nursing Assistant (CNA). OSBN CNA certification is required for students to participate in NUR 104 Certified Nursing Assistant: Level 2 and both OSBN certifications are required to graduate. NUR 103 Nursing Assistant and NUR 104 Certified Nursing Assistant: Level 2 are approved by the Oregon State Board of Nursing (971-673-0685 or [oregon.gov/OSBN](https://www.oregon.gov/OSBN) (<https://www.oregon.gov/OSBN/Pages/>)).

For patient and personnel safety reasons, students are discouraged from working more than 20 hours or working a night shift during the term(s) they are taking NUR 103 Nursing Assistant and NUR 104 Certified Nursing Assistant: Level 2.

Please contact the nursing assistant program director and/or the CAP Center for questions regarding the program.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

Fall		Credits
HD 100CS	College Success	3
HHP 248 or HHP 210	Health Psychology Intro to Health Care System	3-4
MTH 020 or MTH 058 or higher		4
WR 065 or WR 121 or higher		4
Credits		14-15

Winter

CIS 120	Computer Concepts	0-4
NUR 103	Nursing Assistant	7
PSY 215	Developmental Psychology	4
Credits		11-15

Spring

HD 109	Effective Job Search Strategies	2
NUR 104	CNA Level 2	6
COMM 218	Interpersonal Communication	3
Credits		11
Total Credits		36-41

Outdoor Leadership

Outdoor leadership includes programs which prepare professionals who understand the importance of maintaining natural areas for their power to invoke adventurous, challenging, and educational opportunities. Students may work in positions related to outdoor recreation, outdoor education, adventure education, wilderness therapy, and tourism and leisure.

<https://www.cocc.edu/programs/outdoor-leadership/> (<https://www.cocc.edu/programs/outdoor-leadership/default.aspx>)

Contact:

Tim Peterson
541-383-7421
Mazama Hall, Bend Campus

Department: Health and Human Performance
Department Chair: Jessica Russell

Programs

Transfer

- Outdoor Leadership (OSU Transfer) Emphasis AS - Associate of Science (AS) (p. 259)
- Outdoor Leadership - Associate of Arts Oregon Transfer (AAOT) (p. 261)

Courses

OL 111 Introduction to Outdoor Leadership (3 Credits)

Prerequisites: WR 065 or higher.

Designed to introduce students to the field of outdoor recreation, outdoor education, adventure education, therapeutic recreation, and experiential education. Upon completion of this course, students should have a good understanding of the differences between the subspecialties in the field. Includes the history of programs, an introduction to theories, current topics, career options, and preparation needed for those careers. Course may help students decide if an educational path in outdoor leadership is something they wish to pursue. Guest speakers representing various careers/areas will present their experiences to the class. This course is a recommended foundation for other outdoor leadership program courses.

OL 160 Processing the Experience (2 Credits)

Students will be introduced to a variety of creative processing tools to be used either during or after the experience. The use of a field journal for reflection notes, as well as for processing through creative pursuits like sketching or painting will be introduced, as will group-based processing tools like formal debriefs, creating skits and collaborative art projects.

OL 171 Technical Skills for Outdoor Leadership (2 Credits)

Introduces basic skills, gear, and systems necessary for a variety of outdoor pursuits, including alpine mountaineering, challenge course and rock climbing. Provides an introduction to a variety of skills, with the intention of moving into more guide-oriented courses later in their program. Presents technical skills that will serve as a foundation for the advanced training in specific outdoor disciplines. Introduces gear, such as software (ropes, webbing, harnesses) and hardware (carabiners, friction devices); skills, such as knots, belaying, rappelling; and systems such as anchors, raises, lowers.

OL 194AA Avalanche Level I Training and Companion Rescue (2 Credits)

Introduces the various factors that contribute to avalanche hazard including terrain, weather, snowpack, and the human component (good vs. bad decision making). Avalanche safety equipment such as transceivers, probes and shovels are also presented, with instruction on how to use each of these critical pieces of safety gear. Field time is spent on: 1) developing rescue skills, including transceiver search techniques (single and multiple burial), probing and shoveling; 2) snowpack assessment; and 3) safe travel practices / group travel skills.

OL 194AB Avalanche Level I Refresher (1 Credit)

Recommended preparation: OL 194AA.

This course is designed to review the materials from Avalanche Level I, including the various factors that contribute to avalanche hazard including terrain, weather, snowpack, and the human component (good vs. bad decision making). Avalanche safety equipment such as transceivers, probes and shovels are also reviewed, along with how to use each of these critical pieces of safety gear. Field time is spent practicing transceiver search techniques (single and multiple burial), snowpack assessment (through a 'Test-pit Plus'), and safe travel practices and group travel skills. Students must have completed an Avalanche Level I course within the past five years.

OL 194AC Avalanche Level II (2 Credits)

Recommended preparation: OL 194AA or OL 194AB.

This course is designed to build on the skills developed in an Avalanche Level I course. The various factors that contribute to avalanche hazard including terrain, weather, snowpack, and the human component (good vs. bad decision making) will be reviewed, as will avalanche safety equipment such as transceivers, probes and shovels and their correct use. New material will include use of a field notebook and standardized data recording, as well as completing full pit profiles. Field time is spent practicing and reviewing transceiver search techniques (single and multiple burial), snowpack assessment (through test pit, test pit plus, and full pit), and safe travel practices and group travel skills. Students must have completed an Avalanche Level I or Level I Refresher course within the past five years.

OL 199 Selected Topics: Outdoor Leadership (1-4 Credits)

This course is in development.

OL 207 Seminar in Outdoor Leadership (2 Credits)

This course will help prepare students for entering the job market and/or setting up a professional practicum through the following: where to search for jobs, how to apply and how to interview; and how to prepare professional resumes, cover letters, experience resumes and professional portfolios. Professional development opportunities such as conferences, certifications, trainings, etc. will be discussed, as will current research and trends in employment in fields related to outdoor leadership.

OL 244 Psychology of Risk and Adventure (3 Credits)

Recommended preparation: or to be taken with WR 121.

Introduces students to psychological theories and topics relevant to adventure and risk, including perception, motivation, anxiety, arousal and risk-taking. This course will provide a theoretical and skills-based approach to understanding why the psychological components of risk and adventure play a pinnacle role in outdoor leadership.

OL 251 Wilderness First Aid (1 Credit)

Designed to provide the student with the necessary knowledge and skills to care for an injured or suddenly ill person in a remote location. The methods and protocols presented follow the Wilderness Medical Society guidelines for a 16 hour certification and are specific to a wilderness setting. The Wilderness Medical Society defines wilderness as a remote geographical location more than one hour from definitive care. Open to all and counts as an elective for Outdoor Leadership students.

OL 253 Wilderness Advanced First Aid (3 Credits)

This Course is designed to provide the student with the necessary knowledge and skills to care for an injured or suddenly ill person in a remote location. The methods and protocols presented in this class follow the Wilderness Medical Society guidelines for a 36 hour certification and are specific to a wilderness setting. The Wilderness Medical Society defines wilderness as a remote geographical location more than one hour from definitive care.

OL 255 Outdoor Living Skills (5 Credits)

Educates the student on how to travel safely for extended periods in the backcountry. Presents essentials of life (water, food and shelter/clothing) and how they can be provided in an outdoors setting. Also, discusses navigation, backcountry medicine and wilderness use/wilderness concepts. Lecture, discussion and lab (demonstration, practical application and practice) used. Students conduct one solo overnight and one group weekend outing. This course is a recommended foundation for other outdoor leadership program courses.

OL 263 Basic Wilderness Life Support (5 Credits)

Basic Wilderness Life Support is a wilderness first responder course designed to provide an individual with an in-depth knowledge of wilderness medicine and the basic skills to treat the most common injuries and illnesses encountered in the wilderness. This course is appropriate for those who spend a lot of time in remote locations (professionally or recreationally). The methods and protocols presented in this class follow the Wilderness Medical Society guidelines for a 74 hour certification and are specific to a wilderness setting. The Wilderness Medical Society defines wilderness as a remote geographical location more than one hour from definitive care. Students are required to complete a 1 credit CPR course with certification in order to satisfy the BWLS certification. A specific section of the American heart Association's Healthcare Provider CPR course will be offered exclusively for BWLS students. Registration for the CPR class will be separate from registration for the BWLS class.

OL 271 Facilitating Group Experiences (5 Credits)

Prerequisites: OL 111, OL 263, OL 255 and WR 121.

Introduces the broad concepts of group facilitation and presents the various "generations" of adventure facilitation. Students will become familiar with various models of the facilitation process and how each relates to experiential learning. Coursework integrates introductory concepts of leadership, foundational experiential education theory and the practice of facilitation in a variety of modes, including both high and low elements. Students are responsible for facilitating various group initiatives as a way to further comprehend the concepts presented. Successful students will be prepared to effectively and confidently facilitate groups in a variety of learning environments. This is a foundation course and a recommended preparation for other outdoor leadership program courses.

OL 273 Outdoor Recreation Leadership (5 Credits)

Prerequisites: OL 111, OL 263, OL 255 and WR 121.

This course is designed to provide both theoretical and practical knowledge of group leadership in an outdoor setting. Topics will be presented in lecture, discussed in various leadership scenarios, and then applied in group outings that the students will plan and lead. Special emphasis will be placed on group safety issues and risk assessment/risk management.

OL 280 Co-op Work Experience-OL (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: complete a minimum of three OL classes. Provides practicums by the department in conjunction with the community in outdoor recreation, outdoor education, adventure education, environmental education, experiential education, and wilderness therapy. Students must be approved for enrollment by an HHP-OL advisor before registering for this course. P/NP grading.

OL 294AC Alpine Climbing (3 Credits)

Prerequisites: OL 171, OL 271, OL 273.

Designed to introduce the student to guiding, teaching and leading technical mountain travel with specific emphasis on rock, snow, and ice anchors; glacier travel and crevasse rescue; and climbing steeper snow and ice. Additional relevant topics may also be introduced (e.g., avalanche safety, high altitude).

OL 294CA Canoe Program Instruction and Guiding (3 Credits)

Prerequisites with concurrency: OL 271 and OL 273.

Introduce students to guiding, teaching and leading flat and moving water canoe programs. May also introduce swift water rescue, whitewater techniques, etc.. Students will be instructed on the use of a variety of canoeing equipment and techniques used for travel by canoe within instructing/guiding situations (this course will teach much of the preliminary level material). Topics will include such areas as: water dynamics, rescue, client care and welfare, managing a group setting, risk assessment, as well as specific technical skills. Emphasis will be placed on advanced technical skill development and practical application. Although some time will be spent canoeing, this is not an activity course; all aspects of the course will be designed to teach the basic concepts of leading others in a variety of canoeing situations.

OL 294MB Mountain Bike Guiding and Trail Stewardship (3 Credits)

Prerequisites: OL 271 and OL 273.

This course is designed to instruct the student how to provide a fun and safe guided mountain bike experience to people of all ages through a combination of field lecture and hands-on practice. Students will learn how to teach basic mountain bike skills, design and lead group trips, diagnose trailside mechanical issues and perform basic trailside bike maintenance, and understand the characteristics and importance of sustainable mountain bike trail development and stewardship. The majority of the class time for this course will be spent in the field.

OL 294RC Teaching Rock Climbing (3 Credits)

Prerequisites: OL 171, OL 271 and OL 273.

This course is designed as an introduction to guiding/teaching rock climbing. Students will be instructed on the use of a variety of climbing equipment and techniques used for top-roped and lead climbing in guiding/teaching situations (this course will not teach beginning level material except in how to teach such material to a beginner student/client/friend). Topics will include such areas as: client care and welfare, managing a group setting, risk assessment, as well as technical skills. Emphasis will be placed on group work, discussion and practical application. Although some time will be spent climbing, this is not an activity course; all aspects of the course will be designed to teach the basic concepts of leading others in a variety of rock climbing situations.

OL 294WG Whitewater Raft Guiding (3 Credits)

Prerequisites: OL 271, OL 273 and OL 171.

This course is designed to instruct the student on how to provide a fun and safe whitewater raft experience to people of all ages through a combination of lecture and hands-on practice. Students will learn how to guide paddle rafts and oar rafts, read whitewater, lead group trips, and execute various whitewater rescue techniques. The majority of the class time for this course will be spent in the field, including overnight camping, and a variety of weather conditions may be encountered. A background in camping or outdoor living skills is strongly recommended. Please dress appropriately.

OL 298 Independent Study: OL (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Outdoor Leadership (OSU Transfer) Emphasis AS - Associate of Science (AS)

Description

The COCC outdoor leadership program is grounded in the principles of lifelong learning, environmental stewardship, personal growth and leadership. The program emphasizes experiential methodologies to combine theory and practice in a strong field-based curriculum. Students will develop current and accepted skills, understand comprehensive knowledge and standards in the professional field, while being taught by highly skilled and knowledgeable faculty who exemplify the highest level of standards, integrity and ethics. This associate of science degree is designed for transfer to OSU-Cascades and aligns students with their necessary lower division requirements.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and

2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
Baccalaureate Core		
Skills		
Writing I		
WR 121	Academic Composition	4
Writing II		
WR 122	Argument, Research, and Multimodal Composition	4
Speech		
COMM 111	Fundamentals Public Speaking	4
Mathematics (OSU): (p. 407) ¹		
4		
Fitness		
HHP 295	Health and Fitness	3
Perspectives Courses ^{1,2}		
Choose one course from each of the following categories:		
Physical Science: (p. 408) ¹		4-5
Biological Science: (p. 408) ¹		4-5
Physical or Biological Science: (p. 408) ¹		4-5
Western Culture: (p. 408) ¹		3-4
Cultural Diversity: (p. 408) ¹		4
Literature and the Arts: (p. 409) ¹		3-4
Social Processes and Institutions: (p. 409) ¹		3-4
Difference, Power and Discrimination: (p. 409) ¹		4
Program Requirements		
BA 101	Intro to Business	4
FOR 255	Resource Interpretation	3
OL 111	Introduction to Outdoor Leadership	3
OL 171	OL Technical Skills	2
OL 207	Seminar in Outdoor Leadership	2
OL 244	Psych. of Risk & Adventure	3
OL 255	Outdoor Living Skills	5

OL 263	Basic Wilderness Life Support	5
OL 271	Facilitating Group Experiences	5
OL 273	Outdoor Recreation Leadership	5
OL 280	Co-op Work Experience-OL	2
Choose one guide course from the following list:		3
OL 294AC	Alpine Climbing	
OL 294CA	Canoe Instructing and Guiding	
OL 294MB	Mountain Bike Guiding	
OL 294RC	Teaching Rock Climbing	
OL 294WG	Whitewater Raft Guiding	

Electives

Choose enough elective credits to reach a minimum of 94 overall degree credits.³ 4

Total Credits 94-100

- ¹ Select from the appropriate category in the OSU Baccalaureate Core course list (p. 407).
- ² No more than two courses (or lecture/lab combinations) from any one department may be used by a student to satisfy the Perspectives category of the core. GEO courses listed under Physical Science are considered to be from a different department than GEO courses listed under any other Perspective category.
- ³ Elective courses must be numbered 100 or above and can be any combination of general elective, Career and Technical Education (CTE) courses (12 credits maximum) or CWE/HHPA activity classes (15 credits maximum).

Advising Notes

The OL program models a cohort program, whereby students complete a set of courses each term with a single peer group. It is advised that students complete as much of their general education requirements prior to beginning their OL courses.

Students begin their OL work in the Fall, completing a set of introductory/fundamental courses. Fall is particularly special as students attend class for the entirety of the term, in an outdoor classroom, everyday of the week and complete an 8 day expedition in November. Once students begin in the Fall, they complete a prescribed set of courses in both the following Winter and Spring terms. During Winter term, students work on advanced theory and application courses, gaining more extensive understanding about the practices of professional outdoor leaders. Finally, in Spring, students complete advanced skills courses, aimed at developing students' practice of professional standards within specific activities.

First year completion requirements for enrollment into the second year level include: completion of the OL prefix courses (OL 271 Facilitating Group Experiences, OL 273 Outdoor Recreation Leadership, OL 280 Co-op Work Experience-OL, OL 294 guide course) with a grade of "C" or better; completion of a minimum of 36 college credits made up, in part, by the above courses, appropriate prerequisites. See advisor for details.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

Fall		Credits
BA 101	Intro to Business	4
Mathematics (OSU): (p. 407)		4
Physical Science: (p. 408)		4-5
WR 121	Academic Composition	4
Credits		16-17

Winter

Biological Science: (p. 408)		4-5
COMM 111	Fundamentals Public Speaking	4
Physical or Biological Science: (p. 408)		4-5
WR 122	Argument, Research, and Multimodal Composition	4
Credits		16-18

Spring

Difference, Power and Discrimination: (p. 409)		4
HHP 295	Health and Fitness	3
Literature and the Arts: (p. 409)		3-4
Social Processes and Institutions: (p. 409)		3-4
Credits		13-15

Second Year**Fall**

OL 111	Introduction to Outdoor Leadership	3
OL 171	OL Technical Skills	2
OL 255	Outdoor Living Skills	5
OL 263	Basic Wilderness Life Support	5
Credits		15

Winter

OL 207	Seminar in Outdoor Leadership	2
OL 271	Facilitating Group Experiences	5
OL 273	Outdoor Recreation Leadership	5
Western Culture: (p. 408)		3-4
Credits		15-16

Spring

Cultural Diversity: (p. 408)		4
Elective		4
OL 244	Psych. of Risk & Adventure	3
FOR 255	Resource Interpretation	3
Choose one of the following:		3
OL 294AC	Alpine Climbing	
OL 294CA	Canoe Instructing and Guiding	
OL 294MB	Mountain Bike Guiding	
OL 294RC	Teaching Rock Climbing	
OL 294WG	Whitewater Raft Guiding	
Credits		17

Summer

OL 280	Co-op Work Experience-OL	2
Credits		2
Total Credits		94-100

Outdoor Leadership - Associate of Arts Oregon Transfer (AAOT)

Description

The COCC outdoor leadership program is grounded in the principles of lifelong learning, environmental stewardship, personal growth and leadership. The program emphasizes experiential methodologies to combine theory and practice in a strong field-based curriculum. Students will develop current and accepted skills, understand comprehensive knowledge and standards in the professional field, while being taught by highly skilled and knowledgeable faculty who exemplify the highest level of standards, integrity and ethics.

The general area of outdoor leadership includes specific careers in outdoor recreation, outdoor education, wilderness therapy and tourism and leisure enterprises. A student can earn an AAOT or AS degree with a focus in outdoor leadership at COCC to prepare to transfer to a baccalaureate institution to pursue a higher degree in any one of the areas mentioned above.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits	¹	3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.	²	39

FOR 255	Resource Interpretation
OL 111	Introduction to Outdoor Leadership
OL 255	Outdoor Living Skills
OL 263	Basic Wilderness Life Support
OL 171	OL Technical Skills
OL 207	Seminar in Outdoor Leadership
OL 244	Psych. of Risk & Adventure
OL 271	Facilitating Group Experiences
OL 273	Outdoor Recreation Leadership
OL 280	Co-op Work Experience-OL
OL 294AC	Alpine Climbing
OL 294CA	Canoe Instructing and Guiding
OL 294MB	Mountain Bike Guiding
OL 294RC	Teaching Rock Climbing
OL 294WG	Whitewater Raft Guiding
Total Credits	90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

² Elective courses must be numbered 100 or above and can be any combination of general electives, Career and Technical Education (CTE) courses (12 credits maximum) or CWE/HHPA activity courses (15 credits maximum).

Advising Notes

The Outdoor Leadership AAOT models a cohort program, whereby students complete a set of courses each term with a single peer group. It is advised that students complete as much of their general education requirements prior to beginning their Outdoor Leadership courses.

Students begin their Outdoor Leadership work in the Fall, completing a set of introductory/fundamental courses. Fall is particularly special as students attend class for the entirety of the term, in an outdoor classroom, every day of the week and complete an 8 day expedition in November. Once students begin in the Fall, they complete a prescribed set of courses in both the following Winter and Spring terms. During Winter term, students work on advanced theory and application courses, gaining more extensive understanding about the practices of professional outdoor leaders. Finally, in Spring, students complete advanced skills courses, aimed at developing students' practice of professional standards within specific activities.

First year completion requirements for enrollment into the second year level include: completion of the OL prefix courses (OL 271 Facilitating Group Experiences, OL 273 Outdoor Recreation Leadership, OL 280 Co-op Work Experience-OL, OL 294 guide courses) with a grade of "C" or better; completion of a minimum of 36 college credits made up, in part, by the above courses, appropriate prerequisites. See advisor for details.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
Health (3 credits with HHP or HHPA prefix)		3
Mathematics: (p. 399)		4
Oral Communication: (p. 399)		3-4
WR 121	Academic Composition	4
Credits		14-15
Second Term		Credits
Discipline Studies Arts and Letters		3-4
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		16-22
Third Term		Credits
Discipline Studies Arts and Letters		3-4
Discipline Studies Arts and Letters		3-4
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Discipline Studies Social Science		3-4
Credits		15-21
Fourth Term		Credits
Elective (recommend OL 111)		3
Elective (recommend OL 171)		2
Elective (recommend OL 255)		5
Elective (recommend OL 263)		5
Credits		15
Fifth Term		Credits
Discipline Studies Social Science		3-4
Elective (recommend OL 207)		2
Elective (recommend OL 271)		5
Elective (recommend OL 273)		5
Credits		15-16
Sixth Term		Credits
Discipline Studies Science/Math/Computer Science		3-5
Electives (recommend two of the following):		6
OL 294AC	Alpine Climbing	
OL 294CA	Canoe Instructing and Guiding	
OL 294MB	Mountain Bike Guiding	
OL 294RC	Teaching Rock Climbing	
OL 294WG	Whitewater Raft Guiding	
Elective (recommend OL 244)		3
Elective (recommend OL 280)		2
Elective (recommend FOR 255)		3
Credits		17-19
Total Credits		92-108

Pharmacy Technician

A pharmacy technician is a health care provider who performs pharmacy-related functions under the supervision of a licensed pharmacist. Pharmacy Techs work in a wide variety of settings, including hospitals, clinics, community pharmacies, and other health care agencies. COCC's curriculum was developed using accreditation standards of the American Society of Health-System Pharmacists. Students will have a working knowledge of standards of practice, quality assurance, patient confidentiality and communication skills needed in a professional environment.

<https://www.cocc.edu/programs/pharmacy-tech/> (<https://www.cocc.edu/programs/pharmacy-tech/default.aspx>)

Contact:

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541-383-7554
Health Careers Center 244, Bend Campus

Department: Allied Health
Department Chair: Deborah Malone

Programs

Career and Technical Education

- Pharmacy Technician - One Year Certificate of Completion (CC1) (p. 264)

Courses

AH 105 Calculations for Allied Health (3 Credits)

Prerequisites: MTH 060 (or higher) or minimum placement into MTH 095. Reviews basic mathematical skills required to perform calculations without a calculator. The second portion of the class introduces application of mathematical concepts to solve clinically relevant problems by the student's specific Allied Health program(s). P/NP grading.

AH 114 Introduction to Pathophysiology (5 Credits)

Reviews abnormal pathological changes that occur within individual organs and body systems as the result of a disease process. Disease processes are studied in detail with regard to the cause, pathological features, physical signs and symptoms, diagnostic procedures, current preferred treatment, prognosis and pertinent public health issues. Students will also identify and define medical terms related to all body systems. Designed for Allied Health programs.

AH 115 Cultural Responsiveness in Allied Health (3 Credits)

Prerequisites: WR 121 or BA 214. Highlights the impact of cultural differences on both the patient and the caregiver. Examines the major categories of diversity, language, heritage, biases, and stereotypes and how these might impact patient care. Examines how knowledge of diversity issues can be essential to the caregiver in communication and treatment.

PHM 100 Pharmacy Technician Practice I (5 Credits)

Prerequisites: AH 105 or MTH 105 (or higher math course) or minimum placement into MTH 060; WR 065 (or higher) or BA 214 or minimum placement into WR 121 or WR 121 plus WR 098 Writing Seminar; and BI 105.

Corequisites: PHM 101, PHM 115, PHM 120.

Introduces basic information, techniques and procedures needed to assist the pharmacist in delivery of pharmaceutical products and services. Provides a working knowledge of the many aspects of pharmacy in community, institution and other practice settings. Progressive learning takes place as new information and skill sets are studied throughout the course. Covers the regulatory agencies and laws that affect pharmacy practice. Emphasis is placed on the duties and responsibilities of the pharmacy technician to assist the pharmacist. Explores employment opportunities, interpretation and processing of prescriptions, pharmacy law, standards of practice and orientation to the skills required for the occupation of a pharmacy technician.

PHM 101 Pharmacy Tech Law and Ethics (3 Credits)

Corequisites: PHM 100, PHM 120.

This course orients students to the work of pharmacy technicians. Students learn the concept of direct patient care and the technician's role in its delivery with emphasis on the complementary roles of pharmacists and technicians in both the community and institutional pharmacy setting. Students are introduced to the federal and state laws as well as the standards of practice which govern the practice of pharmacy. Students will be able to identify examples of professionalism in pharmacy and discuss the important areas of the Health Insurance Portability and Accountability Act (HIPAA) as it relates to patient confidentiality.

PHM 110 Pharmacy Calculations (3 Credits)

Prerequisites: MTH 095 or higher, PHM 100, PHM 101 and PHM 120.

Corequisites: PHM 130, PHM 140.

This online course reviews basic mathematics related to the application of math concepts to the duties of the pharmacy technician. This course covers the systems of weight, measurement and temperature and the conversion from one system to the other. Emphasis is placed on the math skills needed to calculate doses, drug quantity or volume, intravenous flow rates and percentage concentrations and to learn the mechanics of proportions related to pharmaceutical dosing. The basics of retail pricing and accounting are introduced.

PHM 115 Retail Simulation Lab (2 Credits)

Laboratory instruction complements the lecture with hands-on experience in medication preparation, dispensing, calculations and business applications.

PHM 120 Pharmacology I (5 Credits)

Corequisites: PHM 100, PHM 101.

This online course introduces students to trade and generic names of commonly prescribed drugs used in prevention and treatment of various disease entities. Emphasis is placed on important contraindications, side effects, precautions and interaction of drugs and the process of drug utilization review. The course will provide a basic understanding of pharmacological categories and factors that can affect drug kinetics.

PHM 130 Pharmacology II (5 Credits)

Corequisites: PHM 110, PHM 140.

This online course continues the introduction to trade and generic names of commonly prescribed drugs used in prevention and treatment of various disease entities. Emphasis is placed on important contraindications, side effects, precautions and interaction of drugs and the process of drug utilization review. The course will provide a basic understanding of pharmacological categories and factors that can affect drug kinetics.

PHM 140 Pharmacy Technician Practice II (5 Credits)**Corequisites:** PHM 110, PHM 130.

Teaches the information, techniques and procedures needed to assist the pharmacist in delivery of pharmaceutical products and services. Provides a working knowledge of the many aspects of pharmacy in a community, institution and other practice settings. Progressive learning takes place as new information and skill sets are studied throughout the course. Students will understand the regulatory agencies and laws that affect pharmacy practice. Emphasis is placed on the duties and responsibilities of the pharmacy technician. This course explores employment opportunities, interpretation and processing of prescriptions, pharmacy law, standards of practice and orientation to the skills required for the occupation of a pharmacy technician. Application of skills in a practical setting will be covered. This is a four-credit hybrid course and students should expect to spend nine to 12 hours per week completing the required course work. In addition to the online section, this course requires a one-credit (20 hour) lecture-lab session. Lab sessions are 1.5 hours once a week (days and times to be determined). The labs will be held on the COCC Bend campus and students are responsible for all travel expenses.

PHM 145 Institutional Simulation Lab (2 Credits)

Laboratory instruction completes the lecture with hands-on experience in intravenous medication preparation, sterile compounding, calculations, and maintaining drug stocks.

PHM 180 Co-op Work Experience Pharmacy Technician (1-4 Credits)**Prerequisites:** Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

PHM 181 Pharmacy Technician Seminar (2 Credits)**Prerequisites:** PHM 110, PHM 130 and PHM 140.**Corequisites:** PHM 190, PHM 191.

This online seminar presents discussions on various aspects of the practicum. Students will share work related experiences with the instructor and their peers. Students will prepare to take the Pharmacy Technician National Certification exam. Covers employment opportunities, resume writing, completing job applications and interviewing skills. P/NP grading.

PHM 188 Special Studies: Pharmacy Technician (1-4 Credits)

Explores topics of current interest in the discipline.

PHM 190 Pharmacy Technician Practicum I: Hospital/Institutional (1-4 Credits)**Corequisites:** PHM 181, PHM 191.

This course is an unpaid learning experience which takes place on site at a prearranged clinical facility and is supervised by a registered pharmacist. Each credit is equivalent to 30 hours participation in the clinical worksite. Passing grade will require completion of 120 hours of practice at a facility registered with the Central Oregon Community College Pharmacy Technician Program. You must keep a notebook to log experiences at the worksite and report in the Journal Section of the Pharmacy Seminar Course (PHM 181). A satisfactory evaluation must be submitted by your preceptor that you have successfully exhibited skills in a hospital (institutional) pharmacy. P/NP grading.

PHM 191 Pharmacy Technician Practicum II: Retail/Community (1-4 Credits)**Corequisites:** PHM 181, PHM 190.

This course is an unpaid learning experience which takes place on-site at a prearranged clinical facility and is supervised by a registered pharmacist. Each credit is equivalent to 30 hours participation in the clinical setting. Passing grade will require completion of 120 hours of practice at a facility registered with the Central Oregon Community College Pharmacy Technician Program. You must keep a notebook to log experiences at the worksite and report in the Journal Section of the Pharmacy Seminar Course (PHM 181). A satisfactory evaluation must be submitted by your preceptor that you have successfully exhibited skills in a retail (community) pharmacy. P/NP grading.

PHM 199 Selected Topics: Pharmacy Technician (1-4 Credits)

This course is in development.

PHM 298 Independent Study: Pharmacy Technician (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Pharmacy Technician - One Year Certificate of Completion (CC1)

Description

The Pharmacy Technician training program prepares individuals for employment in the pharmacy industry. Pharmacy technicians are skilled workers who are educated and trained to work in a pharmacy and assist in all areas of the pharmacy not requiring the professional judgment of the registered pharmacist. Some current practice areas for the pharmacy technician include retail, hospital, manufacturing, disease state management and mail order and insurance claim specialists. The pharmacy technician processes prescriptions and medication orders and plays an integral role in maintaining the pharmacy department.

Courses in the Pharmacy Technician program are offered in an online and hybrid format. The curriculum focuses on the abilities needed to assist the pharmacist and provide the skills necessary to process prescriptions accurately, participate in administration and management of a pharmacy and maintain inventory. Topics of study include medical terminology, anatomy and functions of the human body, therapeutic classification and drug names, pharmacy procedures, pharmaceutical calculations, pharmacy law and interpersonal communication. Students will have a working knowledge of sterile technique, standards of practice, quality assurance and patient confidentiality. In addition, students will develop and practice communication skills needed to function in a professional setting. In order to gain workplace experience, students will also participate in a hospital and retail pharmacy practicum.

The Pharmacy Technician certificate program prepares students to pass the National Pharmacy Technician Certification exam required by the Oregon Board of Pharmacy to practice as a pharmacy technician in the state of Oregon.

Learning Outcomes

1. Communicate professionally verbally and non-verbally with patients and healthcare professionals in order to promote safe patient care.
2. Manage physical drug inventory, process medication orders and maintain documentation.

3. Calculate, measure and prepare medication for patient administration.
4. Operate pharmacy software to perform the roles and responsibilities of a Pharmacy Technician.
5. Comply with OARs, various standards of Joint Commission, and apply principles of USP 797 and USP 800.
6. Process insurance claims and explain benefit structures.

- \$65 drug screening
- \$55 background check
- \$65 for American Heart Association CPR for Health Care Providers certificate
- Distance students will be responsible for the cost of travel and expenses to the COCC campus for the two lecture labs in the fall and winter terms.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - AH 105 Calculations for Allied Health or MTH 105 Math in Society or minimum placement into MTH 060 Beginning Algebra I;
 - Either
 - Completion of WR 065 Rhetoric and Critical Thinking II or higher or BA 214 Business Communications
 - or minimum placement into WR 121 Academic Composition or WR 121 Academic Composition plus WR 098 Writing Seminar
 - BI 105 Essentials of Human Biology
 - Complete COCC's online orientation (<https://www.cocc.edu/departments/elearning/online-orientation/>)

Other Entrance Requirements

- Required:
 - A high school diploma, a high school transcript noting successful graduation, or a GED
 - 18 years of age
 - All COCC students enrolled in Pharmacy Technician Program (which includes requirements for practical experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a medical or other facility for training. Students who do not pass the CHC may not be eligible to complete training at affiliated practicum sites, to sit for licensure or certification exams, or to be hired for some professional positions. Students who believe that their past history may interfere with their ability to complete the program of study or to obtain licensure or certification in their chosen field should contact the appropriate state board or the program director.
 - 10 panel drug screen completed as a condition of acceptance into the program. Students must complete a 10 panel urine drug screen with the vendor chosen by COCC prior to entry into the Pharmacy Technician Program. With the exception of certain prescribed medications, students with a positive drug screen, which prevents them from attending clinical, will be disqualified from entering the program. Please refer to the Pharmacy Technician Handbook/website (<https://www.cocc.edu/programs/pharmacy-tech/pharmacy-tech-advising-information.aspx>) for more detailed information.
 - Documentation of current immunizations (MMR, Tdap, Varicella, Hep B, Flu, TB, Blood Titer)
 - American Heart Association Health Care Provider or American Red Cross CPR card

Additional Program Costs

Material Costs

- In some cases \$150 to \$300 for fees associated with required immunizations and tuberculosis screening

Enrollment Fees

- Program fee of \$150 per term (or a total of \$450 for the three-term pharmacy technician cohort)

Course Requirements

Course	Title	Credits
Prerequisite Courses		
BI 105	Essentials of Human Biology	3
Support Courses		
AH 105 or MTH 105	Calculations for Allied Health ¹ Math in Society	3-4
BA 214 or WR 121	Business Communications Academic Composition	3-4
Core Courses		
PHM 100	Pharmacy Technician Practice I	5
PHM 101	Pharmacy Tech Law and Ethics	3
PHM 110	Pharmacy Calculations	3
PHM 115	Retail Simulation Lab	2
PHM 120	Pharmacology I	5
PHM 130	Pharmacology II	5
PHM 140	Pharmacy Technician Practice II	5
PHM 145	Institutional Simulation Lab	2
PHM 181	Pharmacy Technician Seminar	2
PHM 190	Pharm Tech Practicum I	4
PHM 191	Pharm Tech Practicum II	4
Other Required Courses:		
AH 115	Cultural Responsiveness in AH	3
Total Credits		52-54

¹ Or a higher math course than MTH 105 Math in Society.

Advising Notes

Program (PHM) courses begin once per year in fall term. Students wishing to register in the fall Pharmacy Technician cohort must meet the basic prerequisite competencies and may register according to seat availability on a first-come, first-served basis, determined by the priority registration schedule.

Once admitted to the program, students must obtain a two-year nonrenewable Pharmacy Technician License from the Oregon Board of Pharmacy. This license is required to participate in the Pharmacy Technician practicum courses. Applicants must have a high school diploma, a high school transcript noting successful graduation, or a GED and be at least 18 years of age. Application for the license will require a background check and fingerprinting. Students unable to obtain a pharmacy technician license will not be able to complete training at affiliated practicum sites or obtain employment in a pharmacy. Students who believe their personal history may interfere with their ability to

obtain a license should contact the program director. Information for licensure is available from the Oregon Board of Pharmacy website (<https://www.oregon.gov/Pharmacy/pages/>) or by calling 971-673-0001.

Students must be flexible during the spring term to participate in the practicum. Students must perform a three-week block of practicum in a hospital or institution and a three-week block of practicum in a retail or community pharmacy. The practicum will be scheduled by the Pharmacy Technician department and the student must be free of commitments to complete the practicum.

Students must be at least 18 years of age, have a high school diploma, a high school transcript noting successful graduation, or a GED, have no criminal record and pass a National Pharmacy Technician Certification Exam to apply to the Oregon Board of Pharmacy for a Certified Pharmacy Technician License to practice as a pharmacy technician in Oregon.

This certificate is designed for students planning to enter the pharmacy technician field upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All prerequisites courses must be completed with a grade of C or higher.
- Additional Requirements:
 - Students must maintain a minimum 2.0 GPA while enrolled in the Pharmacy Technician program. Students who do not meet this standard may be dismissed from the program.
 - If a student is arrested for any reason while in the Pharmacy Technician program it should be reported to the program director immediately. The information will be reviewed and may affect the student's ability to obtain a pharmacy technician license. If a student is unable to obtain a pharmacy technician license he/she will be unable to complete the practicum and will be dismissed from the Pharmacy Technician program.

Sample Plan

First Year

Summer		Credits
AH 105 or MTH 105	Calculations for Allied Health Math in Society	3-4
BI 105	Essentials of Human Biology	3
BA 214 or WR 121	Business Communications Academic Composition	3-4
	Credits	9-11

Second Year

Fall		
PHM 100	Pharmacy Technician Practice I	5
PHM 101	Pharmacy Tech Law and Ethics	3
PHM 115	Retail Simulation Lab	2
PHM 120	Pharmacology I	5
	Credits	15
Winter		
PHM 110	Pharmacy Calculations	3
PHM 130	Pharmacology II	5

PHM 140	Pharmacy Technician Practice II	5
PHM 145	Institutional Simulation Lab	2
	Credits	15
Spring		
AH 115	Cultural Responsiveness in AH	3
PHM 181	Pharmacy Technician Seminar	2
PHM 190	Pharm Tech Practicum I	4
PHM 191	Pharm Tech Practicum II	4
	Credits	13
	Total Credits	52-54

Political Science

Political science studies the critical issue of governance in modern times. From federal institutions to local businesses, political structures exist to provide means and processes through which public needs are met. A study of political science will introduce you to political values, processes, institutions, and strategies for analyzing equity within society. Instruction includes classes in American Government, state and local government, and international relations.

A background in political science may lead to employment in local, state and national government, law, journalism, special interest groups, teaching, and research. Knowledge of political science can enhance your role as a citizen in community service and/or public office, and for those interested in a law degree, political science may be an excellent undergraduate major.

<https://www.cocc.edu/programs/special-curriculum/political-science/>
(<https://www.cocc.edu/programs/special-curriculum/political-science/default.aspx>)

Contact:

Murray Godfrey
541-383-7747
Modoc Hall

Department: World Languages and Cultures
Department Chair: Murray Godfrey

Programs

Transfer

- Political Science - Associate of Arts Oregon Transfer (AAOT) (p. 267)

Courses

PS 188 Special Studies: Political Science (1-4 Credits)

Explores topics of current interest in the discipline.

PS 199 Selected Topics: Political Science (1-4 Credits)

This course is in development.

PS 201 Introduction to US Government and Politics (4 Credits)

Recommended preparation: WR 121.

Examines the American political system with its separation of powers, limited authority and guarantee of individual liberty. Includes a study of political ideology, parties, voting, media, and interest groups. Special emphasis will be placed on a detailed study of the Constitution and its application in today's America.

PS 203 State/Local Government (3 Credits)

Recommended preparation: or to be taken with WR 121.

Examines the thousands of governments located at the state and local levels. Explores separation of powers between governors, legislatures and state court systems. Opportunity for individual involvement in the administration, innovation and promotion of democracy is investigated.

PS 204 Introduction to Comparative Politics (4 Credits)

Recommended preparation: WR 121.

Surveys the field of comparative politics through in-depth analyses of countries in Europe, the Middle East, Asia, Africa, and the Americas. Comparative structures of these governments will be explored and analyzed in light of separation of powers, limited authority, and individual rights.

PS 205 Introduction to International Relations (4 Credits)

Recommended preparation: WR 121.

Introduces complex relations among the nations of a rapidly changing world. Focuses on the nature of the international system and factors affecting conflict and cooperation within the system.

PS 206 Introduction to Political Thought (4 Credits)

Recommended preparation: WR 121.

Introduces the broad range of issues and approaches in political theory. Examines the diversity of the field, as it includes both classic and historical texts as well as contemporary thought. From Plato to Machiavelli, and from Locke to Nietzsche, this course examines the major political themes of justice, equality, democracy, power, and liberty.

PS 207 Politics of the Middle East (4 Credits)

This course is intended as an introduction to politics in the Middle East and therefore provides a general overview of some of the chief issues of contemporary Middle Eastern politics. These include the impact of colonialism, nationalism and nation-state formation, regional crisis, the Arab-Israeli conflict, the politics of oil, Islamism, democratization, political economy, globalization, and human rights.

PS 250 Terrorism and the American Public (4 Credits)

Recommended preparation: WR121.

The course defines terrorism, considers the motivations of terrorists, considers policy proposals that might be taken to reduce the likelihood of terrorism, and investigates the tensions inherent in democracies between civil liberties and national security.

PS 280 Co-op Work Experience Political Science (1-4 Credits)

Prerequisites: instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

PS 298 Independent Study: Political Science (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

PS 299 Selected Topics: Political Science (1-4 Credits)

This course is in development.

Political Science - Associate of Arts Oregon Transfer (AAOT)

Description

Political science is a social science which deals with the distribution of power and resources through systems of governance. The Associate of

Arts Oregon Transfer (AAOT) with a focus in political science includes courses that are commonly required for this major and meets lower division general education requirements at all Oregon public universities.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;

2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline Studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Recommend: PS 201, PS 204		
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39
Recommend: PS 206		
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

² Take another course from the Social Science Discipline Studies list that does not have a PS prefix.

Advising Notes

Political Science courses do not need to be taken in sequence.

Students pursuing a BA after transfer should consider completing three terms of a 200-level language course. The 100-level language courses will count as electives. The 200-level language courses will partially fulfill the Arts and Letters requirement.

Students pursuing a BS after transfer should consider taking more math and science courses. Language is not necessary. For specific details,

speaking with an advisor. It is recommended that students pursuing a political science major take additional social sciences courses to fulfill some of their elective credits. Economics, geography and history courses are particularly helpful in this regard.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters	3-4
Mathematics: (p. 399)	4
Oral Communication: (p. 399)	3-4
WR 121 Academic Composition	4
Credits	14-16
Second Term	Credits
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science (recommend PS 201)	4
Health (3 credits with HHP or HHPA prefix)	3
WR 122 Argument, Research, and Multimodal or WR 227 Composition Technical Writing	4
Credits	14-15
Third Term	Credits
Discipline Studies Arts & Letters	3-4
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science (recommend PS 204)	4
Elective (recommend PS 206)	4
Credits	14-17
Fourth Term	Credits
Discipline Studies Social Science (recommend PS 205)	4
Discipline Studies Science/Math/Computer Science	3-5
Elective	4
Elective	4
Credits	15-17
Fifth Term	Credits
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
Elective	4
Credits	18-21
Sixth Term	Credits
Discipline Studies Science/Math/Computer Science	3-5
Elective	4
Elective	4
Elective	4
Credits	15-17
Total Credits	90-103

Psychology

Psychology is the scientific study of behavior. The social, emotional and physical development and functioning of humans and non-humans are investigated to help you understand yourself, other people and the organisms with which you inhabit the earth. You will learn how you and others make behavioral choices and how these are influenced by the interaction of genetic inheritance with the physical and social environment. Coursework includes topics covering brain function and drug effects to motivation, memory, and learning to human sexuality, social influence, human development, abnormal behavior, and therapy methods.

Psychology provides access to employment in counseling, social services, personnel, marketing and teaching. A psychology degree also prepares you for graduate work in experimental and clinical psychology and related areas, such as special education, social work, business, communications, law school and the health care field.

<https://www.cocc.edu/programs/psychology/> (<https://www.cocc.edu/programs/psychology/default.aspx>)

Contact:

Matthew Novak
541-383-7206
Modoc Hall, Bend Campus

Department: Social Sciences
Department Chair: Sara Henson

Programs

Transfer

- Psychology - Associate of Arts Oregon Transfer (AAOT) (p. 270)

Courses

PSY 101 Applied Psychology (3 Credits)

This course introduces the basic foundation of psychology to degree-seeking students and career and technical students. Focuses on practical applications of psychological principles in the workplace and everyday life. Topics include motivation, emotions, individual development, identifying problem behavior, coping resources, group dynamics and communication skills.

PSY 188 Special Studies: Psychology (1-4 Credits)

Explores topics of current interest in the discipline.

PSY 199 Selected Topics: Psychology (1-4 Credits)

This course is in development.

PSY 201 Mind and Brain (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Introduces psychology as a scientific study of the biological bases of behavior. Includes history of psychology as a science and surveys methods of inquiry, statistics, sensation, perception, states of consciousness including drug effects, motivation, emotion, learning, memory, language, thinking and intelligence. The major theoretical approaches to psychology are included.

PSY 202 Mind and Society (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Emphasizes psychology as a scientific process, surveying methods of inquiry. Overview of selected areas of psychological study including: human development through the life span; human sexuality; health psychology; personality theories and assessment; psychological disorders; intervention and therapy; social psychology, and human factors psychology. The major theoretical approaches to psychology are included.

PSY 204 Research Methods: Design and Analysis (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Learn scientific method and deepen your appreciation of why it is a valuable method for learning about the world. Teaches scientific concepts and terminology, how the scientific literature is used to generate hypotheses and interpret research findings, how research studies are designed, how data are collected and managed, and how statistics are used to understand data. Class will include discussions of parametric and nonparametric analyses, between subject designs, within subject designs, differences between experimental and correlational research and the differences between qualitative and quantitative data.

PSY 213 Introduction to Physiological Psychology (4 Credits)

Recommended preparation: BI 121, BI 122, BI 231, BI 232, BI 233 or PSY 201.

This course provides a scientific introduction to the brain's anatomy and function. It builds a foundation for understanding sensory and motor systems, brain rhythms and brain plasticity. Essential neurophysiological processes that underlie topics such as human development, cognitive and emotional behavior, gender, and psychological disorders will be presented.

PSY 214 Personality Psychology (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Examines the major theoretical perspectives on personality formation, including biological, psychodynamic, humanistic, cognitive, behavioral, and sociocultural influences. Personality tests and measures are also discussed. The major theoretical approaches to psychology are included.

PSY 215 Developmental Psychology (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Comprehensive study of human development over the life span from prenatal through late adult development. Focuses on physical, cognitive and psychosocial changes throughout the human life cycle and emphasizes an interactionist approach to explain developmental processes and outcomes. The major theoretical approaches to psychology are included.

PSY 216 Social Psychology (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065; and PSY 202 or SOC 201.

Surveys influence of psychological processes on groups and the influence of culture, society and groups on individuals. Includes analysis and exploration of behavior from a social psychology perspective. Topics include aggression, prejudice, conformity, affiliation, altruism, persuasion, interpersonal attraction, social cognition, conflict resolution, attitude formation and change, and applied social psychology.

PSY 219 Abnormal Psychology (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Introductory survey of the variety of emotional, mental and behavioral disorders experienced by humans. History, theoretical perspectives, diagnostic criteria and issues, etiology and treatment strategies are covered for the major forms of psychopathology.

PSY 225 Eating Disorders (3 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065. This course explores eating behavior, weight regulation, and body image in contemporary society. Cultural, familial, social, personal and biological factors in eating and weight problems will be examined. The course will cover the full continuum from normal, healthy eating to clinical eating disorders and related behaviors, which include chronic dieting, excessive exercise, emotional eating, binge eating, obesity or poor body image.

PSY 227 Animal Behavior (4 Credits)

This course will cover the fundamental aspects of animal behavior: how and why animals behave and how animal behavior is studied. Topics include mechanisms of behavior, behavioral ecology, feeding, predation, mating, parenting, communication and social behavior.

PSY 228 Positive Psychology (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065. This course explores the components necessary to help a person flourish in their environment by addressing the biopsychosocial aspects that contribute to positive behaviors and human strengths. Material will provide an overview of the theories of happiness, importance of self-care and positive social cognitions, utilizing strengths in personal and professional venues, and means of achieving healthy relationships personally and with one's community.

PSY 233 Psychology of Violence & Aggression (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065. Addresses the developmental, social, physiological and cultural aspects that contribute to violence and aggression as well as the legal issues involved. Includes an overview of the theories of aggression, as well as factors influencing family violence, violent children, mob mentality, hate crimes, war and terrorism, stalking, sex crimes and murder.

PSY 250 Readings in Psychology (1 Credit)

Prerequisites: Instructor approval.

Provides a scientific introduction to how to critically read and discuss scientific literature.

PSY 261 Indonesia Field Study (3 Credits)

Prerequisites: Instructor approval.

Prepares students for International Field Study Program in Indonesia. Topics include Indonesian culture and history, Indonesian language and development and design of a field research project to be conducted in Indonesia.

PSY 280 Co-op Work Experience Psychology (1-4 Credits)

Prerequisites: instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

PSY 288 Special Studies: Psychology (1-4 Credits)

Explores topics of current interest in the discipline.

PSY 298 Independent Study: Psychology (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

PSY 299 Selected Topics: Psychology (1-4 Credits)

This course is in development.

Psychology - Associate of Arts Oregon Transfer (AAOT)

Description

Psychology is a broad discipline that considers properties of the brain and seeks to understand humans as individuals and in groups. The Associate of Arts Oregon Transfer (AAOT) with a focus in psychology includes courses that are commonly required for this major and meets lower division general education requirements at all Oregon public universities.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Recommend: MTH 111		
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline Studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Recommend: PSY 201, PSY 202		
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

If a student has graduated high school or earned a GED after 1997, two years of the same world language earned at the high school level or two quarters of the same world language at the undergraduate level is required for admittance to most Oregon public universities. For specific details, speak with an advisor.

Students pursuing a BA after transfer should consider completing three terms of a 200-level language course. The 100-level language courses will count as electives. The 200-level language courses will partially fulfill the Arts and Letters requirement.

Students pursuing a BS after transfer should consider taking more math and science courses. In general, two 100-level or higher math courses beyond the foundational mathematics requirement fulfills the Bachelor of Science. These will also partially fulfill the Science/Math/Computer Science Discipline Studies requirement. Language beyond entrance requirements is not required.

Although students may take whichever science sequence they prefer, it is recommended to take BI 101 General Biology: Cells & Genes-BI 103 General Biology: Ecology or BI 231 Human Anatomy and Physiology I-BI 233 Human Anatomy and Physiology III due to the relevance these courses have to upper-division psychology courses.

PSY 204 Research Methods: Design and Analysis, PSY 213 Introduction to Physiological Psychology and PSY 227 Animal Behavior fulfill the science lab requirement if a sequence is not essential.

Students are advised to consider the following psychology courses as electives to gain further insight into the field and to help them determine what area of psychology they may be interested in pursuing: PSY 204 Research Methods: Design and Analysis, PSY 213 Introduction to Physiological Psychology, PSY 214 Personality Psychology, PSY 215 Developmental Psychology, PSY 216 Social Psychology, PSY 219 Abnormal Psychology, PSY 227 Animal Behavior, PSY 233 Psychology of Violence & Aggression. With the exception of PSY 204 Research Methods: Design and Analysis, PSY 213 Introduction to Physiological Psychology and PSY 227 Animal Behavior (see Science/Math/Computer Science lab course fulfillment), these courses will also partially satisfy the Social Science AAOT requirements. Any other potential special topics courses that are offered from time to time will be electives as well.

Students who are considering clinical or counseling psychology might consider the following electives: EMT 195 Crisis Intervention, ED 265 Children at Risk, HS 161 Ethics for Human Services, HS 162 Effective Helping Skills I, HS 201 Families and Addictions, HS 206 Group Counseling Skills for Human Services, HS 209 Introduction to Psychological Trauma: Theory and Practice, HS 224 Psychopharmacology, HS 260 Counseling Theories and HS 262 Effective Helping Skills II. HS 224 Psychopharmacology will meet a non-lab Science/Math/Computer Science requirement. HS 206 Group Counseling Skills for Human Services and HS 208 Multicultural Issues in Human Services will partially complete the Social Science requirement.

Psychology students will be required to take Statistics when they transfer. Although MTH 111 College Algebra is sufficient for the math requirement, advisors recommend taking one or both of MTH 243 Introduction to Probability and Statistics I and MTH 244 Introduction to Probability and Statistics 2 to finish the science requirement and to allow students to be exposed to statistics beforehand. However, for OSU, MTH 243 Introduction to Probability and Statistics I and MTH 244 Introduction to Probability and Statistics 2 currently do not fulfill the BS

math requirements. PSY 204 Research Methods: Design and Analysis is also a good preparation for upper division statistics required for a PSY BA or BS.

Note that individual institutions may have additional requirements or will change the category that a course satisfies if the AAOT is not completed, or is transferred to an out-of-state college or university. For admission into a particular program, courses may be added. Students who plan to transfer should contact the institution they plan to attend to ensure they have fulfilled the specific requirements for their program.

Students have the option of pursuing a bachelor's degree in psychology through Oregon State University – Cascades (contact 541-322-3100) or through a distance program with Eastern Oregon University (contact EOU advisor, 541-385-1137); both programs are available in Central Oregon. Students planning to attend OSU should include in their AA degree the following OSU major requirements: BI 101 General Biology: Cells & Genes-BI 103 General Biology: Ecology, PSY 201 Mind and Brain, PSY 202 Mind and Society, WR 227 Technical Writing.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

		Credits
First Term		
Discipline Studies Arts & Letters		3-4
Mathematics (recommend MTH 111)		4
Oral Communication: (p. 399)		3-4
WR 121	Academic Composition	4
Credits		14-16

Second Term		
Discipline Studies Arts & Letters		3-4
Discipline Studies Social Science (recommend PSY 201)		4
Elective		1
Health (3 credits with HHP or HHPA prefix)		3
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		15-16

Third Term		
Discipline Studies Arts & Letters		3-4
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science (recommend PSY 202)		4
Elective		4
Elective		4
Credits		18-21

Fourth Term		
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4

Elective	4
<hr/>	
Credits	14-17

Fifth Term

Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
<hr/>	
Credits	14-17

Sixth Term

Discipline Studies Science/Math/Computer Science	3-5
Elective	4
Elective	4
Elective	4
<hr/>	
Credits	15-17
<hr/>	
Total Credits	90-104

Public Health

Public health protects and improves the health of individuals, families, communities and populations where they live, learn, work, play, and worship. Public health professionals plan, implement and evaluate evidence-based strategies. These strategies might include educational programs, health promoting policies, social services, mixed-methods research, community development and health systems reform. Public health strategies aim to prevent & control infectious and chronic diseases, reduce environmental hazards, mitigate violence & addictions, prevent injury, decrease health disparities and improve access to health care. Public health careers include program planners, program evaluators, researchers, educators, epidemiologists, health and safety engineers, advocacy & policy advisors, health communication specialists, community developers & organizers, global health development officers, minority health & health disparities experts, and environmental health specialists.

<https://www.cocc.edu/programs/public-health/> (<https://www.cocc.edu/programs/public-health/default.aspx>)

Contact:

Jessica Russell
541-318-3712
Mazama Hall, Bend Campus

Department: Health and Human Performance
Department Chair: Jessica Russell

Programs

Transfer

- Public Health - Associate of Arts Oregon Transfer (AAOT) (p. 274)

Courses

HHP 100 Introduction to Public Health (4 Credits)

Recommended preparation: Completion of WR 065 or higher or minimum placement into WR 121.

Provides an introduction to the core elements of public health science and practice, including health policy, health systems and health ethics. Open to all COCC students who want to know more about the dynamic, multi-disciplinary field of public health, what it is, how it is organized and how it works.

HHP 110 Orientation to Public Health Professions (1 Credit)

Recommended preparation: Completion of WR 065 or minimum placement into WR 121.

Provides an introduction for students interested in health-related careers to the field of public health and its many career opportunities in behavioral and social sciences, community health (including maternal & child health), epidemiology, environmental health, health management and policy, health promotion, health informatics, minority health and health disparities, public health preparedness, gerontology, and global health. Meet public health professionals in class and 'on-the-job,' explore public health interests and academic pathways.

HHP 210 Introduction to the Health Care System (3 Credits)

Recommended preparation: HHP 100.

Provides tools to examine and critically assess the U.S. health care delivery system, its components, and the challenges created by its structure. Considers the U.S. health care system from the perspective of multiple players and partners, including consumers/patients, primary health care, hospitals, providers, insurers, and government. Compares and contrasts the U.S. health care system to health care systems in other developed and emerging countries.

HHP 212 CPR - American Heart Association Heartsaver with Pediatric (1 Credit)

The Heartsaver Automatic External Defibrillator (AED) with Pediatric CPR course teaches the basic techniques of adult CPR and use of an AED. Pediatric CPR skills may be taught if students live or work in a setting where children are present. Students also learn to use barrier devices in CPR and give first aid for choking for responsive adult, child and infant victims. Course teaches how to recognize the signs of four major emergencies: heart attack, stroke, cardiac arrest, and foreign-body airway obstruction. Through the American Heart Association. Course meets the Dental Assistant standards.

HHP 212A AHA Basic Life Support for Providers CPR (1 Credit)

Provides the following skills: Basic life support for patients of all ages (including ventilation with a barrier device and a bag-mask device), use of an automatic external defibrillator and relief of choking in responsive and non-responsive patients. Designed for providers who care for patients in a wide variety of settings, both in and out of hospital. In order to receive the AHA BLS Provider Certification card, one must pass a written exam and be able to physically perform all skills required for CPR.

HHP 231 Human Sexuality (3 Credits)

Explores the biological, psychological, and social aspects of human sexuality. Specific topics include historical and cultural perspectives of human sexuality, sexual anatomy and physiology, sexual and reproductive health factors, gender identity, sexual orientations, and lifespan sexual development.

HHP 240 Science of Nutrition (3 Credits)

Prerequisites: CH 104 or 105 or 106 or CH 221 or 222 or 223.

Will introduce nutrition to exercise science, nutrition, dietetics, food science, and health science majors who have taken general chemistry. Concepts of nutrient metabolism and utilization, nutrient deficiencies and toxicities and their relationship to disease prevention and treatment. Meets requirements for COCC AS in EXSS and BS in EXSS at OSU-Cascades.

HHP 242 Stress Management (3 Credits)

Recommended preparation: WR 065 or higher.

Helps students develop a comprehensive approach to the management of stress. Examines the historical, emotional, intellectual, spiritual, psychological and physiological foundations of the stress concept. This broad understanding of stress will be the basis for the study of the role that stress plays in health and disease. Students will experiment with a wide variety of stress management and relaxation techniques.

HHP 243 Occupation Health, AHA BLS CPR (3 Credits)

This class provides an introduction to major concepts and issues in occupational health and safety, including health promotion, injury and disease prevention, and protection of worker populations from environmental hazards. The course will also include a section on stress management with a focus on the application of managing stress on the job, and will include the American Heart Association (AHA) Basic Life Support (BLS) for Health Care Providers (HCP) CPR course which is what we currently teach in our one-credit HHP 212A class.

HHP 248 Health Psychology (4 Credits)

Recommended preparation: WR 65 or higher.

Health is defined as "a state of complete physical, mental, and social wellbeing, and not merely the absence of disease" (World Health Organization, 1948). With that definition in mind, this course examines how biological, psychological, social, and environmental factors affect physical health and wellbeing. Specific topics include historical and cultural perspectives of health, the psychology and physiology of stress, health behavior modification with emphases on primary prevention and health promotion, socioeconomic and healthcare inequalities, and an exploration of biopsychosocial factors related to chronic diseases like obesity, heart disease, and HIV AIDS. This course is one of the four pre-Public Health core courses offered.

HHP 252 First Aid & AHA Basic Life Support Provider CPR (3 Credits)

Recommended preparation: WR 065 or higher.

First Aid & CPR instruction. First aid includes: immediate and temporary care for a wide variety of injuries, illnesses, conditions. CPR includes: patients of all ages; ventilation with a face shield, pocket mask and a bag-mask device; use of an automated external defibrillator (AED); relief of choking; both one- and two-person CPR; and compression-only CPR. Practical exam includes individual hands-on testing; successful completion of course results in National Safety Council Standard First Aid - card valid for three years and American Heart Association (AHA) Basic Life Support (BLS) for Provider Adult & Pediatric CPR - card valid for two years.

HHP 252A Fitness/First Aid (3 Credits)

Recommended preparation: WR 65 and MTH 20 or higher.

Introduces both first aid and wellness topics, such as immediate and temporary care for injury and illness, control of bleeding, care for poisoning, splinting, bandaging and transportation, as well as fitness, nutrition and stress management. Students earn first aid and CPR cards in both adult and infant from the National Safety Council upon completion of course.

HHP 258 Holistic Wellness (4 Credits)

Recommended preparation: WR 65 or higher.

Looks beyond health risk factors to broader wellness dimensions (i.e. mental, emotional, spiritual, environmental, cultural & financial). Conventional & alternative paradigms of chronic disease causes plus modalities for healing will be explored through the role of our minds, environment, relationships, spirituality, & social support.

HHP 266 Nutrition for Health (3 Credits)

Recommended preparation: MTH 20 or higher.

Introduces the basics of nutrition for a physically active, healthy lifestyle. The course emphasizes nutrient function, energy production, weight management, body composition, psychosocial health, global impact of nutrition, prevention of nutrition related diseases, food guide pyramid, ergogenic aids fad diets, dieting and nutritional research. Course also includes a computerized nutritional assessment.

HHP 268 Sustainable Food and Nutrition (4 Credits)

Recommended preparation: WR 65 or higher.

Farmer and author Wendell Berry once wrote that eating is an "agricultural act". It is also an ethical, cultural, political, and environmental act. In an attempt to understand the full impact of our food choices, this course will explore American food production from start to finish, past to present, and field to fork. Along the way we will answer questions such as: How does a plant grow? What is the difference between conventional vs. organic agriculture? How and why did our current food system evolve? How much does a fast-food cheeseburger really cost? What and why is food biotechnology? Where can I buy a local head of lettuce or leg of lamb? And, ultimately, what should I eat? .

HHP 281 Practicum-Health Promotion/Public Health (1-2 Credits)

Prerequisites: instructor approval. Recommended preparation: complete a minimum of three Health Promotion/Public Health courses.

Provides practicums co-mentored by department faculty in collaboration with community partners. Practicum sites may include, but are not limited to public health departments, community health centers, health promotion and education programs, local government organizations, environmental health organizations, and social justice organizations. Thirty hours of practicum experience is equivalent to one credit. P/NP grading.

HHP 283 Introduction to Alternative Medicine (4 Credits)

Introduces the historical and sociopolitical context of conventional and "alternative" medical systems in the United States. A number of professional alternative medical practices will be examined as independent systems, and also as components of the larger context of the overall health care system in America.

HHP 291 Lifeguard Training (2 Credits)

Designed to teach the knowledge and skills needed to help prevent and respond to aquatic emergencies, including land and water rescue skills, as well as first aid, CPR and AED. Meets American Red Cross lifeguard training standards. Participants should be comfortable in and around the water and be able to demonstrate proficient swimming technique.

HHP 295 Health and Fitness (3 Credits)

Recommended preparation: or to be taken with WR 65 and MTH 20 or higher.

Introduces a comprehensive overview of wellness concepts including fitness, nutrition, stress, disease prevention, and various other lifestyle factors that improve the quality of life. Each student's health and fitness is individually evaluated through a series of tests measuring cardiovascular endurance, strength, body composition, flexibility, blood pressure, nutrition, stress levels and blood lipid and blood glucose.

Public Health - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer (AAOT) degree with a focus in public health provides guidance for a broad-based health & human sciences degree with an emphasis in public health. This AAOT focus area is designed to support students to transfer to the Bachelor of Science at Oregon State University's College of Public Health & Human Sciences in 1 of 2 tracks; either; 1) Health Promotion & Health Behavior, or 2) Health Management & Policy. Alternatively students can transfer to the BA or BS degree in Health Studies at the joint School of Public Health at Oregon Health Sciences University & Portland State University (OHSU & PSU) or transfer to any public health undergraduate degree program in the country. The AAOT with a focus in public health is also excellent preparation for the Human Development & Family Sciences (HDFS) or Sociology degrees at OSU-Cascades for students who plan to remain in central Oregon. In addition, this AAOT provides an appropriate foundation for related degrees in health sciences, nutrition sciences, community development, social work, sociology, sustainability, health administration, and public health nursing at other institutions throughout the Pacific Northwest. To learn more about career and degree options in the field of public health visit the Association of Schools and Programs of Public Health (ASPPH) (<http://www.aspph.org/discover/>) website.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and

3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Recommend: HHP 110 and HHPA activity courses		
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Recommend: HHP 100, HHP 210, HHP 248 and either PSY 201 or SOC 201		
Science/Math/Computer Science: (p. 403)		

Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science ³ 12-20

Electives

Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable. 39

Recommend: EC 201, HHP 231, HHP 240, HHP 267, HHP 268, HHP 281, SOC 212

Total Credits 90-106

¹ HHPA activity courses (1 credit each) which can not to be duplicated.

² For OSU's HPHB Track take MTH 105 Math in Society. For OSU's HM&P Track take MTH 111 College Algebra and MTH 245 Mathematics for Management, Life, and Social Sciences

³ For OSU's HPHB Track take BI 101 General Biology: Cells & Genes, BI 102 General Biology: Evolution OR BI 103 General Biology: Ecology. For OSU's HM&P Track take BI 234 Microbiology

Advising Notes

The following provides a list of the essential lower division courses for students intending to transfer to OSU's Bachelor of Science in Public Health or to the new joint School of Public Health at Oregon Health Sciences University and Portland State University. Students should always check with specific universities to ensure the most current transfer information is accessed when designing their program.

Public health core courses for both tracks at OSU: HHP 100 Introduction to Public Health, HHP 210 Introduction to the Health Care System, HHP 248 Health Psychology, and MTH 243 Introduction to Probability and Statistics I.

In addition, the following courses are strongly recommended for the each of the BSPH tracks at OSU.

Health Promotion & Health Behavior track (HPHB): MTH 105 Math in Society, WR 122 Argument, Research, and Multimodal Composition, WR 227 Technical Writing, HHP 231 Human Sexuality, FN 225 Human Nutrition AND/OR HHP 240 Science of Nutrition (for those wanting to focus on Nutrition & Public Health) as well as HHP 268 Sustainable Food and Nutrition, HHP 267 Wellness Coaching Fundamentals, HHP 281 Practicum-Health Promotion/Public Health, PSY 201 Mind and Brain, SOC 201 Introduction to Sociology, ES 101 Introduction to Ethnic Studies and SOC 212 Race, Class, and Gender.

Health Management & Policy Track (HM&P): MTH 111 College Algebra, MTH 245 Mathematics for Management, Life, and Social Sciences, WR 122 Argument, Research, and Multimodal Composition, WR 227 Technical Writing, CS 160 Computer Science Orientation, BA 111 Applied Accounting I, EC 201 Microeconomics, EC 202 Macroeconomics, BI 234 Microbiology, and any other courses listed above for the HPHB Track.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC degree
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
***See corresponding footnote regarding two Tracks: HPHB and HM&P for different courses & sequencing		
Discipline Studies Arts & Letters		3-4
Mathematics: (p. 399) ²		4
Oral Communication: (p. 399)		3-4
WR 121	Academic Composition	4
Credits		14-16
Second Term		Credits
Discipline Studies Arts & Letters		3-4
Discipline Studies Social Science (recommend HHP 100)		4
Health (recommend HHP 110 and HHPA activity courses) ¹		3
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		14-15
Third Term		Credits
Discipline Studies Arts & Letters		3-4
Discipline Studies Science/Math/Computer Science (recommend BI 101) ³		4
Discipline Studies Social Science (recommend HHP 210)		3
Discipline Studies Social Science (recommend HHP 248)		4
Credits		14-15
Fourth Term		Credits
Discipline Studies Science/Math/Computer Science (recommend BI 102) ³		4
Discipline Studies Social Science (recommend PSY 201)		4
Elective (recommend EC 201)		4
Elective (recommend HHP 231)		3
Elective (recommend HHP 268)		4
Credits		19
Fifth Term		Credits
Discipline Studies Science/Math/Computer Science (recommend BI 103) ³		4
Elective (recommend HHP 240)		3
Elective (recommend HHP 267)		3
Elective		3
Credits		13
Sixth Term		Credits
Discipline Studies Science/Math/Computer Science (recommend MTH 243)		3-5
Elective (recommend HHP 281)		1-2
Elective (recommend SOC 212)		4
Elective		4
Elective		4
Credits		16-19
Total Credits		90-97

*** **Important Note:** Please see Advising Notes below for specific course requirements and recommendations for the two BSPH Tracks at OSU: 1) Health Promotion & Health Behavior (HPHB) and 2) Health Management & Policy (HM&P). The 'Sample Plan' offers the desired course sequence for those seeking Health Promotion & Health Behavior Track. For those seeking Health Management & Policy Track, please consult the detailed Track listings in the Advising Notes.

¹ HHPA activity courses (1 credit each) which can not to be duplicated.

² For OSU's HPHB Track take MTH 105 Math in Society; For OSU's HM&P Track take MTH 111 College Algebra and MTH 245 Mathematics for Management, Life, and Social Sciences

³ For OSU's HPHB Track take BI 101 General Biology: Cells & Genes, BI 102 General Biology: Evolution OR BI 103 General Biology: Ecology. For OSU's HM&P Track take BI 234 Microbiology

Sociology

Sociology is the study of the relationship between humans and society. Students examine how economics, politics, religion, race, gender, family and the environment interact to shape people's lives. Students will learn to analyze social problems such as poverty, war, prejudice and drugs to discover their causes and possible solutions. Courses include topics such as race, class, ethnicity, gender, and social deviance.

Sociology prepares you for employment in social service, recreation, teaching, and preparation for pre-professional studies.

<https://www.cocc.edu/programs/sociology/>

Contact:

Dr. Thomas Barry
541-383-7294
Modoc Hall, Bend Campus

Dr. Ken Ruetters
541-504-2924
Modoc Hall, Bend Campus

Department: Social Sciences
Department Chair: Sara Henson

Programs

Transfer

- Pre-Law - Associate of Arts Oregon Transfer (AAOT) (p. 277)
- Sociology - Associate of Arts Oregon Transfer (AAOT) (p. 279)

Courses

SOC 141 Film & Society: Race, Gender, and Class (2 Credits)

Examines the representation of race, social class and gender in film. Special attention is given to how particular representations reflect the broader historical context surrounding when the films were produced and culturally based audience sentiments. Anthropological and sociological analyses of the films will be provided to give a multi-disciplinary account of how films reflect, create and support various ideological positions regarding race, class and gender. This course is also offered as ANTH 141; students can not use credit from both courses.

SOC 142 Film & Society: Global Cultures (2 Credits)

Examines global issues in both foreign and domestic films from sociological and anthropological perspectives. Selected films cover topics that are relevant to understanding global processes such as global economy and Islam in the contemporary world, as well as films that address the more regionally localized processes of community and family. The purpose of the course is to use film to expose students to diverse perspectives and to encourage the critical awareness of the global interconnections that influence and constrain our modern lives. Films will include documentaries, as well as feature films.

SOC 143 Film & Society: Contemporary Issues (2 Credits)

Examines contemporary issues in film from sociological and anthropological perspectives. Selected films cover such topics as youth culture, nationalism, local culture and poverty, mental health or other social problems. The content of the films, as well as issues of film production, historical context and audience reception will be the major focus of analysis.

SOC 188 Special Studies: Sociology (1-4 Credits)

Explores topics of current interest in the discipline.

SOC 199 Selected Topics: Sociology (1-4 Credits)

This course is in development.

SOC 201 Introduction to Sociology (4 Credits)

Recommended preparation: WR 121.

Provides conceptual tools for analyzing and understanding social forces that shape our lives. The relationships among socialization and social groups, as well as economic, political and religious systems are investigated. This course is considered a human relations component.

SOC 208 Sport and Society (4 Credits)

Recommended preparation: SOC 201.

While we use sociology to help make sense of sport, we also use sport to develop the ability to think sociologically about society. Subjects include sport and: values, socialization, deviance, social problems and social inequities.

SOC 211 Social Deviance (4 Credits)

Recommended preparation: WR 121 or SOC 201.

Examines the definition of deviant behavior. Focuses on deviant behavior of societies as well as individuals including issues such as drugs, organized crime, government deviance and crimes against women.

SOC 212 Race, Class, and Gender (4 Credits)

Recommended preparation: WR 121 or SOC 201.

Analyzes the relationship between race, class, and gender and political and economic systems. Critically examines the interrelationship between race, class, and gender and societal structures and history.

SOC 215 Social Issues and Social Movements (4 Credits)

Recommended preparation: WR 121 or SOC 201.

Applies sociological analysis to contemporary issues and movements. Examples include the environmental crisis, race and ethnic relations, sexual deviancy, drug abuse, health care and violence.

SOC 219 Sociology of Religion (4 Credits)

Recommended preparation: SOC 201.

Surveys a variety of religious traditions and introduces the sociological perspective for the study of religion as part of a larger social order. Explores the nature of religious beliefs and practices, both historically and in contemporary context. Examines the relationship between religious traditions and the current globalization of the institution of religion in culture and society.

SOC 222 Sociology of Family and Intimate Relationships (4 Credits)

Recommended preparation: WR 121.

Examines the connections between family and intimate relations and society. Addresses the impact of economic, social, and political conditions on families and intimate relations past and present.

SOC 250 Sociology of Popular Culture (4 Credits)

Recommended preparation: WR 121.

Course applies a sociological perspective to the study of films, music, advertising and other forms of popular culture. Three separate elements of popular culture are examined: the production of culture, the reception of culture and the text or symbols themselves.

SOC 280 Co-op Work Experience Sociology (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

SOC 298 Independent Study: Sociology (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

SOC 299 Selected Topics: Sociology (1-4 Credits)

This course is in development.

Pre-Law - Associate of Arts Oregon Transfer (AAOT)

Description

Law school is post-baccalaureate, graduate level study that builds on a bachelor's degree but does not require a specific major. The Associate of Arts Oregon Transfer (AAOT) with a focus in pre-law includes courses that are useful to a pre-law student and meets lower division general education requirements at all Oregon public universities. Students are encouraged to combine this focus with preparation for a major that they find interesting, challenging, and that develops skills in research and writing, problem solving, oral communication and listening, organization, and exposure to legal concepts and issues.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		

WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4

General Education/Discipline Studies

Cultural Literacy: (p. 401)

One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).

Arts and Letters: (p. 399)

Choose three courses from at least two prefixes 9-12

Social Science: (p. 404)

Choose four courses from at least two prefixes 12-16

Science/Math/Computer Science: (p. 403)

Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science 12-20

Electives

Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable. 39

Total Credits 90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

Most law schools have no requirements for a pre-law curriculum and will accept a bachelor's degree in any major. Students should develop an educational program that is broad, yet provides depth of understanding in at least one subject area, along with fundamental insights into human institutions and values. The emphasis should be on a degree program that meets students' needs and interests, that students find challenging and in which students will do their best work and will earn good grades.

Legal educators agree that the development of particular skills and habits will contribute more to success in law school than a major in any one subject. Therefore, coursework should focus on strengthening habits of thoroughness, intellectual curiosity, scholarship, the ability to research a topic, write concisely, analyze information and think critically. Verbal and written communication skills are very important. In addition, lawyers must be adept at problem solving and organizing information to support a point of view.

Courses in history, political science, economics, literature, foreign language, sociology, journalism, communication and philosophy are directly concerned with the cultivation of these skills and will provide an opportunity to gain an understanding of social institutions and values.

Students pursuing a BA after transfer should consider completing three terms of a 200-level language course. The 100-level language courses will count as electives. The 200-level language courses will partially fulfill the Arts and Letters requirement.

Students pursuing a BS after transfer should consider taking more math and science courses. Language is not necessary. For specific details, speak with an advisor.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.

- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term		Credits
Discipline Studies Arts & Letters		3-4
Oral Communication: (p. 399)		3-4
Mathematics: (p. 399)		4
WR 121	Academic Composition	4
Credits		14-16
Second Term		
Discipline Studies Arts & Letters		3-4
Discipline Studies Social Science		3-4
Elective		3
Health (3 credits with HHP or HHPA prefix) ¹		3
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Credits		16-18
Third Term		
Discipline Studies Arts & Letters		3-4
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4
Elective		4
Credits		17-21
Fourth Term		
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4
Elective		4
Credits		14-17
Fifth Term		
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective		4
Elective		4
Credits		14-17
Sixth Term		
Discipline Studies Science/Math/Computer Science		3-5
Elective		4
Elective		4
Elective		4
Credits		15-17
Total Credits		90-106

Sociology - Associate of Arts Oregon Transfer (AAOT)

Description

Sociology is the study of human social relationships and institutions and includes subject matter such as race, religion, families, government, and social change. The Associate of Arts Oregon Transfer (AAOT) with a focus in sociology includes courses that are commonly required for this major and meets lower division general education requirements at all Oregon public universities. A bachelor's degree with a major in sociology is great preparation for graduate school (such as schools of law, and education) as well as direct employment in government, research, and human services.

Learning Outcomes

Arts & Letters

- Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
- Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

- Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

- Explain the relationship between human behavior and health.

Mathematics

- Use appropriate mathematics to solve problems; and
- Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

- Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
- Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
- Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

- Apply analytical skills to social phenomena in order to understand human behavior; and
- Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Recommend: MTH 111		
Oral Communication: (p. 399)		
Choose one course		3-4
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes		9-12
Social Science: (p. 404)		
Choose four courses from at least two prefixes		12-16
Recommend: SOC 201, SOC 211, SOC 212, SOC 250		
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

Advising Notes

Students pursuing a BA after transfer should consider completing three terms of a 200-level language course. The 100-level language courses will count as electives. The 200-level language courses will partially fulfill the arts and letters requirement.

Students pursuing a BS after transfer should consider taking more math and science courses. Language is not necessary. For specific details, speak with an advisor.

Students are advised to consider the following sociology courses as electives to gain further insight into the field and to help them determine what area of sociology they may be interested in pursuing: SOC 208 Sport and Society, SOC 211 Social Deviance, SOC 212 Race, Class, and Gender, SOC 215 Social Issues and Social Movements, SOC 219 Sociology of Religion, SOC 222 Sociology of Family and Intimate Relationships, SOC 250 Sociology of Popular Culture, and any other potential special topics courses that are offered from time to time.

Sociology students typically will be required to take Statistics when they transfer. Although MTH 111 College Algebra is sufficient for the math requirement, advisors recommend taking one or both of MTH 243 Introduction to Probability and Statistics I and MTH 244 Introduction to Probability and Statistics 2 to finish the science requirement and to allow students to be exposed to statistics beforehand.

Note that individual institutions may have additional requirements or will change the category that a course satisfies if the AAOT is not completed, or is transferred to an out-of-state college or university. For admission into a particular program, courses may be added. Students who plan to transfer should contact the institution they plan to attend to ensure they have fulfilled the specific requirements for their program.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters	3-4
Mathematics (recommend MTH 111)	4
Oral Communication: (p. 399)	3-4
WR 121	4
Academic Composition	
Credits	14-16
Second Term	Credits
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science (recommend SOC 201)	4
Health (3 credits with HHP or HHPA prefix) ¹	3
WR 122	4
Argument, Research, and Multimodal	
or WR 227	
Composition	
Technical Writing	
Credits	14-15
Third Term	Credits
Discipline Studies Arts & Letters	3-4

Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science (recommend SOC 211)	4
Elective	4
Elective	3
Credits	17-20
Fourth Term	
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science (recommend SOC 212)	4
Elective	4
Elective	4
Credits	15-17
Fifth Term	
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science (recommend SOC 250)	4
Elective	4
Elective	4
Credits	15-17
Sixth Term	
Discipline Studies Science/Math/Computer Science	3-5
Elective	4
Elective	4
Elective	4
Credits	15-17
Total Credits	90-102

Structural Fire Science

Structural firefighting is the field of first responders who specialize in the prevention and suppression of fires in residential or commercial structures as well as helping people in health care emergencies. COCC's structural fire discipline provides the courses, program, and support to launch a firefighting career.

<https://www.cocc.edu/programs/structural-fire/> (<https://www.cocc.edu/programs/structural-fire/default.aspx>)

Contact:

John Faila
541-383-7419
Ponderosa Hall, Bend Campus

Department: Natural and Industrial Resources
Department Chair: Paula Simone

Programs

Career and Technical Education

- Structural Fire Science - Associate of Applied Science (AAS) (p. 285)

Transfer

- Fire Service Administration (EOU Transfer) - Associate of Science (AS) (p. 282)

Courses

SFS 101 Introduction to Emergency Services (4 Credits)

Provides an overview to fire protection and EMS; career opportunities, related fields, philosophy and history, organization and function of public and private agencies, nomenclature, functions. In addition, provides new students a broad overview of college and life success strategies as related to this field.

SFS 102 Fire Service Safety and Survival (3 Credits)

This course broadens the scope of the national firefighter life-safety initiatives and emphasizes their importance to firefighters and on up the ranks through management levels. It is designed to create a positive attitude towards firefighter safety; to have the student recognize how serious the firefighter injury and death problem is; to recognize their responsibility for reducing future injuries and deaths; to provide information for improving safety considerations; to demonstrate that most firefighter injuries and deaths are preventable.

SFS 105 Fire Behavior & Combustion I (3 Credits)

Prerequisites: department approval.

Prerequisites with concurrency: GS105 or CH104 or higher.

Explores the theories and fundamentals of how and why fires start, spread, and how they are controlled.

SFS 110 Building Construction for Fire Personnel (3 Credits)

Recommended preparation: SFS 101, SFS 102.

Studies building construction with emphasis on how buildings fail when subjected to fire. Case studies used to illustrate points. Studies of roof and wall construction enable the student to predict failure points and adapt fire fighting strategies accordingly. Buildings under construction and those subjected to external forces will also be studied. Field trips take students into the community to study various construction techniques.

SFS 112 Public Education and Fire Prevention (3 Credits)

Studies fundamentals of public relations pertaining to fire service including emergency operations, general public appearances, writing news releases, articles and speeches and general media contact. Students work in developing an effective public education campaign for delivery. Audience type and message content is carefully analyzed. Recommended to be taken with WR 121, SFS 101 and SFS 102.

SFS 120 Fixed Systems and Extinguishers (3 Credits)

Recommended preparation: SFS 101 and SFS 102.

Studies portable and fixed extinguisher equipment, fire alarm and detection systems, sprinkler systems and standpipes, and special hazard protection systems. Covers extinguishing agents, system design and maintenance procedures. Field exercises expose students to systems discussed in class.

SFS 121 Fire Law (1 Credit)

Recommended preparation: SFS 101, SFS 102.

Introduces the modern legal system with emphasis on cases related to fire service. Case law is studied to understand underlying concepts. Reviews case law affecting modern fire service agencies. Explores laws relating to medical treatment of patients, fire protection, codes, emergency response and department activities on the fire ground.

SFS 122 Fire Department Budget (1 Credit)

Outlines the budget process as required by Oregon laws to include types of budgets, the process of preparing the budget and classifying expenditures.

SFS 123 HazMat Awareness & Operations (3 Credits)

Designed to prepare individuals to safely respond to hazardous materials emergencies. Individuals will learn to analyze an incident; detect the presence of hazardous materials; survey the scene; collect hazard information from the DOT Emergency Response Guidebook; implement actions consistent with standard operating procedures; initiate protective actions and initiate the notification process. Students complete all training and education requirements for Hazardous Materials Awareness and Operations level certification, per National Fire Protection Association (NFPA) Standard 472 and State certification requirements per Oregon Department of Public Safety Standards and Training (DPSST).

SFS 133 Fire Entry Exams (3 Credits)

Introduces and prepares student for employment testing in a structural fire agency; beneficial for both initial employment testing and promotional examinations within their agency. Exposure to testing in a variety of methods currently in use in the fire service hiring processes, offers strategies for improving test performance as well as job search skills.

SFS 188 Special Studies: Structural Fire Science (1-4 Credits)

Explores topics of current interest in the discipline.

SFS 199 Selected Topics: SFS (1-4 Credits)

This course is in development.

SFS 205 Fire Behavior and Combustion II (2 Credits)

Prerequisites: SFS 105 and department approval based on Firefighter I Academy.

Builds on the foundational knowledge and skills objectives developed in SFS 105, Fire Behavior & Combustion I and Firefighter I academy. Due to safety and OSHA requirements, students must be affiliated with a fire department and have passed the SCBA Fit test within the previous year. Designed for second year students to be taken the year of graduation. Requires three full days in the field with live fire.

SFS 210 Fire Investigation (3 Credits)

Prerequisites: SFS 101; SFS 102; SFS 105; SFS 110; and SFS 112.

Prerequisites with concurrency: SFS 120.

Provides basic information in fire cause determination. Studies arson detection, protection of point of origin, fire indicators, motives and vehicle fire investigation. Field trips and classroom props aid the student in understanding the science of fire investigation.

SFS 212 Fire Codes and Ordinances (3 Credits)

Recommended preparation: SFS 101, SFS 102.

Introduces the International Fire and Building Code (IFC) and laws promulgated by the Office of the State Fire Marshal relating to fire safety and prevention. Includes overview of administrative provisions and many of the applicable standards in the codes. Students apply the codes to specific situations to illustrate understanding and application of the codes and related laws. Students also identify applicable sections of the codes in response to scenarios presented in the classroom or in the field.

SFS 230 Rescue Practices (3 Credits)

Recommended preparation: SFS 101 and SFS 102.

Explores techniques and applications of specialized rescue practices in modern fire service. Focuses on vehicle rescue, steep-angle rescue and swift-water rescue with basic overviews of ice rescue, electrical rescue and trench rescue techniques. Using modern tools and techniques, students apply classroom learning in several comprehensive and dynamic field exercises. Emergency Medical Technician - Basic training allows students to integrate fire and EMS activities at an emergency rescue scene.

SFS 232 Fire Protection Hydraulics and Water Supply (4 Credits)

Prerequisites: department approval.

Recommended preparation: MTH 065 or higher, GS 104, GS 105, SFS 105, and access to engines or affiliation are highly recommended for students' success in the class.

This course provides a foundation of theoretical knowledge in conjunction with hands on labs in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

SFS 263 Human Behavior in Fire (3 Credits)

Prerequisites: SFS 101; SFS 102; SFS 110; SFS 112; SFS 120; MTH 060 or higher or minimum placement into MTH 065.

Provides fundamental information on human behavior as it relates to fire and mass casualties. Understanding human behavior is important as it relates to building design, evacuation and fire department operations. It is especially important where populations are large or include the disabled or persons having limited mobility.

SFS 275 Capstone: Tactics & Strategies (3 Credits)

Prerequisites: SFS 101; SFS 102; SFS 110; SFS 105; and SFS 120.

Prerequisites with concurrency: SFS 232.

Provides a capstone experience to the Structural Fire AAS program with an in-depth analysis of the principles of fire control through the utilization of personnel, equipment, and extinguishing agents on the fire ground. Taken in the final term prior to program completion.

SFS 280 Co-op Work Experience Structural Fire Science (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

SFS 288 Special Studies: Structural Fire (1-4 Credits)

Explores topics of current interest in the discipline.

SFS 298 Independent Study: Structural Fire Science (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

SFS 299 Selected Topics: Structural Fire Science (1-4 Credits)

This course is in development.

Fire Service Administration (EOU Transfer) - Associate of Science (AS) Description

The AS degree is intended to prepare students to transfer to Eastern Oregon University's Fire Service Administration (FSA) degree and is designed for students seeking a career in the fire service industry or upgrading their skills for current fire service employment. The program meets or exceeds the required technical skills and knowledge necessary for employment in many fire service organizations throughout the country.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and

- Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

- Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

- Explain the relationship between human behavior and health.

Mathematics

- Use appropriate mathematics to solve problems; and
- Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

- Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
- Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
- Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

- Apply analytical skills to social phenomena in order to understand human behavior; and
- Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

- Engage in ethical communication processes that accomplish goals;
- Respond to the needs of diverse audiences and contexts; and
- Build and manage relationships.

Writing and Information Literacy

- Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
- Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
- Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - Minimum placement scores resulting in WR 121 Academic Composition or (WR 121 Academic Composition plus WR 098 Writing Seminar) placement, or completion of WR 065 Rhetoric and Critical Thinking II or WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 105 Math in Society placement OR completion of MTH 095 Intermediate Algebra or MTH 098 Math Literacy II.

Other Entrance Requirements

- Recommended:
 - High school diploma or GED.
 - Students must be 18 or older for state and national testing for EMT and for affiliation with a fire agency. Students do NOT need to be 18 to begin taking SFS courses.
 - Documentation of completion of immunizations (Hepatitis B or release, current TB, MMR immunizations at least two of the three shots).
- Required:
 - All COCC students enrolled in the EMT course and/or seeking agency affiliation, or any course requiring practical experience, will have to pass a criminal history check (CHC) as a condition of their acceptance into a medical, fire or other facility for training. Information regarding CHC standards can be found at [cocc.edu \(https://www.cocc.edu/emergency-medical-services/\)](https://www.cocc.edu/emergency-medical-services/). Students who do not pass the CHC may not be eligible to complete training at affiliated sites, to sit for licensure or certification exams, or to be hired for some professional positions. Students who believe their personal history may interfere with their ability to complete the program of study or to obtain licensure or certification in their chosen field should contact the appropriate state board or the program director.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Mathematics		
MTH 105	Math in Society (or higher)	4
Oral Communication		
COMM 111	Fundamentals Public Speaking	3-4
or COMM 218	Interpersonal Communication	
Writing		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
General Education/Discipline Studies		
Aesthetics and Humanities (EOU):¹		
ARH 201	Ancient Art History	6
ARH 202	Medieval and Renaissance Art	
ARH 203	Baroque to Early Modern Art	
COMM 115	Intro Intercultural Comm.	
ENG 201	Shakespeare	
ENG 202	Shakespeare	
FA 101	Introduction to Film	
FA 125	World Cinema	

MUS 111	Music Theory IA	
MUS 113	Music Theory IC	
SPAN 101	First Year Spanish I	
SPAN 102	First Year Spanish II	
SPAN 103	First Year Spanish III	
SPAN 201	Second Year Spanish I	
SPAN 202	Second Year Spanish II	
SPAN 203	Second Year Spanish III	
Artistic Process and Creation (EOU):¹		6
ART 110	Intro to Graphic Design	
ART 115	Basic Design: 2-D	
ART 116	Basic Design: Color	
ART 121	Ceramics: Intro Hand Building	
ART 131	Drawing I	
ART 132	Drawing II	
ART 161	Photography I	
ART 181	Painting I	
ART 191	Sculpture	
ART 265	Digital Photography	
MUS 101	Music Fundamentals	
TA 200	Introduction to Theater	
TA 141	Acting I	
TA 142	Acting II	
WR 241	Introduction to Creative Writing: Fiction	
WR 242	Introduction to Creative Writing: Poetry	
WR 243	Creative Writing:Scriptwriting	
Natural, Mathematical and Information Systems (EOU):²		6
Recommend: GS 104, GS 105		
BI 101	General Biology: Cells & Genes	
BI 102	General Biology: Evolution	
BI 103	General Biology: Ecology	
BI 211	Principles of Biology	
BI 212	Principles of Biology	
BI 213	Principles of Biology	
CH 104	Introduction to Chemistry I	
CH 105	Introduction to Chemistry II	
CH 106	Introduction to Chemistry III	
CH 221	General Chemistry I	
CH 222	General Chemistry II	
CH 223	General Chemistry III	
GEOG 279	Physical Geography-Weather and Climate	
GS 104	Physical Science: Physics	
GS 105	Physical Science: Chemistry	
GS 106	Physical Science: Geology	
GS 107	Physical Science: Astronomy	
MTH 105	Math in Society	
MTH 211	Fundamentals of Elementary Mathematics I	
MTH 212	Fundamentals of Elementary Mathematics II	
MTH 213	Fundamentals of Elementary Mathematics III	
MTH 243	Introduction to Probability and Statistics I	
MTH 244	Introduction to Probability and Statistics 2	
MTH 251	Calculus I	

MTH 252	Calculus II	
MTH 253	Calculus III	
MTH 254	Vector Calculus I	
PH 201	General Physics I	
PH 202	General Physics II	
PH 203	General Physics III	
PSY 201	Mind and Brain	
Social Sciences (EOU):¹		6
Recommend: SOC 201		
ANTH 102	Archaeology	
ANTH 103	Cultural Anthropology	
EC 201	Microeconomics	
EC 202	Macroeconomics	
GEOG 107	Cultural Geography	
HHP 231	Human Sexuality	
HST 101	Hist of Western Civilization	
HST 201	Early America - History of the United States (pre-history to 1820)	
HST 202	19th Century United States	
PS 201	Intro US Government & Politics	
PS 205	Introduction to International Relations	
PSY 202	Mind and Society	
SOC 201	Introduction to Sociology	

Program Requirements

FOR 211	Supervision and Leadership	3
or BA 285	Business Human Relations	
SFS 101	Introduction to Emergency Services	4
SFS 102	Firefighter Safety & Survival	3
SFS 105	Fire Behavior & Combustion I	3
SFS 110	Bldg Const. for Fire Personnel	3
SFS 112	Public Ed. & Fire Prevention	3
SFS 120	Fixed Systems & Extinguishers	3
SFS 232	Fire Protection Hydraulics and Water Supply	4
SFS 275	Capstone: Tactics & Strategies	3
Electives³		22
Total Credits		90-91

¹ A minimum of 6, and maximum of 20 credits, in at least two disciplines.

² A minimum of 6, maximum of 20 credits, in at least two disciplines, including at least one physical or biological science.

³ Choose any course from the following EOU categories: Aesthetics and Humanities; Social Sciences; Natural, Mathematical and Info Systems; Artistic Process and Creation. No more than 20 credits per category.

Advising Notes

This degree is designed for students who wish to transfer to Eastern Oregon University's Fire Service Administration degree upon completion. For more information on this bachelor degree program, please contact the Fire Programs director at 541.383.7404.

Most Fire Service Administration program-specific courses begin once per year in fall term; there are a few entry-level courses offered several times per year and non-program support courses can begin

in a term other than fall or if students need to build skills related to the prerequisites. As a general rule, all SFS specific courses should be taken in sequence in term offered during the second year of program. Exceptions can be made based on individual student education and experience.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree. Students affiliated with a local Fire/EMS agency who are receiving a scholarship will be held to a higher GPA standard depending on affiliation location. Students who do not meet this standard may be dismissed from the program.
 - All courses must be completed with a "C" grade or higher.
- Additional Requirements:
 - Students may also be dismissed if the student has violated a criminal or ethical standard or guideline established by the college and/or program.
 - Prior to taking the National Register of EMT exam and applying for Oregon EMT licensure, students must answer background information questions concerning felony convictions, any regulatory discipline, ethical violations and mental competence on the state of Oregon EMS Licensure application. For more information, contact the Paramedicine/ SFS director, 541.383.7404.

Sample Plan

First Year

Fall		Credits
MTH 105	Math in Society (higher)	4
SFS 101	Introduction to Emergency Services	4
SFS 102	Firefighter Safety & Survival	3
WR 121	Academic Composition	4
Credits		15

Winter

SFS 120	Fixed Systems & Extinguishers	3
Social Science (recommend SOC 201)		4
COMM 111 or COMM 218	Fundamentals Public Speaking Interpersonal Communication	3-4
WR 122	Argument, Research, and Multimodal Composition	4
Credits		14-15

Spring

Artistic Process & Creation		4
Aesthetics & Humanities		4
Natural, Mathematical and Information Systems (recommend GS 104)		4
Elective		3-4
Credits		15-16

Second Year

Fall		Credits
Aesthetics & Humanities		4
SFS 105	Fire Behavior & Combustion I	3
SFS 110	Bldg Const. for Fire Personnel	3
SFS 112	Public Ed. & Fire Prevention	3

Natural, Mathematical and Information Systems (recommend GS 105)		4
Credits		17
Winter		
Elective		4
Artistic Process & Creation		4
FOR 211 or BA 285	Supervision and Leadership Business Human Relations	3
Social Science		4
Credits		15
Spring		
Elective		4
SFS 275	Capstone: Tactics & Strategies	3
SFS 232	Fire Protection Hydraulics and Water Supply	4
Elective		4
Credits		15
Total Credits		91-93

Structural Fire Science - Associate of Applied Science (AAS)

Description

The Structural Fire Science AAS degree is designed for students seeking a career in the fire service industry or upgrading their skills for current fire service employment.

Learning Outcomes

1. Explain and apply strategic tactical priorities for safety, rescue, incident control and loss control for situations including: fire suppression, search and rescue, hazardous materials, and disaster management.
2. Effectively communicate with others using methods appropriate to the situation, population and multidisciplinary agencies.
3. Demonstrate appropriate leadership skills and styles to promote effective teamwork in the field and within emergency service organizations.
4. Apply safety practices to prevent the occurrence and severity of hostile fires, to mitigate the effect of fire on people and to assist in the determination of the cause of such fires.
5. Demonstrate professional conduct by displaying a personal code of ethics, positive work ethics, flexibility, teamwork skills, physical fitness, safe procedures and sensitivity to diverse cultures and individuals.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - Minimum placement scores resulting in WR 121 Academic Composition or WR 121 Academic Composition plus WR 098 Writing Seminar or completion of WR 065 Rhetoric and Critical Thinking II /WR 095 Basic Writing II .

- Minimum placement scores resulting in MTH 060 Beginning Algebra I /MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra .
- High school diploma or GED.

Other Entrance Requirements

- Required:
 - Students must be 18 or older for state and national testing for EMT and affiliation with a fire agency. Students do NOT need to be 18 to begin taking SFS courses.
 - All COCC students seeking enrollment in the EMT course and/ or agency affiliation that requires practical experience will have to pass a Criminal History Check (CHC) as a condition of their acceptance into a medical, fire or other facility for training. Students who do not pass the CHC may not be eligible to complete training at affiliated sites, to sit for licensure or certification exams, or to be hired for some professional positions. Students who believe their personal history may interfere with their ability to complete the program of study or to obtain licensure or certification in their chosen field should contact the appropriate state board or the program director.
 - Complete a 10 panel urine drug screen with Verified Credentials, Inc. With the exception of certain prescribed medications, students with a positive drug screen, which prevents them from attending clinical, will be disqualified from entering the program. Please refer to the structure fire science website (<https://www.cocc.edu/programs/structural-fire/default.aspx>) and/or program handbook for more information.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required:
 - CPR for Healthcare Provider card \$55, must remain current throughout EMT class.
 - Background check, immunization upload and 10-panel drug screen is required for all students entering into the EMT class at an approximate cost of \$110.
 - In some cases fees associated with immunizations can range from \$20-\$200.
 - Fee for State Certification Testing and National Registry Test (currently \$170-\$350).
 - Materials (boots, ear protection, gloves, etc.), \$200-\$350
 - Other special equipment and clothing may be required as part of this program.

Course Requirements

Course	Title	Credits
Core Courses		
EMT 151	EMT Basic Part A	5
EMT 152	EMT Basic Part B	5
SFS 101	Introduction to Emergency Services	4
SFS 102	Firefighter Safety & Survival	3
SFS 105	Fire Behavior & Combustion I	3
SFS 110	Bldg Const. for Fire Personnel	3
SFS 112	Public Ed. & Fire Prevention	3

SFS 120	Fixed Systems & Extinguishers	3
SFS 123	HazMat Awareness & Operations	3
SFS 133	Fire Entry Exams	3
SFS 210	Fire Investigation	3
SFS 212	Fire Codes and Ordinances	3
SFS 230	Rescue Practices	3
SFS 232	Fire Protection Hydraulics and Water Supply	4
SFS 275	Capstone: Tactics & Strategies	3
WF 215S	S-215 Urban Interface/SFS ¹	3
or WF 215	S-215 Fire Ops Urban Interface	
SFS Technical Electives:		9
AH 111	Medical Terminology I	
EMT 170	Emergency Response Communication/Documentation	
EMT 171	Emerg Response Pt Transport	
EMT 195	Crisis Intervention	
FOR 130	Chainsaw Use and Maintenance	
SFS 121	Fire Law	
SFS 122	Fire Department Budget	
SFS 205	Fire Behavior & Combustion II	
SFS 263	Human Behavior in Fire	
Any course with a WF prefix		
Other Required Courses		
CH 104	Introduction to Chemistry I	4-5
or GS 105	Physical Science: Chemistry	
FOR 211	Supervision and Leadership	3
or BA 285	Business Human Relations	
HHP 242	Stress Management	3
or HHP 266	Nutrition for Health	
or HHP 295	Health and Fitness	
HHP Activity Course		1
MTH 065	Beginning Algebra II (or higher) ²	4
PH 201	General Physics I	4-5
or GS 104	Physical Science: Physics	
Choose one of the following:		3-4
COMM 111	Fundamentals Public Speaking	
COMM 115	Intro Intercultural Comm.	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
Discipline Studies Course (choose one course from below):		3-4
ANTH 103	Cultural Anthropology	
BI 234	Microbiology	
CJ 100	Survey of the Criminal Justice System	
OL 244	Psych. of Risk & Adventure	
PSY 201	Mind and Brain	
PSY 202	Mind and Society	
PSY 216	Social Psychology	
SOC 201	Introduction to Sociology	
WR 121	Academic Composition	4
WR 227	Technical Writing	4
or WR 122	Argument, Research, and Multimodal Composition	
Total Credits		96-100

¹ WF 215S S-215 Urban Interface/SFS is recommended.

² Students planning to transfer to an institution offering a four-year degree should take MTH 105 Math in Society or higher.

Advising Notes

The Structural Fire Science AAS requires hands-on training in fire and emergency medical skills and NFPA Firefighter I certification which requires a significant amount of on-the-job training (OJT) by joining a fire agency that require students to work with and around mechanical equipment, ropes, fire pumps, fire hose and appliances, ladders, various apparatus and hand tools (both manual and powered). Most local fire agencies have student and volunteer positions. Students must apply and compete for these positions. Passing a written and physical agility exam is required for acceptance into these positions. Students desiring to complete a degree in Structural Fire Science and Paramedicine must follow a specific course of study. Please see the program director for more information.

The AAS degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions. Currently, the COCC Structural Fire Science AAS has articulation agreements with Eastern Oregon University (<https://www.cocc.edu/departments/admissions/grades-and-student-records/articulation-and-partnership-agreements.aspx>).

Prior to taking the Emergency Medical Technician exam, students must answer background information questions concerning felony convictions, any regulatory discipline, ethical violations and mental competence. For more information, contact the SFS director at 541-383-7404.

The following are required for graduation in the SFS program and are only obtainable through affiliation in a fire agency:

- NFPA Firefighter I
- NFPA Hazmat Awareness & Operations
- I-200 FEMA or NWCG certified course

Upon Completion of EMT 151 Emergency Medical Technician Part A and EMT 152 Emergency Medical Technician Part B, student must pass the National Registry of EMT's written and Oregon Practical exams. Currently certified students do not need to retake the courses for the degree.

Students must hold a current EMT or higher Oregon certification for graduation with an SFS degree.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses with the program prefix must be completed with a grade of C or higher.
- Additional Requirements:
 - All students will undergo drug screening, background check and immunization verification with the vendor approved by Central Oregon Community College, prior to entrance into the EMT courses, at their expense. Students will be administratively withdrawn from the program and the seat given to an alternate student if requirements are not initiated with the specified vendor by the due date indicated by the SFS program. Students with a

positive urine drug screen will be disqualified from entering the EMT courses at Central Oregon Community College, with the exception of certain prescribed medications. The director of EMS/SFS will notify the student of positive drug screens and their resulting disqualification from the program. Students have a right to appeal the decision.

- Students must maintain a minimum 2.0 GPA while enrolled in the program and if affiliated and receiving a scholarship will be held to a higher GPA standard; students who do not meet this standard may be dismissed from the program. Students may also be dismissed if the student has violated a criminal or ethical standard.

Sample Plan

First Year

Fall		Credits
EMT 151	EMT Basic Part A	5
SFS 101	Introduction to Emergency Services	4
SFS 102	Firefighter Safety & Survival	3
SFS 123	HazMat Awareness & Operations	3
SFS Elective		1 - 4
Credits		16-19

Winter

EMT 152	EMT Basic Part B	5
SFS 120	Fixed Systems & Extinguishers	3
SFS 212	Fire Codes and Ordinances	3
SFS Elective		1-3
WR 121	Academic Composition	4
Credits		16-18

Spring

MTH 065	Beginning Algebra II (higher)	4
SFS 230	Rescue Practices	3
WR 227	Technical Writing	4
or WR 122	Argument, Research, and Multimodal Composition	
Choose one of the following:		3
HHP 242	Stress Management	
HHP 266	Nutrition for Health	
HHP 295	Health and Fitness	
SFS Elective		1-3
Credits		15-17

Second Year

Fall		Credits
SFS 105	Fire Behavior & Combustion I	3
SFS 110	Bldg Const. for Fire Personnel	3
SFS 112	Public Ed. & Fire Prevention	3
CH 104	Introduction to Chemistry I	4-5
or GS 105	Physical Science: Chemistry	
Choose one from the following:		3-4
COMM 111	Fundamentals Public Speaking	
COMM 115	Intro Intercultural Comm.	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
Credits		16-18

Winter

PH 201 or GS 104	General Physics I Physical Science: Physics	4-5
FOR 211 or BA 285	Supervision and Leadership Business Human Relations	3
SFS 210	Fire Investigation	3
SFS Elective		1-3
Discipline Studies course (choose one from the following):		3-4
ANTH 103	Cultural Anthropology	
BI 234	Microbiology	
CJ 100	Survey of the Criminal Justice System	
OL 244	Psych. of Risk & Adventure	
PSY 201	Mind and Brain	
PSY 202	Mind and Society	
PSY 216	Social Psychology	
SOC 201	Introduction to Sociology	
Credits		14-18

Spring

HHP Activity Course		1
SFS 133	Fire Entry Exams	3
SFS 232	Fire Protection Hydraulics and Water Supply	4
SFS 275	Capstone: Tactics & Strategies	3
WF 215S or WF 215	S-215 Urban Interface/SFS S-215 Fire Ops Urban Interface	3
Credits		14
Total Credits		91-104

Veterinary Technician

If you care about animals, are good at math, science and decision-making, enjoy working with your hands, like working with people and handling a variety of responsibilities, then the challenging career of veterinary technology may be just right for you. The veterinary technician's role is to provide professional health care to animals in conjunction with the veterinarian. The veterinary technician is an essential member veterinary health care team—they have been educated in the care and handling of animals, the basic principles of normal and abnormal life processes, and in many laboratory and clinical procedures.

<https://www.cocc.edu/programs/vet-tech/>

Contact:

Beth Palmer
541.318-3724
Building 1, Redmond Campus

Department: Allied Health
Department Chair: Deborah Malone

Programs

Career and Technical Education

- Veterinary Technician - Associate of Applied Science (AAS) (p. 290)

Courses

VT 101 Intro to Veterinary Technician (3 Credits)

Prerequisites: BI 101 or BI 211; GS 105 or CH 104; MTH 095, 111 or higher; WR 121; and COMM 218.

Corequisites: VT 102, VT 103, VT 117.

Introduces the role of the veterinary technician within the veterinary health care team, career opportunities for veterinary technicians, the history of veterinary medicine, ethics, common small animal breeds and effective communication techniques within the veterinary teams and with clientele.

VT 102 Veterinary Terminology (3 Credits)

Corequisites: VT 101, VT 103, VT 117.

Introduces veterinary medical terminology, including medical word parts, common medical terms, and a basic knowledge of word construction.

VT 103 Animal Hospital and Office Procedures (2 Credits)

Corequisites: VT 101, VT 102, VT 117.

Introduces veterinary medical records, admitting procedures, and record maintenance. Covers basic bookkeeping skills, inventory control measures, marketing, and the use of computer software specifically designed for use in a veterinary hospital.

VT 108 Small Animal Nursing (4 Credits)

Prerequisites: VT 101, VT 102, VT 103 and VT 117.

Corequisites: VT 110, VT 114, VT 118.

Introduces basic techniques necessary for the provision of nursing care to small animals, including small animal restraint, husbandry, behavior, physical examination, medication administration, and grooming. Includes kennel duty experience in the care of a variety of companion animals.

VT 110 Parasitology and Pathology (4 Credits)

Prerequisites: VT 101, VT 102, VT 103 and VT 117.

Corequisites: VT 108, VT 114, VT 118.

Explores the life cycles, modes of transmission, and diseases associated with common parasites of animals. Lab introduces diagnostic procedures and covers identification of parasites using prepared slides and collected specimens.

VT 111 Hematology and Urinalysis (5 Credits)

Prerequisites: VT 108, VT 110, VT 114, VT 118.

Corequisites: VT 112, VT 113, VT 116.

Covers laboratory techniques of hematology, serum chemistry, and urinalysis. Also explores special commercial laboratory test procedures.

VT 112 Advanced Small Animal Nursing (4 Credits)

Prerequisites: VT 108, VT 110, VT 114 and VT 118.

Corequisites: VT 111, VT 113, VT 116.

Covers advanced nursing techniques including parenteral administration of medication, bandaging and wound care, cardiopulmonary resuscitation (CPR), physical rehabilitation, diagnostic sample collection, and vaccination of small animals.

VT 113 Exotic and Lab Animal Medicine (3 Credits)

Prerequisites: VT 108, VT 110, VT 114 and VT 118.

Corequisites: VT 111, VT 112, VT 116.

Provides an overview of the anatomy and physiology, the care and handling, and diseases of common laboratory and exotic small animals. Covers the principles of lab animal use in research with an emphasis on animal welfare.

VT 114 Pharmaceutical Math (3 Credits)**Prerequisites:** VT 101, VT 102, VT 103 and VT 117.**Corequisites:** VT 108, VT 110, VT 118.

Covers pharmacological mathematics, including drug dosage calculations and fluid calculations. Introduces prescription terminology and labeling.

VT 116 Pharmacology (4 Credits)**Prerequisites:** VT 108, VT 110, VT 114 and VT 118.**Corequisites:** VT 111, VT 112, VT 113.

Explores pharmacological principles, including classes, mechanisms, and side effects of drugs used in veterinary medicine.

VT 117 Veterinary Anatomy & Physiology I (6 Credits)**Corequisites:** VT 101, VT 102, VT 103.

This is the first of two courses covering the structure and function of animal bodies and the anatomical and physiological differences between selected species. Examines body organization, cellular biology, histology, and gross anatomy and physiology of the integumentary, skeletal, muscular, and nervous systems. Concurrent labs include the use of skeletons, models, virtual anatomy tools and dissection of cadavers.

VT 118 Veterinary Anatomy & Physiology II (5 Credits)**Prerequisites:** VT 101, VT 102, VT 103 and VT 117.**Corequisites:** VT 108, VT 110, VT 114.

This is the second of two courses covering the structure and function of animal bodies and the anatomical and physiological differences between domestic species. Continues the study of the interrelationship of organ systems, including the endocrine, reproductive, cardiovascular, lymphatic, digestive, respiratory, and urinary systems.

VT 188 Special Studies Vet Technician (1-4 Credits)

Special studies for Veterinary Technician.

VT 200 Radiation Safety (2 Credits)**Prerequisites:** VT 111, VT 112, VT 113 and VT 116.**Corequisites:** VT 201, VT 203, VT 208, VT 212.

Covers the physics of x-ray photon production, radiation safety, quality control measures, federal and state radiation regulations, film processing, radiographic technique evaluation, positioning of animals, and proper identification and storage of radiographic images.

VT 201 Anesthesiology and Surgery Techniques (4 Credits)**Prerequisites:** VT 111, VT 112, VT 113, and VT 116.**Corequisites:** VT 200, VT 203, VT 208, VT 212.

Covers the principles and practices of veterinary anesthesia and surgical assistance.

VT 202 Surgical Nursing and Dentistry (4 Credits)**Prerequisites:** VT 200, VT 201, VT 203, VT 208, and VT 212.**Corequisites:** VT 204, VT 206, VT 209.

Covers common dental problems and dental prophylaxis. Explores pre-operative, operative, and post-operative protocols for routine surgical procedures. Provides hands-on experience in anesthesiology, surgical patient preparation, surgical assistance, and dentistry.

VT 203 Large Animal Nursing (4 Credits)**Prerequisites:** VT 111, VT 112, VT 113 and VT 116.**Corequisites:** VT 200, VT 201, VT 208, VT 212.

Covers common large animal breeds (ruminant, equine, swine, and chickens). Introduces techniques necessary for the provision of nursing care to large animals, including restraint, husbandry, behavior, physical examination, medication administration, diagnostic sample collection, grooming, bandaging, nutrition, and vaccination. Includes animal husbandry experience in the care of large animals.

VT 204 Diagnostic Imaging (3 Credits)**Prerequisites:** VT 200, VT 201, VT 203, VT 208 and VT 212.**Corequisites:** VT 202, VT 206, VT 209.

Covers the operation and use of fixed, portable, and dental x-ray machines; the care and development of films; radiographic positioning of animals; and evaluation of radiographic technique. Explores additional diagnostic imaging modalities, such as ultrasound, MRI, CT, and endoscopy.

VT 206 Small Animal Diseases (4 Credits)**Prerequisites:** VT 200, VT 201, VT 203, VT 208 and VT 212.**Corequisites:** VT 202, VT 204, VT 209.

Covers preventative medicine and diseases of small animals including the public health significance of relevant small animal diseases. Examines the role of the veterinary technician in performing diagnostics, nursing care, and client education.

VT 208 Animal Nutrition (2 Credits)**Prerequisites:** VT 200, VT 201, VT 203, VT 209 and VT 212.**Corequisites:** VT 202, VT 204, VT 206.

Covers the basic principles of nutrition, the development of nutrition protocols based on the life stage and health status of the patient, and explores special prescription diets used in veterinary medicine.

VT 209 Large Animal Diseases (3 Credits)**Prerequisites:** VT 111, VT 112, VT 113 and VT 116.**Corequisites:** VT 200, VT 201, VT 203, VT 212.

Covers preventative medicine and diseases of large animals including the public health significance of relevant large animal diseases. Examines the role of the veterinary technician in performing diagnostics, nursing care, and client education.

VT 212 Veterinary Microbiology (4 Credits)**Prerequisites:** VT 111, VT 112, VT 113 and VT 116.**Corequisites:** VT 200, VT 201, VT 203, VT 208.

Explores clinical microbiology and cytology as it relates to veterinary technology. Covers the basic principles of microbial classification, growth, and pathogenicity as well as various laboratory methods used in identification of microorganisms.

VT 280 Clinical Practicum I (6 Credits)**Prerequisites:** VT 202, VT 204, VT 206 and VT 209.**Corequisites:** VT 281.

Provides hands-on experience working with actual animal cases in a clinical veterinary setting. Links prior coursework with off-campus learning experiences providing development of increased proficiency of essential skills necessary for a career as a veterinary technician. In this first practicum course, students are matched to two different practicum sites, each for a three-week period. Each student is expected to attend 120 total hours for each three-week period at a clinical site.

VT 281 Clinical Practicum II (4 Credits)**Prerequisites:** VT 202, VT 204, VT 206 and VT 209.

Provides hands-on experience working with actual animal cases in a clinical veterinary setting. Links prior coursework with off-campus learning experiences providing development of increased proficiency of essential skills necessary for a career as a veterinary technician. In this second practicum course, students will be matched to a practicum site for a three-week period. Each student is expected to attend 120 total hours for the three-week period at the clinical site. Reflection upon the practicum experiences will occur during the final week of the course.

VT 288 Special Studies Vet Technician (1-4 Credits)

Special Studies for Veterinary Technician.

VT 298 Independent Study: Veterinary Technician (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

VT 299 Special Topics Vet Technician (1-4 Credits)

Special Topics Veterinary Technician.

Veterinary Technician - Associate of Applied Science (AAS)

Description

The Veterinary Technician Associate of Applied Science (AAS) degree is a two-year program designed to prepare students to take the Veterinary Technician National Examination (VTNE) to become a Certified Veterinary Technician (CVT). The veterinary technician program is accredited by the AVMA Committee on Veterinary Technician Education and Activities as a program for educating veterinary technicians.

The veterinary technician program provides education in subjects such as animal husbandry, nursing, nutrition, animal handling, parasitology, hematology, microbiology, radiology, pharmacology, anesthesiology, dental prophylaxis, surgical assisting, office procedures and includes externships designed to give students practical hands-on experience to build on the skills learned in the classroom.

Learning Outcomes

1. Perform comprehensive veterinary technician medical processes and apply critical thinking skills for optimal patient care.
2. Utilize therapeutic and professional communication skills to achieve patient outcomes in collaboration with veterinary health care team members and clients.
3. Apply principles of professionalism and confidentiality within the veterinary client patient relationship.
4. Implement ethical and legal standards as they apply to veterinary medical practice.
5. Practice current concepts of infection control and occupational safety.
6. Utilize knowledge of facility policies and procedures.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Students must possess a high school diploma or GED equivalency.
 - The following prerequisite courses must be completed with a "C" grade or higher prior to applying to the veterinary technician program.
 - BI 101 General Biology: Cells & Genes or BI 211 Principles of Biology
 - GS 105 Physical Science: Chemistry or CH 104 Introduction to Chemistry I
 - WR 121 Academic Composition
 - COMM 218 Interpersonal Communication

- MTH 095 Intermediate Algebra or MTH 111 College Algebra or higher
- 40 hours of observation in a veterinary clinic

Other Entrance Requirements

- Required:
 - Refer to the current year veterinary technician program admissions handbook (<https://www.cocc.edu/programs/vet-tech/admission-requirements.aspx>) detailed description of admissions requirements. Students must complete 40 hours of observation in a veterinary clinic, the veterinary technician program application and submit any required documentation as part of their application packet. Admission packets are available on the veterinary technician website (<https://www.cocc.edu/programs/vet-tech/default.aspx>). Applications are accepted biennially during spring term for admission to the veterinary technician program for the following fall term.
 - Once admitted into the veterinary technician program, students will need to complete the following before the start of fall term:
 - 10 panel urine drug screen
 - Criminal history check
 - Documentation of immunizations
 - Tdap (required)
 - Rabies (recommended)

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required:
 - Criminal history check, drug screening, immunization verification \$110
 - In some cases, immunization cost for Tetanus and Rabies \$100-\$900
 - Supplies, such as scrubs, lab jacket, coveralls, farm boots, stethoscope, thermometer, bandage scissors, wrist watch, name badge, calculator, laptop or tablet computer \$500-\$800
 - Transportation costs are variable

Enrollment Fees

- Student lab fee, per term \$300

Course Requirements

Course	Title	Credits
Prerequisite Courses		
BI 101 or BI 211	General Biology: Cells & Genes Principles of Biology	4
GS 105 or CH 104	Physical Science: Chemistry Introduction to Chemistry I	4-5
COMM 218	Interpersonal Communication	3
MTH 095	Intermediate Algebra (or MTH 111 or higher)	4
WR 121	Academic Composition	4
40 hours of observation in a veterinary clinic		
Core Courses		
VT 101	Intro to Veterinary Technician	3
VT 102	Veterinary Terminology	3

VT 103	Animal Hospital and Office Procedures	2
VT 108	Small Animal Nursing	4
VT 110	Parasitology and Pathology	4
VT 111	Hematology and Urinalysis	5
VT 112	Advanced Small Animal Nursing	4
VT 113	Exotic and Lab Animal Medicine	3
VT 114	Pharmaceutical Math	3
VT 116	Pharmacology	4
VT 117	Veterinary Anatomy & Physiology I	6
VT 118	Veterinary Anatomy & Physiology II	5
VT 200	Radiation Safety	2
VT 201	Anesthesiology and Surgery Techniques	4
VT 202	Surgical Nursing and Dentistry	4
VT 203	Large Animal Nursing	4
VT 204	Diagnostic Imaging	3
VT 206	Small Animal Diseases	4
VT 208	Animal Nutrition	2
VT 209	Large Animal Diseases	3
VT 212	Veterinary Microbiology	4
VT 280	Clinical Practicum I	6
VT 281	Clinical Practicum II	4
360 hours on-site at veterinary practices		
Total Credits		105-106

Advising Notes

Students are admitted to the veterinary technician program through a selective admission process. Admission to the veterinary technician program is competitive and enrollment is limited. Program courses must be taken in sequence.

Students are strongly recommended to attend a veterinary technician program information session (<https://www.cocc.edu/programs/vet-tech/information-sessions.aspx>) to learn about COCC's veterinary technician program (<https://www.cocc.edu/programs/vet-tech/default.aspx>) and admission requirements prior to application submission. Currently, a cohort begins every other Fall term.

This program is intended for students seeking employment as veterinary technicians. These courses are not intended as preparation for a doctor of veterinary medicine degree (see Pre-Medicine, Pre-Dentistry, Pre-Veterinary AAOT (p. 61)). Some courses may transfer to other veterinary technician programs. Please contact your transfer institution for more information.

Performance Standards

- Academic Requirements:
 - Students must earn a cumulative 3.0 of higher GPA in prerequisite courses.
 - All courses in the program must be completed with a grade of C or higher.
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Additional Requirements

- Students must enroll full time in all courses listed for each term.
- In order to progress to the next term, students must pass all previous coursework with a grade of 75% or better.
- All Veterinary Technician coursework must be successfully completed prior to entering the clinical practicum courses.

Sample Plan

First Year

Fall		Credits
BI 101	General Biology: Cells & Genes	4
or BI 211	Principles of Biology	
MTH 095	Intermediate Algebra (MTH 111 or higher)	4
COMM 218	Interpersonal Communication	3
Credits		11
Winter		
GS 105	Physical Science: Chemistry	4-5
or CH 104	Introduction to Chemistry I	
WR 121	Academic Composition	4
40 hours of observation in a veterinary clinic		
Credits		8-9

Second Year

Fall		
VT 101	Intro to Veterinary Technician	3
VT 102	Veterinary Terminology	3
VT 103	Animal Hospital and Office Procedures	2
VT 117	Veterinary Anatomy & Physiology I	6
Credits		14
Winter		
VT 108	Small Animal Nursing	4
VT 110	Parasitology and Pathology	4
VT 114	Pharmaceutical Math	3
VT 118	Veterinary Anatomy & Physiology II	5
Credits		16
Spring		
VT 111	Hematology and Urinalysis	5
VT 112	Advanced Small Animal Nursing	4
VT 113	Exotic and Lab Animal Medicine	3
VT 116	Pharmacology	4
Credits		16

Third Year

Fall		
VT 200	Radiation Safety	2
VT 201	Anesthesiology and Surgery Techniques	4
VT 203	Large Animal Nursing	4
VT 209	Large Animal Diseases	3
VT 212	Veterinary Microbiology	4
Credits		17
Winter		
VT 202	Surgical Nursing and Dentistry	4
VT 204	Diagnostic Imaging	3
VT 206	Small Animal Diseases	4

VT 208	Animal Nutrition	2
360 hours on-site at veterinary practices		
	Credits	13
Spring		
VT 280	Clinical Practicum I	6
VT 281	Clinical Practicum II	4
	Credits	10
	Total Credits	105-106

Wildland Fire/Fuels Management

Would you like to work in the wildland fire management field? At COCC, some of the best instructors in the Northwest provide students with the hands-on training needed to manage controlled burns, implement fuels planning, work with fire suppression tactics and more. All classes are designed to meet US Forest Service requirements, as well as those of other government wildland fire management agencies. COCC offers an associate of applied science degree and two certificate programs in wildland fire as well as the fire S-courses for the East Slope Training Region.

<https://www.cocc.edu/programs/wildland-fire/> (<https://www.cocc.edu/programs/wildland-fire/default.aspx>)

Contact:

Paula Simone
541-383-7404
Ponderosa Hall, Bend Campus

Department: Natural and Industrial Resources
Department Chair: Paula Simone

Programs

Career and Technical Education

- Wildland Fire Suppression - One Year Certificate of Completion (CC1) (p. 294)
- Wildland Fire/Fuels Management - Associate of Applied Science (AAS) (p. 295)
- Wildland Firefighter Type II - Career Pathway Certificate of Completion (CPC) (p. 297)

Courses

WF 101 Firefighter Type II Training (3 Credits)

The purpose of this course is to train new firefighters in basic firefighting skills and the basic fire behavior factors that will aid them in the safe and effective control of wildland fires. Students will receive NWCG certification in S-130, S-190, L-180 and S-133.

WF 103 Safety for Survival (3 Credits)

Provides the fundamentals and technical knowledge needed for fire line safety as it pertains to: entrapment avoidance, fire shelter deployment, hazards, injuries and safety issues, mental and physical health, fitness, and current issues. Meets the NWCG requirement for RT-130.

WF 111 Tactical Decision Simulations (2 Credits)

The course uses classroom and simulations to focus on the fire environment and the indicators fireline personnel should recognize in order to anticipate or predict problem fire behavior during fireline operations while utilizing lookouts, communications, escape routes and safety zones. Upon completion of the course and given a Fireline Handbook, Incident Response Pocket Guide (IRPG), and specific problem situations related to fire assignments, student will be provided with the knowledge and practice in decision making necessary to effectively apply tactical decisions making in wildland fire. P/NP grading.

WF 131 S-131, Firefighter Type I (2 Credits)

Recommended preparation: WF 100 and WF 101.

Firefighter Type 1, S-131, is designed to meet the training needs of the Firefighter Type 1 (FFT1). This course is designed to be interactive in nature. It contains several tactical decision games designed to facilitate learning the objectives and class discussion. Topics include fireline reference materials, communications, and tactical decision making.

WF 134 S-134 Lookouts, Communication, Escape Routes, Safety Zones (2 Credits)

Students become engaged in the process of designing their own safety program. The small group exercises will discuss and develop the L, C, E, S, creating a list of performance standards. The entire class will then work together to produce and edit a contract, based on consensus, which guides performance.

WF 188 Special Studies: Wildland Fire (1-4 Credits)

Explores topics of current interest in the discipline.

WF 199 Selected Topics: Wildland Fire (1-4 Credits)

This course is in development.

WF 200 S-200 Initial Attack Incident Command (2 Credits)

Designed to meet the training needs of the ICT4. Presented in a lecture/discussion format and supplemented with group exercises. The six instructional units cover: readiness and mobilization; size up, planning and ordering; deployment and containment; administrative requirements; and post-fire evaluation.

WF 201 NFPA Instructor 1 (3 Credits)

NFPA Instructor 1 is an intensive, instructional methodology program. It addresses the job performance requirement of the National Fire Protection Agency, 1041 Standard for Fire Service Instructor Professional Qualifications and the National Wildfire Coordinating Group. The course prepares students for planning instruction, using a variety of instructional methods, teaching diverse learners, and evaluating course outcomes. The course also provides guidelines for addressing the critical issues of safety and the legal issues of training, and it provides opportunities for participants to participate in application activities. P/NP grading.

WF 203 S-203 Introduction to Incident Information (3 Credits)

Provides students with the knowledge and skills they need to serve as public information officers (PIOF). Touches on virtually all aspects of establishing and maintaining an incident information operation, from communicating with internal and external audiences to handling special situations. Format of the course is lecture and exercises with a final simulation.

WF 210 FI-210 Wildfire Origin/Cause (3 Credits)

The primary purpose of this course is to provide a consistent knowledge and skill base for the wildland fire origin and cause determination investigator (INVF). The concepts taught in this course will help an INVF perform at an acceptable level on a national basis without regard to geographic boundaries. The course is presented by lectures, electronic presentations, field exercises and class discussion.

WF 211 S-211 Portable Pumps (2 Credits)

Recommended preparation: WF 100 and WF 101.

This is an instructor-led course intended to be presented at the local level. The course consists of three skill areas: supply, delivery and application of water. Students will be required to demonstrate their knowledge of correct water use, basic hydraulics and equipment care. The field exercise requires set up, operation and maintenance of pump equipment. To receive credit for this course, students must have field work observed and approved, and take a closed-book written final examination.

WF 215 S-215 Fire Operations in the Urban Interface (3 Credits)

Recommended preparation: WF 100 and WF 101.

This course is designed to assist structure and wildland firefighters who will be making tactical decisions when confronting wildland fire that threatens life, property, and improvements, in the wildland/urban interface. Instructional units include interface awareness, size-up, initial strategy and incident action plan, structure triage, structure protection tactics, incident action plan assessment and update, follow-up and public relations, and firefighter safety in the interface.

WF 215S S-215 Fire Operations in Urban Interface for Structure Fire (3 Credits)

Prerequisites: Department approval based on certified NWCG Firefighter Type II or have completed NWCG S-130/190 and be certified NFPA Firefighter I or be qualified NWCG Firefighter Type I.

Recommended preparation: WF 101.

Designed to assist structure and wildland firefighters who will be making tactical decisions when confronting wildland fire that threatens life, property, and improvements, in the wildland/urban interface. Instructional units include interface awareness, size-up, initial strategy and incident action plan, structure triage, structure protection tactics, incident action plan assessment and update, follow-up and public relations, and firefighter safety in the interface.

WF 219 S-219 Fire Operations (2 Credits)

Prerequisites: department approval.

The course introduces the roles and responsibilities of a firing boss (FIRB) and outlines duties of other personnel who may engage firing operations. The course discusses and illustrates common firing devices and techniques. Although comprehensive in nature, the course work is not a substitute for the dynamic fire environment.

WF 230 S-230 Crew Boss (3 Credits)

Designed to produce student proficiency in the performance of duties associated with the single resource boss position from initial dispatch through demobilization to the home unit. Topics include: operational leadership, preparation and mobilization, assignment preparation, risk management, entrapment avoidance, safety and tactics, offline duties, demobilization and post incident responsibilities.

WF 231 S-231 Engine Boss (1 Credit)

Skill course designed to produce student proficiency in the performance of all duties associated with the single resource engine boss. Topics include tactical use and safety precautions required to establish an effective engine operation on a large incident.

WF 236 S-236 Heavy Equipment Boss (2 Credits)

Prerequisites: department approval.

This is a skill course designed to meet the training needs of a Heavy Equipment Boss on an incident as outlined in the PMS 310-1 and the Position Task Book developed for the position. Primary considerations are tactical use and safety precautions required to establish and maintain an effective dozer operation.

WF 244 S-244 Field Observer (2 Credits)

Provides students with the necessary skills to perform as a field observer (FOBS) and/or a prescribed fire effects monitor (FEMO). Topics include: identifying and interpreting maps, making map calculations, using observation aids and instruments, performing field observations and communicating information. There will be a daylong field trip.

WF 248 S-248 Status/Check-In Recorder (2 Credits)

Prerequisites: department approval.

This course is designed to introduce students to the tools and techniques used to perform the duties of a status check-in recorder (SCKN). The course provides an overview of what a student can expect if dispatched to an incident.

WF 261 S-261 Applied Interagency Incident Business Management (2 Credits)

This course is designed to provide the prerequisite skills/knowledge necessary to perform the tasks of the entry-level finance positions, i.e., commissary manager, personnel time recorder, equipment time recorder, compensation for injury specialist, and claims specialist, in the Incident Command System (ICS). It is designed to be taken after completion of Interagency Incident Business Management (S-260).

WF 270 S-270 Basic Air Operations (2 Credits)

Recommended preparation: WF 131 and WF 134.

Covers aircraft types and capabilities, aviation management and safety, tactical and logistical uses of aircraft, and requirements for helicopter take-off and landing areas.

WF 280 Co-op Work Experience Wildland Fire (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

WF 281 L-280 Followership/Leadership (2 Credits)

Training course designed as a self-assessment opportunity for individuals preparing to step into a leadership role. There is one day of classroom instruction followed by a day in the field with small teams of students working through a series of problem-solving events (Field Leadership Assessment Course). Topic areas include: leadership values and principles; transition challenges for new leaders; situational leadership; team cohesion factors; ethical decision making.

WF 286 Pacific Northwest Engine Academy (3 Credits)

Students attending the Pacific Northwest Engine Academy will receive training utilizing a variety of methods and techniques, which will provide information about water handling and will improve engine operation skills. These skills are applicable to both fuels management and fire suppression activities. The student will be instructed using ICS terminology. P/NP grading.

WF 288 Special Studies: Wildland Fire (1-4 Credits)

Explores topics of current interest in the discipline.

WF 290 S-290 Intermediate Wildfire Behavior (3 Credits)

Recommended preparation: WF 131, WF 260 and WF 134.

This is a classroom-based skills course designed to prepare the prospective fireline supervisor to undertake safe and effective fire management operations. It is the second course in a series that collectively serves to develop fire behavior prediction knowledge and skills. Fire environment differences are discussed as necessary; instructor should stress local conditions.

WF 293 RX-340 (RX-310) Fire Effects (3 Credits)

Provides the student with the knowledge and skills to recognize basic fire regimes, the results of fire treatment on first order fire and fire effects, and to manipulate fire treatments to achieve desired first order fire effects.

WF 294 S-300 IC Extended Attack (2 Credits)

Meets the training needs of the incident commander, type 3 (ICT3). Presented in a lecture/discussion format and supplemented with group exercises. There are six instructional units that cover information gathering, planning, supporting organization, operations, transitioning, and demobilization/administrative requirement.

WF 295 S-330 Task Force/Strike Team Leader (3 Credits)

Prepares the student to perform in the role of task force leader (TFLD) or any strike team leader. Examples and exercises are specific to wildland fire suppression. If the student is expected to perform in another risk area, applicable examples and exercises area will be added.

WF 297 S-339 Division Group Supervisor (2 Credits)

Prepares student to perform in the role of division/group supervisor. Provides instruction in support of the specific tasks of division/group supervisor, but will not instruct the student in general management/supervision or in the incident command system (ICS). Topics include: division/group management, organizational interaction, and division operations.

WF 298 S-390 Fire Behavior Calculation (3 Credits)

Prerequisites: department approval.

This is an NWCG (National Wildfire Coordinating Group) Certified course. This course is designed to introduce fire behavior calculations by manual methods, using nomograms and the Fire Behavior Handbook Appendix B. Students gain an understanding of the determinants of fire behavior through studying Inputs (weather, slope, fuels, and fuel moisture). Students also learn how to interpret fire behavior outputs, documentation processes, and fire behavior briefing components.

WF 299 Selected Topics: Wildland Fire (1-4 Credits)

This course is in development.

Wildland Fire Suppression - One Year Certificate of Completion (CC1)

Description

The Wildland Fire Suppression One-Year Certificate is designed to provide basic skills for students interested in working in the wildland fire profession. Courses are open to all students and the certificate takes three terms/quarters to complete for students attending full time. Students can choose to continue to complete the Associate of Applied Science (AAS) in Wildland Fire/ Fuels Management.

Learning Outcomes

1. Describe the interaction of fuels, weather, and topography on wildland fire behavior, fireline tactics and safety.
2. Interpret maps and use navigation tools to identify a location.
3. Apply knowledge of fundamental leadership principles.
4. Effectively communicate with others using methods appropriate to the situation, population and multidisciplinary agencies.

Entrance Requirements

Academic Entrance Requirements

- Strongly Recommended:
 - Minimum placement scores resulting in WR 121 Academic Composition or WR 121 Academic Composition plus WR 098 Writing Seminar placement or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 060 Beginning Algebra I/MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Hard hat, gloves, boots that meet federal wildland fire specifications, fire clothes, ear protection, eye protection: \$250-\$500. (Some fire clothes may be provided by the College, check with the program director. Boots will NOT be provided.)

Course Requirements

Course	Title	Credits
Core Courses		
FOR 100	Forestry Program Orientation	1
FOR 110	Wildland Fire Science I	2
FOR 111 or SFS 101	Forestry Perspectives Introduction to Emergency Services	4
FOR 211	Supervision and Leadership	3
FOR 230A	Map, Compass and GPS	3
HHPA Activity Course		1
HHP 295 or HHP 242 or HHP 266	Health and Fitness Stress Management Nutrition for Health	3
WF 101	Firefighter Type II Training	3
WF 103 or SFS 102	Safety for Survival Firefighter Safety & Survival	3
WF 111	Tactical Decision Simulations	2
WF 215	S-215 Fire Ops Urban Interface	3
WF 290	S-290 Intermediate Wildfire Behavior	3
Choose from the courses below for a total of 4 credits:		4
FOR 130	Chainsaw Use and Maintenance	
Any WF prefix course not required for degree		
Other Requirements		
MTH 085	Technical Mathematics I (or higher)	4
WR 121	Academic Composition	4
Total Credits		43

Advising Notes

This one year certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

For all suppression short courses (S-courses), students will be given National Wildfire Coordinating Group (NWCG) certification.

Minimum qualifications for entry into the occupation is Firefighter Type II (FFT2) which is offered fall/winter term for the Wildland Firefighter Type II Career Pathway Certificate.

Students will need to be physically fit for employment in the occupation of wildland firefighter. For an FFT2 position, students will be required to pass the arduous "pack test" (three miles in 45 minutes carrying 45 pounds).

Because the short courses are sponsored by the East Slope Training region, the short courses (S-courses) are available to students in the following order:

1. Sponsored government and state employees, including structural fire agencies, from within the East Slope Training area;
2. Sponsored government and state employees, including structural fire agencies, from outside the East Slope Training area; and
3. Full-time COCC students/part-time COCC students/private contractors (in that order) who meet the qualifications of the course. Students must provide a copy of training records to the program director.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

Fall		Credits
FOR 100	Forestry Program Orientation	1
FOR 111 or SFS 101	Forestry Perspectives Introduction to Emergency Services	4
FOR 211	Supervision and Leadership	3
FOR 230A	Map, Compass and GPS	3
MTH 085	Technical Mathematics I	4
Credits		15
Winter		
HHP 295 or HHP 242 or HHP 266	Health and Fitness Stress Management Nutrition for Health	3
WF 101	Firefighter Type II Training	3
Any WF prefix course not required for degree and/or FOR 130		4
WR 121	Academic Composition	4
Credits		14
Spring		
HHPA Activity Course		1
WF 103 or SFS 102	Safety for Survival Firefighter Safety & Survival	3
FOR 110	Wildland Fire Science I	2
WF 111	Tactical Decision Simulations	2
WF 215	S-215 Fire Ops Urban Interface	3

WF 290	S-290 Intermediate Wildfire Behavior	3
Credits		14
Total Credits		43

Wildland Fire/Fuels Management - Associate of Applied Science (AAS) Description

The Associate of Applied Science degree in Wildland Fire/Fuels Management is designed to prepare a student for a job in Fire/Fuels management. Students will learn importance of how fire/fuels management fits in the managing of ecosystems and natural resources as one of the more important aspects of fire management, including the reintroduction of fire as an ecosystem process.

Learning Outcomes

1. Develop the tools for all levels of decision-making and seek information to improve decision-making in wildland fire suppression and management.
2. Analyze the interaction of fuels, weather, and topography on wildland fire behavior, fireline tactics, and safety.
3. Interpret, communicate, apply, and document wildland fire behavior and weather information.
4. Apply the concepts of silviculture as it relates to fuel treatments, fire effects and land management.
5. Interpret GIS data and use in fire management.
6. Synthesize fire management plans incorporating the philosophical, historical, legal, ecological, social and cultural aspects of land management.
7. Integrate concepts of forest and fire ecology in the practice of land and fire management.

Entrance Requirements

Academic Entrance Requirements

- Recommended:
 - Minimum placement scores resulting in WR 121 Academic Composition placement or WR 121 Academic Composition plus WR 098 Writing Seminar or completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 060 Beginning Algebra I/MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra.
- Recommended:
 - High school diploma or GED.

Other Entrance Requirements

- Required:
 - Current employment with a wildland fire suppression organization.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Hard hat, gloves, 12" leather boots with Vibram soles, fire clothes, ear protection, eye protection: \$250-\$500. (Some fire clothes may be

provided by the College, check with the program director. Boots will NOT be provided.)

WR 121 Academic Composition 4

A minimum of 60 days fire-related work experience approved by the Wildland Fire Science director

Total Credits 97-107

Course Requirements

Course	Title	Credits
Core Courses		
FOR 100	Forestry Program Orientation	1
FOR 110	Wildland Fire Science I	2
FOR 111	Forestry Perspectives	4
or SFS 101	Introduction to Emergency Services	
FOR 208	Soils: Sustainable Ecosystems	4
FOR 209	Fire Ecology and Effects	3
FOR 210	Wildland Fire Science II	2
FOR 211	Supervision and Leadership	3
FOR 230A	Map, Compass and GPS	3
FOR 230B	Forest Surveying	3
FOR 235	Resource Measurements	4
FOR 236	Aerial Photo	3
FOR 240A	Forest Ecology	3
FOR 241A	Field Dendrology	3
FOR 241B	Dendrology	3
FOR 260	Conservation of Natural Resources	3
FOR 271	Applied Forest Ecology	3
FOR 272	Forest Entomology/Pathology	3
FOR 273	Silviculture and Harvesting Systems	5
GEOG 265	Geographic Information Systems	4
GEOG 273	Spatial Data Collection	5
WF 101	Firefighter Type II Training	3
WF 111	Tactical Decision Simulations	2
WF 290	S-290 Intermediate Wildfire Behavior	3
WF 298	S-390 Fire Behavior Calculation	3
Wildland Fire Electives (choose from below):		4
Any course with a WF prefix		
BA 101	Intro to Business	
FOR 130	Chainsaw Use and Maintenance	
SFS 101	Introduction to Emergency Services	
SFS 102	Firefighter Safety & Survival	
Other Requirements		
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
Discipline Studies Course		3-4
HHP 185 Activity Course		1
HHP 295	Health and Fitness	3
or HHP 242	Stress Management	
or HHP 266	Nutrition for Health	
MTH 085	Technical Mathematics I	4-8
& MTH 086	and Technical Mathematics II	
or MTH 111	College Algebra	
Choose one course from the following:		3-4
COMM 111	Fundamentals Public Speaking	
COMM 115	Intro Intercultural Comm.	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	

Advising Notes

This degree is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

A minimum of 60 days fire-related work experience approved by the wildland fire science director is required for graduation.

All suppression short courses (S-courses), students will be given National Wildfire Coordinating Group (NWCG) certification.

- Minimum qualifications for entry into the occupation is Firefighter Type II (FFT2) which is offered fall/winter term for the Wildland Firefighter Type II Career Pathway Certificate.
- Students will need to be physically fit for employment in the occupation of wildland firefighter. For an FFT2 position, students will be required to pass the arduous "pack test" (three miles in 45 minutes carrying 45 pounds).

Because the short courses are sponsored by the East Slope Training region, the short courses (S-courses) are available to students in the following order:

1. Sponsored government and state employees, including structural fire agencies, from within the East Slope Training area;
2. Sponsored government and state employees, including structural fire agencies, from outside the East Slope Training area; and
3. Full-time COCC students/part-time COCC students/private contractors (in that order) who meet the qualifications of the course. Students must provide a copy of training records to the program director.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year		Credits
Fall		
FOR 100	Forestry Program Orientation	1
FOR 111	Forestry Perspectives	4
or SFS 101	Introduction to Emergency Services	
FOR 230A	Map, Compass and GPS	3
FOR 240A	Forest Ecology	3
MTH 085	Technical Mathematics I	4
Credits		15
Winter		
FOR 230B	Forest Surveying	3
FOR 271	Applied Forest Ecology	3
GEOG 265	Geographic Information Systems	4

MTH 086	Technical Mathematics II	4
WF 101	Firefighter Type II Training	3
Credits		17
Spring		
FOR 110	Wildland Fire Science I	2
FOR 236	Aerial Photo	3
FOR 241B	Dendrology	3
FOR 272	Forest Entomology/Pathology	3
HHPA Activity Class		1
WF 111	Tactical Decision Simulations	2
WR 121	Academic Composition	4
Credits		18
Second Year		
Fall		
CIS 120	Computer Concepts (Computer Competency Test)	0-4
FOR 210	Wildland Fire Science II	2
FOR 241A	Field Dendrology	3
FOR 273	Silviculture and Harvesting Systems	5
GEOG 273	Spatial Data Collection	5
Credits		15-19
Winter		
Discipline Studies Course		3-4
FOR 211	Supervision and Leadership	3
FOR 235	Resource Measurements	4
HHP 295	Health and Fitness	3
or HHP 242	Stress Management	
or HHP 266	Nutrition for Health	
Choose one course from the following:		3-4
COMM 111	Fundamentals Public Speaking	
COMM 115	Intro Intercultural Comm.	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
WF 290	S-290 Intermediate Wildfire Behavior	3
Credits		19-21
Spring		
FOR 208	Soils: Sustainable Ecosystems	4
FOR 209	Fire Ecology and Effects	3
FOR 260	Conservation of Natural Resources	3
WF 298	S-390 Fire Behavior Calculation	3
Wild Fire Elective		2
Wild Fire Elective		2
Credits		17
Total Credits		101-107

Wildland Firefighter Type II - Career Pathway Certificate of Completion (CPCC)

Description

The Wildland Firefighter Type II Career Pathway Certificate of Completion is designed to provide basic skills for students interested in working in

the wildland fire profession. Courses are open to all students and the certificate takes one to two terms/quarters to complete.

Students will meet the standards set forth by the National Wildfire Coordinating Group under the Wildland Qualifications System for the courses that taught using NWCG curriculum and provides certification. The wildland fire program also offers more extensive training with a One Year Certificate in Wildland Fire Suppression as well as an Associate of Applied Science (AAS) degree in Wildland Fire/Fuels Management.

Learning Outcomes

1. Demonstrate a working knowledge of the basic field strategy and tactics that relate to various fire situations.
2. Analyze factors in that environment which could impact safety.
3. Utilize the use of mapping tools for navigation.

Entrance Requirements

Academic Entrance Requirements

- Required:
 - Minimum placement scores resulting in WR 121 Academic Composition placement or WR 121 Academic Composition plus WR 098 Writing Seminar completion of WR 065 Rhetoric and Critical Thinking II/WR 095 Basic Writing II.
 - Minimum placement scores resulting in MTH 060 Algebra I/MTH 085 Technical Mathematics I placement or completion of MTH 020 Pre-Algebra.
- Recommended:
 - High school diploma or GED.

Additional Program Costs (beyond standard tuition/fees and textbooks)

Material Costs

- Required:
 - Hard hat, gloves, boots that meet federal wildland fire specifications, fire clothes, ear protection, eye protection: \$250-\$500. (Some fire clothes may be provided by the College, check with the program director. Boots will NOT be provided.)

Course Requirements

Course	Title	Credits
Core Courses		
FOR 100	Forestry Program Orientation	1
FOR 110	Wildland Fire Science I	2
FOR 111	Forestry Perspectives	4
or SFS 101	Introduction to Emergency Services	
FOR 230A	Map, Compass and GPS	3
WF 101	Firefighter Type II Training	3
WF 103	Safety for Survival	3
or SFS 102	Firefighter Safety & Survival	
WF Elective or FOR 130		2-4
Total Credits		18-20

Advising Notes

For all suppression short courses (S-courses), students will be given National Wildfire Coordinating Group (NWCG) certification.

Minimum qualifications for entry into the occupation is Firefighter Type II (FFT2) which is offered fall term for the Firefighter Type II Career Pathway Certificate.

Students will need to be physically fit for employment in the occupation of wildland firefighter. For an FFT2 position, students are required to pass the arduous "pack test" (three miles in 45 minutes carrying 45 pounds).

This career pathway certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferable to public or private baccalaureate institutions.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

Winter		Credits
FOR 100	Forestry Program Orientation	1
FOR 111 or SFS 101	Forestry Perspectives Introduction to Emergency Services	4
WF 101	Firefighter Type II Training	3
Credits		8
Spring		Credits
FOR 110	Wildland Fire Science I	2
FOR 230A	Map, Compass and GPS	3
WF 103 or SFS 102	Safety for Survival Firefighter Safety & Survival	3
WF Elective or FOR 130		2-4
Credits		10-12
Total Credits		18-20

World Languages

In today's globally interconnected world and increasingly competitive job market, students with proficiency in more than one language, supported by cultural knowledge and empathetic experience of diverse U.S. and world cultures, have a decided advantage in whatever career they may pursue.

At COCC, we help students to:

- Demonstrate proficiency at a second-year level, a requirement for a bachelor of arts at most Oregon universities. In practical terms, this means passing any of our foreign language courses at the 203 level with a grade of "C" or higher.
- Complete the foreign language entrance requirement for most Oregon universities, which is commonly two terms of a foreign language course.

COCC offers first- and second-year French, Spanish, German, Italian, and Chinese courses; all of these can be used to satisfy the aforementioned lower-division requirements for bachelor's degrees and to prepare transfer students for success in achieving their academic and professional goals. In addition, first-year courses in Kiksht (the native

language of the Wasco people) and Ichishkin (the native language of the Sahaptin people) are offered on the Madras campus.

Please see the World Languages Program page (<https://www.cocc.edu/programs/world-languages/default.aspx>) for contact information and more detailed program descriptions.

Department: World Languages and Cultures
Department Chair: Murray Godfrey

Programs

Transfer

- World Languages - Associate of Arts Oregon Transfer (AAOT) (p. 302)

Courses

CHN 101 Mandarin Chinese I (4 Credits)

Introduces Mandarin Chinese language presented within the context of Chinese culture. First course of a three-course sequence. Introduces students to the sound system of Mandarin Chinese and moves on to basic skills in listening, speaking, reading, and copying a limited number of Chinese characters.

CHN 102 Mandarin Chinese II (4 Credits)

Prerequisites: CHN 101.

Introduces Mandarin Chinese language presented within the context of Chinese culture. Second course of a three-course sequence. Develops fundamental language skills (listening, speaking, reading, and writing) in communicative context.

CHN 103 Mandarin Chinese III (4 Credits)

Prerequisites: CHN 102.

Introduces Mandarin Chinese language presented within the context of Chinese culture. Third course of a three-course sequence. Expands on effective communicative skills in both the written and spoken language with particular attention to handling uncomplicated social situations and developing writing and reading to meet a number of practical everyday needs.

CHN 110 Chinese Characters (4 Credits)

Recommended preparation: CHN 101.

An introductory course on Chinese Simplified Characters, with an emphasis on the recognition, writing, and etymology of said characters. This course will help the beginning student of Chinese, or those who have an interest in studying Chinese characters, learn to recognize many of the most common characters, write those characters using correct stroke order, and learn the etymology of many of those characters. Students will also gain an understanding of the importance of Chinese characters in Chinese culture, and Chinese character's influence in Asia in general. Note: This is not a calligraphy course.

CHN 140 Contemporary Chinese Cultures (4 Credits)

Provides overviews of the dynamic ideologies, political policies, economics, geography, social structures, mass media presentations, and arts and literature, since the formation of the People's Republic of China in 1949 to the present. No background in Chinese languages is required.

CHN 141 Chinese Culture Through Film (4 Credits)

Introduction to the history, politics, society and economy of China through viewing and analyzing cinema. Examines how traditional Asian visual arts and centuries-old cultural tradition influenced filmmakers. No background in Chinese languages is required.

CHN 201 Second Year Mandarin Chinese I (4 Credits)**Prerequisites:** CHN 103.

The first course of a three-course sequence in intermediate Mandarin Chinese language and culture. This course will focus on effective communication in the Mandarin Chinese language, emphasizing both the written and spoken language, as well as an understanding of the practices and products of Chinese culture. Particular attention will be given to exploring the relationship between Chinese language, literature, philosophy, and culture.

CHN 202 Second Year Mandarin Chinese II (4 Credits)**Prerequisites:** CHN 201.

The second course of a three-course sequence in intermediate Mandarin Chinese language and culture. This course will focus on effective communication in the Mandarin Chinese language, emphasizing both the written and spoken language, as well as an understanding of the practices and products of Chinese culture. Particular attention will be given to exploring the relationship between Chinese language, literature, philosophy, and culture.

CHN 203 Second Year Mandarin Chinese III (4 Credits)**Prerequisites:** CHN 202.

The third course of a three-course sequence in intermediate Mandarin Chinese language and culture. This course will focus on effective communication in the Mandarin Chinese language, emphasizing both the written and spoken language, as well as an understanding of the practices and products of Chinese culture. Particular attention will be given to exploring the relationship between Chinese language, literature, philosophy, and culture.

CHN 298 Independent Study: Chinese (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study in Chinese to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

FR 101 First Year French I (4 Credits)

The first course of a three-course sequence in French. Emphasizes active communication in French. Develops students' basic skills in listening, reading, writing, and speaking.

FR 102 First Year French II (4 Credits)**Prerequisites:** FR 101.

The second course of a three-course sequence in French. Continues the development of reading, writing, listening and speaking skills. Particular emphasis on short interactions regarding everyday life.

FR 103 First Year French III (4 Credits)**Prerequisites:** FR 102.

The third course of a three-course sequence in French. Continues the development of reading, writing, listening and speaking skills. Prepares students for entry into second-year level at COCC or any other university.

FR 199 Selected Topics: French (1-4 Credits)

This course is in development.

FR 201 Second Year French I (4 Credits)

Recommended preparation: FR 103 or three years of high school French. Continues the work of First Year French, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Emphasis on writing and reading skills. Incorporates culture in all aspects of the course; class taught mostly in French. Course should be taken in sequence.

FR 202 Second Year French II (4 Credits)

Recommended preparation: FR 201 or four years of high school French. Continues the work of FR201, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Incorporates culture in all aspects of the course; class taught mostly in French. Course should be taken in sequence.

FR 203 Second Year French III (4 Credits)

Recommended preparation: FR 202, or one year of IB, AP French in high school, or four years of middle/high school French.

Continues the work of French 202, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Incorporates culture, regionalisms, and argot; class taught mostly in French. Course should be taken in sequence.

FR 211 French Conversation and Culture I (3 Credits)**Recommended preparation:** FR 103, or two years of high school French.

Intended for students who wish to maintain and continue mastering fluency in the acquisition of French. Also an excellent option for the non-degree-seeking student.

FR 212 French Conversation and Culture II (3 Credits)**Recommended preparation:** FR 211, or FR 201, or three years of high school French.

Intended for students who wish to maintain and continue mastering fluency in the acquisition of French. Also an excellent option for the non-degree-seeking student.

FR 213 French Conversation and Culture III (3 Credits)**Recommended preparation:** FR 212, or 202, or four years of middle/high school French.

Intended for students who wish to maintain and continue mastering fluency in the acquisition of French. Also an excellent option for the non-degree-seeking student.

FR 298 Independent Study: French (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study in French to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

GER 101 First Year German I (4 Credits)

German 101 is designed for beginners. Basic listening, comprehension, speaking, and writing skills will be developed during this course. Focuses on phonetics, genders, descriptions of objects and people, conjugating regular and irregular verbs in the present tense, punctuation, question words, German word order, and vocabulary, which includes the following categories: the alphabet, numbers, and greetings. Communication and German thought processes will be emphasized. Successful completion of this sequence, which should be taken in order, will prepare students for second-year level German at COCC or other universities.

GER 102 First Year German II (4 Credits)**Recommended preparation:** GER 101 or one year of high school German.

Continues the development of reading, writing, listening and speaking skills. Focuses on usage of *kennen* and *wissen*, the accusative case and prepositions governed by the accusative, modal verbs, verbs with separable prefixes, forming plurals, the formal and informal imperative, and prepositions. Students are encouraged to review GER 101 concepts and vocabulary prior to class.

GER 103 First Year German III (4 Credits)

Recommended preparation: GER 102 or two years of high school German. Continues the development of reading, writing, listening and speaking skills. Focuses on the dative case including indirect objects and prepositions governed by the dative, prepositions that can be accusative or dative, past tense using sein and haben, coordinating conjunctions, and comparisons. Students are encouraged to review the concepts of GER 101 and GER 102 prior to class.

GER 188 Special Studies: German (1-4 Credits)

Explores topics of current interest in the discipline.

GER 201 Second Year German I (4 Credits)

Recommended preparation: GER 103 or three years of high school German.

Continues, after GER 103, with the development of reading, writing, listening and speaking skills. Focuses on subordinating conjunctions, reflexive pronouns and verbs in the accusative and dative, genitive, adjective endings, and comparisons. Class begins with a review of GER 101, GER 102 and GER 103.

GER 202 Second Year German II (4 Credits)

Recommended preparation: GER 201 or four years of high school German.

Continues with the development of reading, writing, listening and speaking skills. Focuses on the concepts of adjectives used as nouns, the simple past tense, past perfect tense, expressing wishes and expectations, the future tense, relative clauses, negations using nicht, noch nicht, noch kein(e), and nicht mehr, verbs with fixed prepositions, da- and wo- compounds, and the subjunctive.

GER 203 Second Year German III (4 Credits)

Recommended preparation: GER 202 or four years of high school German.

Continues with the development of reading, writing, listening and speaking skills. Focuses on the concepts of subjunctive I and II, expressing opinions, indirect discourse in present and past subjunctive I, the passive voice and the impersonal use of "man", present participles, review of GER 202 grammar and vocabulary.

GER 298 Independent Study: German (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study in German to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

GER 299 Selected Topics: German (1-4 Credits)

This course is in development.

ICH 101 First Year Ichishkin Native Language I (4 Credits)

Introduces the Ichishkin language of the Warm Springs (Sahaptin) people. First course of a three-term sequence of study of the Native American language, Ichishkin, at the first-year college level. The first term will introduce students to alphabet characters, sounds, and simple phrases.

ICH 102 First Year Ichishkin Native Language II (4 Credits)

Recommended preparation: ICH 101.

Introduces the Ichishkin language of the Warm Springs (Sahaptin) people. Second of a three-term sequence of study of the Native American language, Ichishkin, at the first-year college level. The second term will develop student familiarity with simple phrases and basic conversation.

ICH 103 First Year Ichishkin Native Language III (4 Credits)

Recommended preparation: ICH 102.

Introduces students to the Ichishkin language of the Warm Springs (Sahaptin) people. Third of a three-term sequence of study of the Native American language, Ichishkin, at the first-year college level. The third term will focus on refining conversational skills.

IT 101 First Year Italian I (4 Credits)

Designed for beginners. Emphasizes active communication in Italian. Develops students' basic skills in listening, reading, writing, and speaking in Italian. Successful completion of this sequence prepares students for entry into second-year level at COCC or any other university. Should be taken in sequence. Students who have previously learned Italian should contact the instructor for advice on which class to take. This class is intended for students who have no knowledge of Italian.

IT 102 First Year Italian II (4 Credits)

Recommended preparation: IT 101 or one year of high school Italian; students who have previously learned Italian should contact the instructor for advice on which class to take.

Continues the development of reading, writing, listening and speaking skills. Students are expected to have completed IT 101 material, and are encouraged to review Italian 101 concepts and vocabulary prior to class. Course should be taken in sequence.

IT 103 First Year Italian III (4 Credits)

Recommended preparation: IT 102 or two years of high school Italian; students who have previously learned Italian should contact the instructor for advice on which class to take.

Continues the development of reading, writing, listening and speaking skills. Course should be taken in sequence.

IT 199 Selected Topics: Italian (1-4 Credits)

This course is in development.

IT 201 Second Year Italian I (4 Credits)

Recommended preparation: IT 103; students who have previously learned Italian should contact the instructor for advice on which class to take.

Continues the work of First Year Italian, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Culture, regionalisms and history incorporated; course taught mostly in Italian.

IT 202 Second Year Italian II (4 Credits)

Recommended preparation: IT 201; students who have previously learned Italian should contact the instructor for advice on which class to take.

Continues the work of Italian 201, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Culture, regionalisms and history incorporated; course taught mostly in Italian.

IT 203 Second Year Italian III (4 Credits)

Recommended preparation: IT 202; students who have previously learned Italian should contact the instructor for advice on which class to take.

Continues the work of Italian 202, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Culture, regionalisms and history incorporated; course taught mostly in Italian.

IT 298 Independent Study: Italian (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

IT 299 Selected Topics: Italian (1-4 Credits)

This course is in development.

KIK 101 First Year Kiksht Native Language I (4 Credits)

Beginning Kiksht introduces students to the Kiksht language of the Wasco people. The first term will introduce students to alphabet characters, sounds, and simple phrases. One of the techniques used to learn the language will be Total Physical Response © (TPR) which is an adopted method used by indigenous language teachers to hear and respond to verbal commands in the target language.

KIK 102 First Year Kiksht Native Language II (4 Credits)

Beginning Kiksht introduces students to the Kiksht language of the Wasco people. The second term will build on student knowledge of alphabet characters, sounds, and phrases. One of the techniques used to learn the language will be Total Physical Response © (TPR) which is an adopted method used by indigenous language teachers to hear and respond to verbal commands in the target language.

KIK 103 First Year Kiksht Native Language III (4 Credits)

Beginning Kiksht introduces students to the Kiksht language of the Wasco people. The third term will focus on developing student ability to communicate meaningful phrases in predictable and culturally appropriate settings with particular attention to introducing students to verb affixes indicating aspect and tense. One of the techniques used to learn the language will be Total Physical Response © (TPR) which is an adopted method used by indigenous language teachers to hear and respond to verbal commands in the target language.

KIK 201 Second Year Kiksht Native Language I (4 Credits)

Develops communication skills in Kiksht, the language of the Wasco people. First course of a three-term sequence of study of the American Indian language, Kiksht, at the second-year college level. Focuses on improving pronunciation and developing conversational skills.

KIK 202 Second Year Kiksht Native Language II (4 Credits)

Develops communication skills in Kiksht, the language of the Wasco people. Second course of a three-term sequence of study of the American Indian language, Kiksht, at the second-year college level. Focuses on developing sentence skills to engage in short conversations.

KIK 203 Second Year Kiksht Native Language III (4 Credits)

Develops communication skills in Kiksht, the language of the Wasco people. Third course of a three-term sequence of study of the American Indian language, Kiksht, at the second-year college level. Focuses on conversational skills.

KIK 298 Independent Study: Kiksht (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

SPAN 101 First Year Spanish I (4 Credits)

Course designed for beginners; students with prior Spanish experience should contact COCC Spanish instructors to determine which Spanish course is appropriate for them. Begins the development of reading, writing, listening and speaking skills. Focuses on the concepts of pronunciation, gender, descriptions, possessives, present tense -ar verbs, numbers, question words, and vocabulary that includes the following categories: alphabet, people, greetings, school items, family and activities.

SPAN 102 First Year Spanish II (4 Credits)

Recommended preparation: SPAN 101 or one year of high school Spanish.

Continues the development of reading, writing, listening and speaking skills. Focuses on the concepts of weather, time & date, clothing, colors, regular -er/-ir verbs, the verb gustar, interrogatives, stem-changing verbs (i-ie, e-i, o-ue), the city, the home, furniture & appliances, the verb estar (used with prepositions, adjectives, the present progressive, and contrasted with the verb ser), the verb ir and the phrase ir + infinitivo (used to refer to the future), and adjectives referring to physical and emotional states. Students are encouraged to review SPAN 101 concepts and vocabulary prior to class.

SPAN 103 First Year Spanish III (4 Credits)

Recommended preparation: SPAN 102 or two years of high school Spanish.

Final course in the first-year sequence. Continues the development of reading, writing, listening and speaking skills. Focuses on the concepts of , professions, verbs with changes in the first person (yo), saber/ conocer, body parts, reflexive verbs, adverbs of time and frequency, sports and outdoor activities, the preterite tense (including regular, stem-changing, and irregular verbs), food vocabulary, por/para, vocabulary related to meals and table settings, and direct object pronouns. Students are encouraged to review the concepts of SPAN 101 and SPAN 102 prior to class.

SPAN 188 Special Studies: Spanish (1-4 Credits)

Explores topics of current interest in the discipline.

SPAN 199 Selected Topics: Spanish (1-4 Credits)

This course is in development.

SPAN 201 Second Year Spanish I (4 Credits)

Recommended preparation: SPAN 103 or three years of high school Spanish.

First course of the second-year sequence. Continues, after SPAN 103, with the intermediate development of reading, writing, listening and speaking skills. Includes review of the preterite tense and vocabulary from SPAN 103. Focuses on the imperfect tense, (usages with and in conjunction with the preterite), indirect, direct, and double object pronouns, indefinite and negative words, por/para, creating adverbs, and vocabulary including the following categories: chores and housework, fiestas and other celebrations, pastimes and diversion, and accidents.

SPAN 202 Second Year Spanish II (4 Credits)

Recommended preparation: SPAN 201 or four years of high school Spanish.

Continues with the intermediate development of reading, writing, listening and speaking skills. Focuses on the concepts of relative pronouns, the imperative (commands: formal, informal, plural, and singular), the use of pronouns with the imperative, the impersonal and passive se, comparisons, using se to describe unplanned occurrences or accidents, the simple future tense, and vocabulary including the following categories: travel, shopping, fine art, and nature and the environment.

SPAN 203 Second Year Spanish III (4 Credits)

Recommended preparation: SPAN 202 or four years of high school Spanish.

Final course in the second-year sequence. Continues with the intermediate development of reading, writing, listening and speaking skills. Focuses on the concepts of *estar* used with past participles, the *presente perfecto*, the present subjunctive (used with: impersonal expressions, expressions of doubt, expressions of desire, expressions of emotion, adjective clauses, adverbial clauses and conjunctions), reciprocal verbs, the conditional tense, the past subjunctive, the past perfect tense, and vocabulary covering the following: animals, personal relationships, popular culture, health and medical emergencies, and nationalities and political terms.

SPAN 211 Spanish Conversation and Culture I (3 Credits)

Recommended preparation: or to be taken with SPAN 203.

Designed for students who wish to continue mastering fluency in the speaking of Spanish. Objective is to study various Spanish-speaking cultures. Taught exclusively in Spanish and some student participation is required. Does not meet baccalaureate degree language requirements.

SPAN 212 Spanish Conversation and Culture II (3 Credits)

Recommended preparation: or to be taken with SPAN 203.

Designed for students who wish to continue mastering fluency in the speaking of Spanish. Objective is to study various Spanish-speaking cultures. Taught exclusively in Spanish and some student participation is required. Does not meet baccalaureate degree language requirements.

SPAN 213 Spanish Conversation and Culture III (3 Credits)

Recommended preparation: or to be taken with SPAN 203.

Designed for students who wish to continue mastering fluency in the speaking of Spanish. Objective is to study various Spanish-speaking cultures. Taught exclusively in Spanish and some student participation is required. Does not meet baccalaureate degree language requirements.

SPAN 288 Special Studies: Spanish (1-4 Credits)

Explores topics of current interest in the discipline.

SPAN 298 Independent Study: Spanish (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

SPAN 299 Selected Topics: Spanish (1-4 Credits)

This course is in development.

World Languages - Associate of Arts Oregon Transfer (AAOT)

Description

Students seeking a bachelor's degree in French, Spanish, German, Italian, Chinese, or a related degree, or a teaching endorsement featuring world language, literature and culture studies are often best served by pursuing the Associate of Arts Oregon Transfer (AAOT) degree with a focus in world languages. This AAOT provides the lower division general education courses as well as foundation language skills.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and

2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and
2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

In addition, students should be aware that certain courses have recommended preparation.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 398)		
Choose 3 credits ¹		3
Mathematics: (p. 399)		
Choose one course		4
Oral Communication: (p. 399)		
Choose one course		3-4
Recommend: COMM 115		
Writing: (p. 399)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (p. 401)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (p. 399)		
Choose three courses from at least two prefixes ²		9-12
Recommend: Second year world language courses		
Social Science: (p. 404)		
Choose four courses from at least two prefixes ³		12-16
Science/Math/Computer Science: (p. 403)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Electives		
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.		39
Total Credits		90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated.

² Second-year world language courses fit into this category. Any second-year world language course not used to satisfy this requirement may be counted as an elective. First-year language courses are counted as electives.

³ Related course to consider: ANTH 240 Language and Culture

Advising Notes

Oregon public universities that offer bachelor's degrees, minors, certificates or endorsements in world languages and related fields:

- Eastern Oregon University
- Oregon State University-Corvallis
- Portland State University
- Southern Oregon University
- University of Oregon
- Western Oregon University

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
- Options for additional standards:
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters (recommend world language)	3-4
Mathematics: (p. 399)	4
Oral Communication (recommend COMM 115)	4
WR 121	Academic Composition
	Credits
	15-16

Second Term	Credits
Discipline Studies Social Science (recommend ANTH 240)	4
Discipline Studies Arts & Letters (recommend world language)	3-4
Elective	1
Health (3 credits with HHP or HHPA prefix)	3
WR 122	Argument, Research, and Multimodal
or WR 227	Composition
	Technical Writing
	Credits
	15-16

Third Term	Credits
Discipline Studies Arts & Letters (recommend world language)	3-4
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
	Credits
	17-21

Fourth Term	Credits
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
	Credits
	14-17

Fifth Term	Credits
Discipline Studies Science/Math/Computer Science	3-5
Discipline Studies Social Science	3-4
Elective	4
Elective	4
	Credits
	14-17

Sixth Term	Credits
Discipline Studies Science/Math/Computer Science	3-5
Elective	4
Elective	4
Elective	4
	Credits
	15-17
Total Credits	90-104

COURSES A-Z

Courses are grouped alphabetically by the subject prefix and then by number. Refer to guidance on understanding course information (p. 459).

A

- Allied Health (AH) (p. 305)
- Anthropology (ANTH) (p. 305)
- Apprenticeship (APR) (p. 306)
- Art (ART) (p. 308)
- Art History (ARH) (p. 312)
- Automotive (AUT) (p. 312)
- Aviation (AV) (p. 315)

B

- Baking and Pastry Arts (BAK) (p. 320)
- Biology (BI) (p. 321)
- Business (BA) (p. 323)

C

- Chemistry (CH) (p. 325)
- Chinese (CHN) (p. 326)
- Communication (COMM) (p. 327)
- Computer & Information Systems (CIS) (p. 327)
- Computer Science (CS) (p. 331)
- Criminal Justice (CJ) (p. 332)
- Culinary Arts (CUL) (p. 333)

D

- Dental Assisting (DA) (p. 335)

E

- Economics (EC) (p. 337)
- Education (ED) (p. 337)
- Emergency Medicine (EMT) (p. 339)
- Engineering (ENGR) (p. 341)
- Engineering-General (GE) (p. 342)
- English & Literature (ENG) (p. 342)
- Ethnic Studies (ES) (p. 343)

F

- Film Arts (FA) (p. 344)
- Fish & Wildlife (FW) (p. 344)
- Foods & Nutrition (FN) (p. 344)
- Forestry (FOR) (p. 344)
- French (FR) (p. 346)

G

- General Science (GS) (p. 347)
- Geography / Geog Info Systems (GEOG) (p. 347)

- Geology (G) (p. 349)
- German (GER) (p. 349)

H

- Health & Human Performance (HHP) (p. 349)
- Health and Human Performance Activity (HHPA) (p. 352)
- Health Information Management (HIM) (p. 354)
- History (HST) (p. 356)
- Hospitality Management (HM) (p. 357)
- Human Development (HD) (p. 358)
- Human Services/Addictions Stds (HS) (p. 359)
- Humanities (HUM) (p. 361)

I

- Italian (IT) (p. 362)

J

- Journalism (J) (p. 363)

K

- Kiksht (KIK) (p. 363)

L

- Library & Information Skills (LIB) (p. 363)

M

- Manufacturing (MFG) (p. 364)
- Massage Therapy (LMT) (p. 367)
- Mathematics (MTH) (p. 369)
- Medical Assistant (MA) (p. 372)
- Military Science (MS) (p. 373)
- Music (MUS) (p. 373)
- Music -Small Ensembles/Lessons (MUP) (p. 375)

N

- Nursing (NUR) (p. 376)

O

- Outdoor Leadership (OL) (p. 378)

P

- Pharmacy Technician (PHM) (p. 380)
- Philosophy (PHL) (p. 381)
- Physics (PH) (p. 381)
- Political Science (PS) (p. 382)
- Psychology (PSY) (p. 383)

R

- Reading (RD) (p. 384)

S

- Sociology (SOC) (p. 384)
- Spanish (SPAN) (p. 385)
- Structural Fire Science (SFS) (p. 386)

T

- Theater Arts (TA) (p. 387)

V

- Veterinary Technician (VT) (p. 387)

W

- Wildland Fire (WF) (p. 389)
- Women's Studies (WS) (p. 391)
- Writing (WR) (p. 391)

Allied Health (AH)**AH 105 Calculations for Allied Health (3 Credits)**

Prerequisites: MTH 060 (or higher) or minimum placement into MTH 095. Reviews basic mathematical skills required to perform calculations without a calculator. The second portion of the class introduces application of mathematical concepts to solve clinically relevant problems by the student's specific Allied Health program(s). P/NP grading.

AH 111 Medical Terminology I (3 Credits)

Covers terminology pertaining to medical term construction, body structure, integumentary, hematopoietic/lymph, cardiovascular, oncology, respiratory and musculoskeletal systems. Includes standard abbreviations, anatomic, diagnostic, symptomatic and operative terms related to these body systems. Students (online and face-to-face) must pass a face-to-face written final exam at 70% or higher to pass this class. The overall grade parameter to pass this class is "C" (75%) or higher.

AH 112 Medical Terminology II (3 Credits)

Prerequisites: AH 111.

The second of a two-quarter sequence that provides continuity from AH 111 in medical terminology used in the health sciences that pertain to the human body. This course studies neurologic terms and disorders; the digestive system; urogenital system; endocrine system; gynecologic and obstetric terminology; fetal and neonatal disorders and anomalies; terminology relating to psychiatry, anesthesia, pharmacology, and emergency medicine; and the sense organs of sight and hearing. Students (online and face-to-face) must pass a face-to-face, written final exam at 70% or higher to pass this class. The overall grade parameter to pass this class is "C" (75%) or higher.

AH 114 Introduction to Pathophysiology (5 Credits)

Reviews abnormal pathological changes that occur within individual organs and body systems as the result of a disease process. Disease processes are studied in detail with regard to the cause, pathological features, physical signs and symptoms, diagnostic procedures, current preferred treatment, prognosis and pertinent public health issues. Students will also identify and define medical terms related to all body systems. Designed for Allied Health programs.

AH 115 Cultural Responsiveness in Allied Health (3 Credits)

Prerequisites: WR 121 or BA 214.

Highlights the impact of cultural differences on both the patient and the caregiver. Examines the major categories of diversity, language, heritage, biases, and stereotypes and how these might impact patient care. Examines how knowledge of diversity issues can be essential to the caregiver in communication and treatment.

AH 199 Special Topics: Allied Health (1-3 Credits)

This course is in development. Reserved for courses that cover topics of general interest in health occupations.

AH 205 Medical Ethics (3 Credits)

Recommended preparation: WR 121.

Explores the relation of traditional ethical precepts to current biomedical ethical controversies. Open to all students without prerequisites, but recommended primarily for students enrolled in, or planning to enroll in, programs in nursing or other health care professions.

AH 299 Selected Topics: Allied Health (1-4 Credits)

This course is in development.

Anthropology (ANTH)**ANTH 102 Archaeology (4 Credits)**

Provides an introduction to archaeological method and theory along with a survey of human world prehistory through the rise of great civilizations. In this course we will address questions relevant to the practice of archaeology: What is archaeology? Why do archaeologists dig holes? How do archaeologists know where to dig? What is material culture? How do archaeologists analyze and understand what they find? Topics include archaeological concepts, survey, excavation, analysis and interpretation of data, dating techniques, research methods and theories of cultural change.

ANTH 103 Cultural Anthropology (4 Credits)

Provides an introduction to the diversity of human beliefs and behaviors around the world. Explores cross-cultural similarities and differences in systems of values, family, religion, economics, politics, and social structure, including issues of race and ethnicity. The goals of this course are to foster an appreciation of cultural diversity, to use this appreciation to better understand the student's culture(s), and to learn to be active and aware participants of local and global communities.

ANTH 141 Film & Society: Race, Gender, and Class (2 Credits)

Examines the representation of race, social class and gender in film. Special attention is given to how particular representations reflect the broader historical context surrounding when the films were produced and culturally-based audience sentiments. Anthropological and sociological analyses of the films will be provided to give a multi-disciplinary account of how films reflect, create and support various ideological positions regarding race, class and gender. This course is also offered as SOC 141; students can not use credit from both courses.

ANTH 142 Film & Society: Global Cultures (2 Credits)

Examines global issues in both foreign and domestic films from sociological and anthropological perspectives. Selected films cover topics that are relevant to understanding global processes such as global economy and Islam in the contemporary world, as well as films that address the more regionally localized processes of community and family. The purpose of the course is to use film to expose students to diverse perspectives and to encourage the critical awareness of the global interconnections that influence and constrain our modern lives. Films will include documentaries, as well as feature films.

ANTH 143 Film & Society: Contemporary Issues (2 Credits)

Examines contemporary issues in film from sociological and anthropological perspectives. Selected films cover such topics as youth culture, nationalism, local culture and poverty, mental health or other social problems. The content of the films, as well as issues of film production, historical context and audience reception will be the major focus of analysis.

ANTH 188 Special Studies: Anthropology (1-4 Credits)

Explores topics of current interest in the discipline.

ANTH 199 Selected Topics: Anthropology (1-4 Credits)

This course is in development.

ANTH 202 Archaeology Of Oregon (4 Credits)

Recommended preparation: WR 121 and ANTH 102.

Investigates the diverse nature of Oregon archaeology. Prehistoric patterns of human occupation in five distinct regions will be analyzed: the Great Basin, Columbia Plateau, Lower Columbia and Coast, Willamette Valley and the Southwestern Mountains. Furthermore, the course will investigate how the diversity of eco-scapes within Oregon shaped the manner in which humans culturally, technologically, and spiritually adapted to their environments.

ANTH 234 Biological Anthropology (4 Credits)

An introduction to biological anthropology. The goal of this course is to achieve the basic scientific literacy necessary to understand and think critically about contemporary human variation, bio-cultural interactions, and five million years of human evolution. It examines the biological evidence for human evolution and population variation. Lecture topics include the mechanisms of evolution, cell biology and human genetics, primate behavior, the human fossil record, and modern human variation and adaptations.

ANTH 235 Evolution of Human Sexuality (4 Credits)

Recommended preparation: ANTH 234.

Examines the complex interplay between culture and biology in human sexual behavior with particular attention to anatomy and physiology as traits that have evolved from our primate and mammalian ancestors. Focus will be on theoretical issues in evolution and the implications of these theoretical models on human behavior. Topics include human mating systems across cultures, sexual selection, reproduction, physiological and hormonal processes, as well as the non-reproductive aspects of human sexuality and the physiological and hormonal processes of sexuality.

ANTH 237 Forensic Anthropology (4 Credits)

Recommended preparation: ANTH 234.

This course teaches the basic analysis of human remains for the medico-legal profession, and will cover the history of the discipline, the human skeleton, determining postmortem interval, trauma evaluation, and individual identification. It will also cover the investigation of crime scenes, the role of the forensic anthropologist, and case studies from a number of various situations.

ANTH 240 Language and Culture (4 Credits)

Recommended preparation: WR 121.

An introduction to the relationship between communication and culture. Designed to help students become familiar with and understand the mechanics of language from brain structure to how we make sounds; cross-cultural and historical variations between and within communicative systems; and language as a form of social interaction, specifically exploring the complex and diverse relationships between language, socio-cultural, politics and identity.

ANTH 250 Food and Culture (4 Credits)

Recommended preparation: WR 121.

Provides an introduction to the diversity of food ways and the cultural significance of food and eating around the world. Topics explored will include food rules and rituals, consumption and health, food movements, food scarcity and poverty, global movement of foods, as well as the gendered dimensions of food and eating, with particular focus on body and body image. By the end of the course, students will have gained a broad-ranging familiarity with the cultural, political and economic aspects of past and present human food systems and be able to recognize and analyze the social linkages and hierarchies embedded in food systems.

ANTH 254 Magic, Witchcraft, Religion (4 Credits)

Recommended preparation: WR 121.

Introduces students to the subject of religion in the broad anthropological context, contributes to a deeper awareness of diverse expressions of religious faith in a multicultural world, and promotes openness to and tolerance of world views different from the student's own.

ANTH 283 Introduction to Medical Anthropology (4 Credits)

Recommended preparation: WR 121.

Introduces the main theories, concepts, and methods of exploring health, illness, disease and health care systems from a medical anthropological perspective. Uses a cultural interpretive approach to explore health beliefs, healing practices, and healer's and patient's roles within the context of world health care systems. Includes an examination of the biomedical model of health care as a cultural construct created through Western belief systems. P/NP grading.

ANTH 295 Gender and Sexuality in an Anthropological Perspective (4 Credits)

Recommended preparation: WR 121 and ANTH 103.

Examines the constructions of femininities, masculinities and sexualities from a cross-cultural perspective. The cross-cultural focus will provide students with the comparative framework necessary to understand the diversity of gender roles within the context of specific cultural, political and economic processes. While exploring how both Western and non-Western cultures from diverse parts of the world imagine, negotiate, and even contest gender identities and relations, this course will also address key theoretical issues and anthropological approaches to understanding gender.

ANTH 298 Independent Study: Anthropology (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

ANTH 299 Selected Topics: Anthropology (1-4 Credits)

This course is in development.

Apprenticeship (APR)

APR 101 Elec/Mfg Plant 1 - Basic Electric Theory (4 Credits)

Students will be introduced to content in trade math, fundamental concepts of electricity, resistance, Ohm's law, series circuits, parallel circuits, grounding, grounding electrode systems, and the National Electrical Code. This course will be taught in a lecture/lab format with hands-on use of meters, power supplies, relays and switches.

APR 102 Elec/Mfg Plant 2 - Basic Wiring (4 Credits)

This course includes principles of inductance, capacitance, transformer fundamentals, generator fundamentals, electric motors, enclosure grounding, and the National Electrical Code as it applies to these topics. This course will be taught in a lecture/lab format, with labs demonstrating the electrical functions of the various elements.

APR 103 Elec/Mfg Plant 3 - Industrial Wiring (4 Credits)

Students will be introduced to commercial building plans and specs, reading drawings, branch and feeder circuits, appliance circuits, lighting circuits, panel boards, protection circuits, cooling systems, and the National Electrical Code as it applies to these topics. This course will be taught in a lecture/lab format, with a field trip to either a hospital, a newspaper publishing facility or a mill.

APR 104 Elec/Mfg Plant 4 - Commercial Wiring (4 Credits)

Course content includes industrial plans and site work, substations, panel boards and feeders, wire tables, determining conductor size, motors, controllers, ventilating, system protection, site lighting hazards, programmable logic controllers, and the National Electric Code as it applies to these topics. This course will be taught in a lecture/lab format, with labs to include hands-on PLC programming and ladder logic development.

APR 111M Metering Basics (4 Credits)

This course is an introduction to electrical trade theory for Meterman Apprentices and will review math concepts including percentages, scientific notation, metric prefixes, ratios, proportions, and equations. Apprentices will also be introduced to electrical topics such as current, voltage, resistance, Ohm's Law, power, DC series, and parallel circuits. Lastly students will learn about single phase metering, Blondel's Theorem, metering vocabulary, single phase transformers, and working safely within the electric field.

APR 118M Transformer Connections (4 Credits)

This course is designed to instruct Meterperson Apprentices on the fundamentals of transformer bank connections: delta-delta, wye-wye, wye-delta, and single-phase regulators. Apprentices will also learn about conditions that can cause back feed, while continuing to learn about single phase metering.

APR 121 Boiler Operator 1 - Stationary Engine Principles (4 Credits)

The course will cover stationary engineering principles, boiler types and accessories, and trade math.

APR 121M Metering Fundamentals I (4 Credits)

This course is designed to instruct second year Meterperson Apprentices on the fundamentals of AC theory. This includes: DC review, trigonometry review, RC, RL, TLC circuits, series and parallel resonance. Apprentices also learn about self-contained three phase metering and refining what they have already learned about single phase metering.

APR 122 Boiler Operator 2 - Boiler Accessories (4 Credits)

The course content will cover boiler accessories, fuel burning equipment, combustion and draft controls.

APR 122M Metering Fundamentals II (4 Credits)

This course is designed to instruct second year Meterperson Apprentices on the graphic representation of system parameters (i.e. currents & voltages) and various transformer line-ups that create those parameters. Apprentices learn how to apply mathematical and vectoral approaches for deriving the values of Real, Apparent and Reactive Power in a electrical service. Additionally they learn about instrument rated three phase metering and refining what they have already learned about self-contained three phase metering.

APR 141 Sheet Metal Core Curriculum (4 Credits)

This course is an introduction to construction and maintenance skills used in various crafts. Basic concepts in safety, math, tools, blueprints and rigging are examined this first term. In addition, employment opportunities will be explored through various apprenticeship trades.

APR 142 Sheet Metal I (4 Credits)

This course presents related training material consistent with the minimum skill requirements of the sheet metal trade. The content includes elements of trade specific tools and fundamentals of duct layout and safety as it relates to the sheet metal trade.

APR 143 Basic Layout (4 Credits)

Introduction to trade, terminology, trade math, tools, shop safety, shop equipment, basic layout of duct work and fittings.

APR 144 Sheet Metal Math (4 Credits)

Covers fractions and decimals, geometric shapes, equation solutions, ratios and proportions, perimeters, areas, and volumes of geometric shapes; powers and use of the scientific calculator. Emphasis is on applications to applied sheet metal fabricators. There will be lab time in the class to work on assignments.

APR 145 Blueprint Reading (4 Credits)

Introduction to blueprint reading, drafting blueprints, scaling existing buildings and drafting mechanical systems.

APR 146 Architectural Sheet Metal (4 Credits)

The study of architectural sheet metal in the context of today's industry. The course of study includes the following: discovery of various types of materials; study profiles of roofing panels, water conductors, various types of roof flashings; related trades that are integral with this trade; the philosophy of layout in the field; and the application of actual installations, safety equipment and practices applicable to the trade.

APR 201 Elec/Mfg Plant 5 - Motor Controls (4 Credits)

Course of study includes reversing circuits applied to motors, power distribution systems, transformers, electronic control devices, relays, photoelectric and proximity controls, programmable controllers, starters, preventive maintenance, and the National Electric Code as it applies to these topics. This course is taught in a lecture/lab format, with labs covering wiring and operation of listed equipment to control a small motor.

APR 202 Elec/Mfg Plant 6 - Motor Controls/Circuits (4 Credits)

Course of study includes reversing circuits applied to motors, power distribution systems, transformers, electronic control devices, relays, photoelectric and proximity controls, programmable controllers, starters, preventive maintenance, and the National Electric Code as it applies to these topics. This course will be taught in a lecture/lab format, with the lab portion including the demonstration of and hands on programming of variable speed drives.

APR 203 Elec/Mfg Plant 7 - Motor Applications (4 Credits)

Topics include safety, commercial and residential calculations; wiring methods; related theory and the National Electric Code as it applies to these topics. This course will be taught in a lecture/lab format. Lab will include field trip to a commercial building with walk-through of service equipment and heating/cooling equipment.

APR 204 Elec/Mfg Plant 8 - NEC Code (4 Credits)

Topics include theory and application of motor controls, solid state fundamentals, special termination, layout, hazardous locations and transformer locations, operation and maintenance of high voltage switchgear and starters, and a thorough review of the National Electric Code. This course will be taught in a lecture/lab format, with students having the opportunity to take practice quizzes and practice code exams.

APR 221 Boiler Operator 3 - Boiler Operation (4 Credits)

The course content will include boiler operation, maintenance, water treatment, and boiler room safety.

APR 222 Boiler Operator 4 - Steam Usage (4 Credits)

The course content includes steam usage and management, basic electricity principles and basic knowledge of steam turbines.

APR 223 Turbine Operator 1 - Applied Mechanics (4 Credits)

The course content will include mathematics, mensuration, applied mechanics, thermodynamics, steam and internal combustion engines, steam and gas turbines, refrigeration, air compression, and lubrication.

APR 224 Turbine Operator 2 - Instrumentation (4 Credits)

The course content will include basic electricity, electronics and control instrumentation, fluid mechanics, pumps, power plant piping systems, air compressors, and different types of power plants.

APR 225 Turbine Operator 3 - Thermodynamics (4 Credits)

The course content will include internal combustion engines, lubrication, thermodynamics, heat engines, steam engines, and steam and gas turbines.

APR 226 Turbine Operator 4 - Electrical Theory (4 Credits)

The course content will include electrical theory, AC and DC electrical machines, transformers and rectifiers, steam turbine theory, construction of steam turbines, and steam turbine and condenser operation and maintenance.

APR 231M Metering Advanced I (4 Credits)

This course is designed to instruct third-year apprentices on the subject of advanced metering, including the following: history of metering (past, present and future), review of meter vectoring, polyphase vectoring, self-contained meters, instrument rated meters, instrument transformers (Current and Voltage) and their application. While learning about Primary metering and refining what they have already learned about instrument rated three phase metering.

APR 232M Metering Advanced II (4 Credits)

This course is designed to instruct third-year Meterperson Apprentices on the subject of advance fundamentals of metering including: billing rates, demand metering, Kilovolt-Ampere-Reactance (KVAR) and Kilovolt Ampere (KVA) metering, special metering, net metering, and pulse metering (pulse weights, pulse initiation, and totalization). Additionally apprentices will learn about different types of meter test equipment, AMI/AMR, Telemetry and Smart grid.

APR 241 Building Codes and Installation Manuals (4 Credits)

This course is an overview of the mechanical codes as related to the HVAC industry in commercial and residential applications. In addition, installation manuals will be explored as to proper installation and usage of HVAC equipment. During the term there will be three field trips to visit job sites where students will identify code applications and violations.

APR 242 Duct Fabrication/Design (4 Credits)

Introduction to duct design, different styles of duct design, and multilevel duct system design. Heat loss, heat gain calculations and instruction on use of duct calculators.

APR 243 General Fabrication (4 Credits)

This course is the study of the sheet metal trade as it is applied to general-needs metal work. The work studied is that outside of the traditional HVAC and architectural scope as studied in previous terms with a broader base of skills to be learned, such as custom, decorative and artistic finished products.

APR 244 Project Supervision (4 Credits)

Introduction to construction management skills as they apply to project supervision.

Art (ART)

ART 101 Introduction to the Visual Arts (4 Credits)

Introduces approaches to the understanding and appreciation of the visual arts. Provides a foundation in the basic concepts, vocabulary of the elements and principles of design as well as materials, methods and processes. A wide variety of artworks are explored. May include some hands-on experience with various mediums.

ART 110 Introduction to Graphic Design (3 Credits)

Students will use standard graphic design applications such as Adobe Illustrator and Photoshop for drawing and page layout purposes for art, design, and the web.

ART 115 Basic Design: 2-D (3 Credits)

Provides an introduction to visual language and the basic elements of design. Basic Design 2D employs design elements and principles of organization to communicate visual ideas in black and white. 2-D composition, structure, visual balance and rhythm, unity and emphasis along with the elements of point, line, plane, texture, form and space, value, and their interactions are explored through hands on projects and activities.

ART 116 Basic Design: Color (3 Credits)

Introduction to color theory and studio practice using value, hue and intensity with the elements of line, shape, texture and the principles of organization to articulate visual ideas with two-dimensional color design problems. Munsell color theory for paint mixing, Albers visual Interaction of color and Itten's proportional, cultural and subjective color theories are presented.

ART 117 Basic Design: 3-D (3 Credits)

Explores the elements and principles of three-dimensional design. Studio projects offer hands-on experience by which to explore basic elements such as scale, proportion, mass, volume, line, physical texture and planes in space. A foundation course for students interested in ceramics, sculpture, architecture and other three-dimensional fields. For art and non-art majors.

ART 121 Ceramics: Introductory Hand Building (3 Credits)

Recommended preparation: ART 117 and ART 131.

Introduces basic hand building skills, simple glaze application and an understanding of fundamental ceramic processes, for students with little or no experience. Includes presentation of historical, cultural and contemporary trends in ceramics. Students should plan on at least one term of this course and one term of Introductory Wheel Throwing before advancing to Intermediate Ceramics and beyond. May be repeated up to 9 credits.

ART 122 Ceramics: Introductory Wheel Throwing (3 Credits)

Recommended preparation: ART 117 and ART 131.

Introduces basic wheel throwing skills, simple glaze application and an understanding of fundamental ceramic processes, for students with little or no experience. Includes presentation of historical, cultural and contemporary trends in ceramics. Students should plan on at least one term of this course and one term of Introductory Hand Building before advancing to Intermediate Ceramics and beyond. May be repeated up to 9 credits.

ART 131 Drawing I (3 Credits)**Recommended preparation:** ART 115.

Emphasis on observing and developing fundamental drawing and composition skills. Still life material used extensively. Combined Lecture and Lab sessions include historical and cultural approaches to drawing and drawing materials.

ART 132 Drawing II (3 Credits)**Recommended preparation:** ART 131.

This is a foundation course with emphasis on observation and the development of fundamental drawing and composition skills. Concepts and skills developed in ART 131 will be applied to drawing the human figure and portraiture. Live models are used for the study of the human figure and portrait. Representational as well as expressive approaches will be applied. This course may be considered as part of the foundation for all further study in the visual arts.

ART 133 Drawing III (3 Credits)**Recommended preparation:** ART 131 or ART 132.

Foundational course with emphasis on landscape drawing and creative expression working with a broader range of media. Technical, aesthetic and conceptual aspects will be addressed, along with the discipline of working in a series. This course can be considered as part of the foundation for all further study in the visual arts. Drawing III is excellent preparation for Figure Drawing, Painting, Illustration, as well as Printmaking.

ART 157 Metalcraft I (3 Credits)**Recommended preparation:** MTH 060.

Basic skills necessary to work nonferrous metals plus hot and cold fabrication, forging, texturing and cabochon stone-setting are included in the metalwork sequence. Projects can be jewelry, hollowware or small sculpture. Development of imaginative ideas and personal aesthetic direction is expected. Experimentation and invention is encouraged. Should be taken in sequence.

ART 157A1 Metalwork & Jewelry - Hot Fabrication I (2 Credits)

Introduction to the basic skills used to fabricate non-ferrous metals including silver, copper and copper alloys to make jewelry or other small metal objects. Projects will be joined using high temperature silver solder and natural gas/compressed air torches as the heat source. Additional instruction includes developing designs, annealing, drilling, sawing, filing, texturing, dapping and finishing techniques.

ART 157A2 Metalwork & Jewelry - Hot Fabrication II (2 Credits)**Recommended preparation:** ART 157A1.

Builds the skills learned in ART 157A1. Students will develop soldering skill by designing more complex and dimensional projects. Bezel setting a cabochon stone, making hinges, and more complex forming techniques and texturing methods will also be included.

ART 157B1 Metalwork & Jewelry - Cold Fabrication I (2 Credits)

Introduction to the basic skills used to fabricate non-ferrous metals including silver, copper and copper alloys to make jewelry or other small metal objects. Projects will be joined using rivets, tabs, links and other methods of cold connections. Additional instruction includes developing design, annealing, drilling, sawing, filing, texturing, dapping and finishing techniques.

ART 157B2 Metalwork & Jewelry - Cold Fabrication II (2 Credits)**Recommended preparation:** ART 157B1.

Builds the skills learned in ART 157B1 with more challenging project assignments. Students will develop technical skills by designing projects, which include simple forming techniques, moving parts, incorporating found objects and/or stone settings.

ART 157C1 Jewelry - Precious Metal Clay I (1 Credit)

An introduction to working with Precious Metal Clay (PMC) to make fine silver jewelry. The course will include designing projects, making a texture stamp, manipulation and joining techniques for both soft and unfired PMC, kiln firing and finishing techniques.

ART 158B1 Jewelry - Casting & Chain Making I (2 Credits)

An introduction to centrifugal lost wax casting process. Additive and subtractive methods will be used to sculpt small-scale wax models, which will be sprued, invested and cast. Fusing links to weave simple chains and finishing techniques will be included.

ART 158B2 Jewelry - Casting & Chain Making II (2 Credits)**Recommended preparation:** ART 158B1 and ART 157A1.

Builds on the skills learned in ART 158B1. It will include centrifugal, vacuum, cuttlebone casting and sand casting. The use of molds to duplicate textures to transfer onto wax, creating stone settings in wax, controlling the wax burn-out and weaving complex linked chains will be included.

ART 158C1 Jewelry - Enameling I (1 Credit)

Basic introduction to enameling on copper and fine silver. Techniques for texturing, using stencils, sifting and wet-packing enamel, adding foils, kiln firing, cold connecting and finishing techniques will be included.

ART 158C2 Jewelry - Enameling II (1 Credit)**Recommended preparation:** ART 158C1 and ART 157A1.

Builds on the skills learned in ART 158C1. Techniques of champleve, cloisonne, image transfer and fusing the enamel with a torch will be included.

ART 159A1 Metalwork & Jewelry - Forming I (2 Credits)**Recommended preparation:** ART 157A1.

Students will make non-ferrous metal projects which include a third dimension. The projects can be fabricated jewelry, containers, or small-scale sculpture made using folding, scoring, chasing and repousse, or other metalworking techniques used to form sheet metal. Projects may include the use of hot and/or cold connections and non-metal materials.

ART 159A2 Metalwork & Jewelry - Forming II (2 Credits)**Recommended preparation:** ART 157A1 and ART 159A1.

Builds on the skills learned in ART 159A1. The projects can be fabricated from sheet metal using angle raising, shell forming, hydraulic-press forming and electro-forming. Projects may include the use of hot and/or cold connections and non-metal materials.

ART 159B2 Metalwork & Jewelry - Etching & Hydraulic Press II (2 Credits)**Recommended preparation:** ART 159B1 and either ART 157A1 or ART 157B1.

Builds on the skills learned in ART 159B1. Etching resists will include markers, oil paint and asphaltum varnish as resists for copper. Non-conforming carved acrylic and liquid steel conforming dies will be made to form the etched metal using the hydraulic press.

ART 159C1 Jewelry - Precious Metal Clay & Enameling I (2 Credits)**Recommended preparation:** ART 157C1.

Focuses on improving designs for fine silver precious metal clay. The fired projects will be enhanced with enamel to add color and then fired again to fuse the enamel.

ART 159C2 Jewelry - Precious Metal Clay & Enameling II (2 Credits)**Recommended preparation:** ART 159C1.

Focuses on designing projects to create recesses in the precious metal clay. After firing the PMC, enamel is placed in the depressions. The project is fired again to fuse the enamel. Cold connections and adding gold will also be covered.

ART 161 Photography I (3 Credits)

Recommended preparation: ART 115.

Introduction to traditional black and white film photography including camera operation, composition, film processing, printing and presentation. Emphasis is on creative problem solving and understanding the basic photographic concepts used to create good visual communication. Weekly photo assignments will require shooting outside of class, as will text readings. In-class critiques of work are a major part of this course.

ART 162 Photography II (3 Credits)

Recommended preparation: ART 161.

Introduction to black and white fine printing in the traditional wet darkroom. Course includes a basic overview of the Zone System, with the goal of "pre-visualizing" a scene as a finished photograph being an expected outcome. Students work with fiber-base printing paper, print bleaching, toning, archival print finishing and other advanced techniques to create an expressive print statement. Creative problem solving and development of personal vision are a course emphasis. Weekly shooting and printing assignments, class critiques and a final project are part of the course.

ART 163 Photography III (3 Credits)

Recommended preparation: ART 161.

An exploration of alternative darkroom processes including hand coloring, multiple image printing, selective/multiple toning, "solarization" (Sabattier effect), negative prints and more. A course goal is to use a "post-visualization" approach, allowing students to evolve visual communication beyond what was initially conceived in the field. Creative problem solving and development of personal vision are emphasized. Weekly printing assignments, class critiques and a final project are part of the course.

ART 180 Co-op Work Experience Art (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

ART 181 Painting I (3 Credits)

Recommended preparation: ART 115 and ART 131.

Introduction to materials and techniques using alkyd oil, acrylic and/or water-soluble oil paints, building canvas supports, stretching canvas and preparing painting grounds. Studio experience using still life, self-portrait, landscape and the figure.

ART 182 Painting II (3 Credits)

Recommended preparation: ART 131 and ART 181 or instructor approval.

Introduction to color theory and personal expression. Studio experience using still life, portrait, figure and landscape. Application of compositional principles using the grid, sequential imagery and continuous field.

ART 183 Painting III (3 Credits)

Recommended preparation: ART 131 and ART 182.

Exploration of personal iconography. Studio experience using still life, landscape, figure in context, abstract spatial and abstract geometric.

ART 184 Watercolor I (3 Credits)

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.

ART 185 Watercolor II (3 Credits)

Recommended preparation: ART 131 and ART 184 or instructor approval.

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.

ART 186 Watercolor III (3 Credits)

Recommended preparation: ART 131 and ART 185.

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.

ART 188 Special Studies: Art (1-4 Credits)

Explores topics of current interest in the discipline.

ART 190 Figurative Clay Sculpture (3 Credits)

Recommended preparation: ART 131 and ART 154.

Introduction to modeling the human form in clay from clothed and unclothed models using traditional additive and subtractive processes. Historical treatments of the figure and contemporary approaches will be referenced.

ART 191 Sculpture (3 Credits)

Recommended preparation: ART 117.

Studio introduction to articulation of visual ideas in three dimensions using additive, subtractive and construction processes.

ART 197 Art Portfolio Creation (3 Credits)

Prepares students for the business and professional art world. Create both digital and hard-copy portfolios while learning about public relations, marketing, promoting, business guidelines, time management, contracts, presentations, goal setting, long-term inspiration and commitment to their craft, as well as exhibition hanging, timelines and reception set-ups. Review art school requirements and learn how to fill out applications for art schools, residencies, grants and art scholarships. Includes practical experience in art exhibitions in the Pence Gallery at Pinckney Center.

ART 199 Selected Topics: Art (1-3 Credits)

This course is in development.

ART 234 Figure Drawing I (3 Credits)

Recommended preparation: ART 131 or instructor approval.

Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media.

ART 235 Figure Drawing II (3 Credits)

Recommended preparation: ART 234 or instructor approval.

Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media.

ART 236 Figure Drawing III (3 Credits)

Recommended preparation: ART 235 or instructor approval.

Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media.

ART 252 Ceramics: Intermediate Wheel Throwing (3 Credits)

Recommended preparation: ART 121 and ART 122.

Enhances ceramic wheel throwing skills, with an emphasis on complex functional forms, as well as the understanding of glaze formulation, testing and kiln firing. Includes presentation of historical, cultural and contemporary trends in ceramics. May be repeated up to 9 credits.

ART 253 Ceramics: Intermediate Ceramics (3 Credits)**Recommended preparation:** ART 121 and ART 122.

Enhances ceramic hand building and wheel throwing skills. Continued focus on complex thrown and hand built forms with attention to design elements, as well as the understanding of glaze formulation, testing and kiln firing. Includes presentation of historical, cultural and contemporary trends in ceramics. Independent development of a unique body of work, for presentation/exhibition, is expected. May be repeated up to 9 credits.

ART 257 Metalcraft IV (3 Credits)**Recommended preparation:** ART 159 and ART 117.

Skills to work nonferrous metals such as hydraulic press, enameling, granulation, reticulation, electro-forming, fold forming, chasing and repousse, angle-raising, and fabricated hollowware are included. Projects can be jewelry, hollowware or small sculpture. Development of imaginative ideas and personal aesthetic direction is expected. Experimentation and invention are encouraged.

ART 258 Metalcraft V (3 Credits)**Recommended preparation:** ART 257 and ART 117.

Skills to work nonferrous metals such as hydraulic press, enameling, granulation, reticulation, electro-forming, fold forming, chasing and repousse, angle-raising, and fabricated hollowware are included. Projects can be jewelry, hollowware or small sculpture. Development of imaginative ideas and personal aesthetic direction is expected. Experimentation and invention are encouraged.

ART 259 Metalcraft VI (3 Credits)**Recommended preparation:** ART 117 and ART 158.

Skills to work nonferrous metals such as hydraulic press, enameling, granulation, reticulation, electro-forming, fold forming, chasing and repousse, angle-raising, and fabricated hollowware are included. Projects can be jewelry, hollowware and small sculpture. Development of imaginative ideas and personal aesthetic direction is expected. Experimentation and invention is encouraged. Should be taken in sequence.

ART 261 Darkroom Photography (3 Credits)**Recommended preparation:** ART 161.

This course is an application of darkroom photography. Students must have prior knowledge of traditional black and white film photography including: camera operation, film processing and darkroom printing. Emphasis is on creative problem solving and understanding the photographic concepts used to create good visual communication. Requirements include outside-of-class shooting, and independent in-lab processing and printing. In-class photo critiques of work and a hanging of work are a major part of this course.

ART 265 Digital Photography (3 Credits)

Introduces students to the basics of composition and camera settings and provides an understanding of digital photo-editing for the purpose of creating successful landscape, portrait, montage and other photographic forms.

ART 266 Raku-Special Topics (2 Credits)**Recommended preparation:** ART 154.

Short course focusing on the raku firing process.

ART 267 Digital Photography II (3 Credits)**Recommended preparation:** ART 265.

This course is an intermediate continuation of digital photography including: the zone system technique for image exposure; advanced photo-editing techniques; lighting concepts; and presentation. Emphasis is on creative problem solving and mastering the basic photographic concepts used to create good visual communication. Requirements include outside-of-class shooting, as well as readings. In-class photo labs and critiques of work are a major part of this course.

ART 270 Printmaking (3 Credits)**Recommended preparation:** ART 131.

Practice printmaking, including relief, intaglio process on an individual project basis. Processes and materials are presented for students to complete four to five hand-pulled prints. All projects serve as an introduction to various printmaking methods and reproduction printing techniques.

ART 281 Painting IV (3 Credits)**Recommended preparation:** ART 131 and ART 183.

Introduction to materials and techniques using alkyd oil, oil and/or water-soluble oil paints and mediums with emphasis on exploration, self-expression and nontraditional supports. Introduces color theory and personal expression; students apply composition principles using the grid, sequential imagery and continuous field with still life, portrait, figure and landscape.

ART 282 Painting V (3 Credits)**Recommended preparation:** ART 131 and ART 281.

Emphasis on individual exploration of color, visual concepts, critical doubling, the diptych and scale.

ART 283 Painting VI (3 Credits)**Recommended preparation:** ART 131 and ART 282.

Emphasis on independent projects, the triptych, exploration of contemporary problems in painting, statement of a thesis, painting the proposition through a series of interrelated works and the professional documentation and exhibition of the paintings.

ART 284 Watercolor IV (3 Credits)**Recommended preparation:** ART 131 and ART 186.

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.

ART 285 Watercolor V (3 Credits)**Recommended preparation:** ART 131 and ART 284 or instructor approval.

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.

ART 286 Watercolor VI (3 Credits)**Recommended preparation:** ART 131 and ART 285.

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.

ART 291 Mold Making for Ceramics and Sculpture (3 Credits)**Recommended preparation:** ART 191 and/or ART 121.

Intermediate studio course with emphasis on developing skills and technical knowledge in mold making processes. Topics covered include plaster molds for ceramic slip casting, block molds, two part and complex molds. Lecture and research topics encompass Mold Making and Casting in Art and Industry, Historical Uses of Mold Making, and Contemporary Materials/Processes.

ART 292 Site Specific Sculpture (3 Credits)**Recommended preparation:** ART 117 and/or ART 191.

Explores the possibilities of using non-traditional means such as site, time, and interactivity to communicate ideas. Through a process of research and collaboration, students create interactive sculptural artworks on site. Culminates with a public exhibition of individual and group projects/installations.

ART 293 Outdoor and Public Sculpture (3 Credits)**Recommended preparation:** ART 117 and/or ART 191.

Explores the meaning and varieties of art created in and for public spaces, especially concentrating on work that contains environmental and social themes. Each student will generate several proposals, informed by research and readings, then create a work of public art as the primary goal.

ART 298 Independent Study: Art (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

ART 299 Selected Topics: Art (1-3 Credits)

This course is in development.

Art History (ARH)

ARH 180 Co-op Work Experience Art History (1-4 Credits)**Prerequisites:** Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

ARH 188 Special Studies: Art History (1-4 Credits)

Explores topics of current interest in the discipline.

ARH 199 Selected Topics: Art History (1-4 Credits)

This course is in development.

ARH 201 Art History: Western: Prehistory to Early Byzantine (4 Credits)**Recommended preparation:** WR 065 or higher.

Surveys the major periods of visual arts in the West, with a focus on the ancient world. Introduces students to the concepts of art and surveys the development of art in historical context from Prehistory through the early Byzantine Empire. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them.

ARH 202 Art History: Western: Early Medieval to Late Renaissance (4 Credits)**Recommended preparation:** WR 065.

Surveys the major periods of visual arts in the West, with a focus on the Middle Ages and the Renaissance. Introduces students to the concepts of art and surveys the development of art in historical context from the Early Middle Ages through the Late Renaissance. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them.

ARH 203 Art History: Western: Baroque to Early Modern (4 Credits)**Recommended preparation:** WR 065.

Surveys the major periods of visual arts in the West with an emphasis on the Baroque through early Modern eras. Introduces students to the concepts of art and surveys the development of art in historical context from the early 1600s through the turn of the 20th Century. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them.

ARH 206 Art History: Western: Modern and Contemporary (4 Credits)

A specialized chronological survey of Modern and Contemporary art from the mid-19th Century to the present day. Explores the many eclectic developments in Modern art from its beginnings through the Postmodern contemporary era. Emphasizes major artists, movements, and critical concepts in modern art and theory, and relates those concepts to the art of the past as well as issues facing artists and society today.

ARH 207 Native American Art History (4 Credits)

Survey of the arts indigenous to Mesoamerican and North American Indian cultures emphasizing architecture, pottery, painting and the fiber arts.

ARH 208 Art History: Non-Western (4 Credits)**Recommended preparation:** WR 065.

A specialized survey of the art of Non-Western cultures around the world, from the Prehistoric past through the present day. This course will examine the artistic and cultural traditions of Islam, India, East Asia, the Pacific Islands, Sub-Saharan Africa, and the Americas. The course will focus on understanding select works of art and architecture within their original cultural, religious, and historical contexts, and will contrast various Non-Western artistic philosophies and values with those of the Western world.

ARH 298 Independent Study: Art History (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study in art history to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Automotive (AUT)

AUT 101 Basic Electricity for Automotive (2 Credits)**Prerequisites with concurrency:** AUT 106.

Provides understanding of fundamental principles of electricity. Covers basic electrical quantities, Ohm's law, power, series, and parallel circuits, magnetism, electromagnetism and an introduction to DC-current troubleshooting. Introduces student to the use of a digital multimeter and oscilloscope. Student will also be introduced to electrical schematics. A self-paced course.

AUT 102 Automotive Electric I (5 Credits)**Prerequisites:** AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.**Recommended preparation:** MTH 020 or higher or minimum placement into MTH 060.

Covers Automotive Electrical Skills. Introduces the testing, disassembly, and rebuilding of various electrical equipment. Troubleshooting and using various test equipment common to the Automotive trade will be stressed. Introduces the use of automotive scan tools for basic diagnostics. Introduces the use of intrusive and non-intrusive testing methods.

AUT 103 Automotive Electric II (2 Credits)**Prerequisites:** AUT 102.

Studies disassembly, testing and rebuilding of various electrical equipment. Stresses troubleshooting and using various test equipment common to the automotive trade.

AUT 104 Automotive Electric III (2 Credits)**Prerequisites:** AUT 103.

A hands-on study and familiarization of repair procedures for air bag, security entry and cruise control systems. Learn diagnostic and repair procedures using body control modules. Learn diagnostics and repair procedures for hybrid and new electrical systems.

AUT 105 Diesel Performance I (2 Credits)**Prerequisites:** AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Introduces principles of diesel systems and basic diagnosis. Includes engine analysis, cooling and exhaust systems, fuel management systems and diesel engines.

AUT 106 Automotive Program Orientation (1 Credit)**Recommended preparation:** or to be taken with AUT 101, AUT 107, AUT 110, AUT 115, and MTH 020 or higher or minimum placement into MTH 060.

Introduction to the Automotive program. Provides an introduction of the fundamental principles of automotive shop safety and tool care. Guidance given on the self-paced course format. This course is required prior to taking any automotive course. This is a three-day, intensive course that is only taught at the beginning of each term. Permissible to be taken in a term along with other automotive courses.

AUT 107 Mechanical Systems I (3 Credits)**Prerequisites with concurrency:** AUT 106.

Provides an understanding of the fundamental principles of automotive shop safety and tool care. Develops mechanical knowledge and skills utilized throughout a career in the automotive field. Includes techniques of routine vehicle maintenance. Includes customer vehicle identification and handling, new vehicle pre-delivery inspection and preparation, safety inspection, lubrication tasks, and light line tasks. A self-paced course.

AUT 110 Small Gas Engines (3 Credits)**Prerequisites with concurrency:** AUT 106.

Designed to study and apply the theory, operation, diagnoses and repair of small gas engines and their use in the world today. A self-paced course.

AUT 111 Computerized Engine Controls (5 Credits)**Prerequisites:** AUT 205.

Studies advanced electrical systems found on late-model vehicles. Provides solid understanding of computerized automotive engine control systems and how they operate and the ability to diagnose, troubleshoot and repair computerized engine control systems.

AUT 112 Basic Engine Performance I (1 Credit)**Prerequisites:** AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Designed to study and apply the theory, operation, diagnoses and repair of the points-type ignition and carburetion systems as they were used in vehicles of the past.

AUT 113 Basic Engine Performance II (1 Credit)**Prerequisites:** AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Designed to continue the study and apply the theory presented in AUT 112 Basic Engine Performance I. Continues with the operation, diagnoses, and repair of the carburetion system as it was used in vehicles of the past.

AUT 114 Welding for the Automotive Trade (3 Credits)**Prerequisites:** AUT 101, AUT 106, AUT 107, AUT 110, and AUT 115.

Provides a basic understanding of the fundamental principles of automotive fabrication, including safety topics. Topics introduce students to focused areas that are required when replacing vehicle components that include a light level of fabrication. (A scheduled self-paced course).

AUT 115 College Success for Automotive Technology (2 Credits)**Prerequisites with concurrency:** AUT 106.

Recommended preparation: or to be taken with MTH 020 or higher or minimum placement into MTH 060.

Prepares students for successful completion of the Automotive Technology degree at COCC and explores careers as an automotive technician and professional. Offers a condensed version of the College Success course geared toward the two Automotive Technology degrees and/or the multiple Automotive Certificates. Introduces the various automotive information systems, hand tool usage, Scan Tool introduction, and resume preparation.

AUT 199 Selected Topics: Automotive (1-4 Credits)

This course is in development.

AUT 201 Automotive Engines (4 Credits)**Prerequisites:** AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.

Provides information on the construction, operation and design of the internal combustion engine. Teaches the concepts and procedures of engine work to cover the proper procedure in rebuilding a four-cycle internal combustion engine. Includes a combination of guided lecture and laboratory applications, stressing safety, accuracy of measure, proper usage of tools, and application of repair manuals through actual overhaul of engines.

AUT 202 Manual Drive Trains I (3 Credits)**Prerequisites:** AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.

A self-paced course that studies standard transmissions and transaxles. Students will learn on college-owned components. The students will learn operating principles, diagnosis, construction, approved repair procedures, and overhaul of current transmission types on manual transmissions and transaxles.

AUT 203 Manual Drive Trains II (3 Credits)**Prerequisites:** AUT 202.

Second part of a manual transmission sequence. A study of standard transmission and the relationship to clutches, driveshafts, rear axle assembly, transaxle, shift controls and four-wheel drive components. Students will learn on college-owned components. The student will learn operating principles, diagnosis and approved repair procedures on manual transmissions and related power train components. Includes emphasis on diagnosis, service, and procedure to conform to current service manuals.

AUT 204 Steering and Suspension (3 Credits)**Prerequisites:** AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

Recommended preparation: AUT 208.

Designed to study and apply the theory, operation, diagnoses and repair of the modern suspension and steering systems.

AUT 205 Engine Performance I (2 Credits)**Prerequisites:** AUT 103.

Studies the diagnosis of drivability problems. Covers engine analysis, cooling and exhaust systems, ignition and fuel management systems.

AUT 206 Engine Performance II (2 Credits)**Prerequisites:** AUT 111.

Studies diagnosis of drivability problems. Includes further study of engine analysis, ignition and fuel management systems, and super performance diagnosis. Provides the technician with a look into the causes of automotive emissions in relation to vehicles that are four years old and newer. Looks at various methods of emissions inspection/maintenance testing, the diagnosis of failed vehicles, and enhanced on-board computer systems. Also covers the testing of alternative-fuel vehicles.

AUT 208 Automotive Brakes (3 Credits)**Prerequisites:** AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.**Recommended preparation:** MTH 020 or higher or minimum placement into MTH 060.

Studies the theory, operation, diagnosis and repair of the modern braking systems of both domestic and import vehicles. Includes an introduction to anti-lock brake systems.

AUT 211 ASE Test Prep I (1 Credit)**Recommended preparation:** completion of two terms of Automotive Technology curriculum and WR 60.

This self-paced, program-specific course allows the student to study in preparation for the ASE A1-A5 areas.

AUT 212 ASE Test Prep II (1 Credit)**Recommended preparation:** completion of two terms of Automotive Technology curriculum and WR 60.

This self-paced, program-specific course allows the student to study in preparation for the ASE A6-A8 areas.

AUT 216 Co-op Work Experience Automotive (1-4 Credits)**Prerequisites:** completion of two terms of Automotive Technology curriculum.

Provides an environment in which students can begin to recognize their strengths and limitations in their chosen career. The student is placed in an actual job environment where pressure, production and personalities are experienced. Cooperative Work Experience is a program requirement for students in the Automotive Technology program. Two CWE sections are required for the student who will achieve the Master Automotive Technician Certificate.

AUT 216A CWE Automotive A (4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** at least 24 credits of automotive courses.

The student is provided with the environment in which he/she can begin to recognize his/her strengths and limitations in their chosen career. The student is placed in an actual job environment where the experiences of pressure, production, and personalities are experienced. Cooperative Work Experience, is a program requirement for students in the Automotive Technology Program. Two CWE sections are required for the student who will achieve the Master Automotive Technician Certificate. 4 credits per section (144 hours).

AUT 216B CWE Automotive B (4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** at least 24 credits of automotive courses.

The student is provided with the environment in which he/she can begin to recognize his/her strengths and limitations in their chosen career. The student is placed in an actual job environment where the experiences of pressure, production, and personalities are experienced. Cooperative Work Experience, is a program requirement for students in the Automotive Technology Program. Two CWE sections are required for the student who will achieve the Master Automotive Technician Certificate. 4 credits per section (144 hours).

AUT 251 Automatic Transmissions I (3 Credits)**Prerequisites:** AUT 203.

Provides an understanding of the basic principles and theory of planetary gear sets, torque converters and hydraulic controls as applied to automatic transmissions. Includes construction, operation and overhaul of current transmission types with emphasis on diagnosis, service and procedures to conform to current service manuals. A self-paced course.

AUT 253 Automotive Air Conditioning (3 Credits)**Prerequisites:** AUT 102.**Recommended preparation:** MTH 020 or higher or minimum placement into MTH 060.

A hands-on study of automotive air conditioning and heating systems, concurrent with EPA Recovery Requirements for R-12, R-134a systems, diagnosis and service. A study of advanced electrical systems found on late-model vehicles.

AUT 256 Automatic Transmissions II (2 Credits)**Prerequisites:** AUT 251.

This is the second part of an automatic transmission sequence. This course will continue principles and theory of planetary gear sets, torque converters, and hydraulic controls as applied to automatic transmissions. Includes emphasis on diagnosis, service, and procedures to conform to current service manuals. The student will also be introduced to Constant Velocity Transmissions/Hybrid Electric Vehicles/Electric Vehicle type transmissions.

AUT 260 Diesel Performance II (4 Credits)**Prerequisites:** AUT 206.

This is the second part of a diesel performance sequence. This course will provide the operational principles and theory of: Hydraulically actuated Electronically controlled Unit Injection ******(HEUI) systems, the Electronic Unit Injection *****(EUI) systems, and the Common Rail (CR) systems, as they are applied to Diesel Engine Performance. The course will include, in depth, Controller Area Networking (CAN), multiplexing, Controller Area Networking (CAN C) language (J1939 protocol), Software Updates, (J2534 re-flash), Vehicle Communication Interface (VCI), Selective Catalytic Reduction (SCR), Exhaust Gas Recirculation (EGR) systems, Variable Geometry Turbo-chargers (VGT), Constant Geometry Turbo-chargers (CGT) systems, Diesel Particulate Filter (DPF) variations, Diesel Oxidation Catalyst (DOC) systems, and diagnostic strategies, that will lead to accurate conclusions. The student will be exposed to multiple vehicle product lines during this course and, will be introduced to the proper techniques and procedures to repair them.

AUT 270 Automotive Controller Systems I (4 Credits)**Prerequisites:** AUT 206.

Technological advancements in modern vehicles have changed how we perform diagnosis. This course examines various methods of those enhancements of automotive drive systems, with major emphasis on electronic programming, and how to accurately repair them, using computers and scan tools. This course will require the student technician to build on current diagnostic routines into advanced applications.

AUT 271 Automotive Controller Systems II (4 Credits)**Prerequisites:** AUT 206.**Recommended preparation:** AUT 270.

Vehicle performance is enhanced by a variety of methods. This course examines various methods of performance enhancements of automotive drive systems with major emphasis on electronic programming. Manufacturer scan tools will be included with vehicle testing.

AUT 280 Hybrid Electric Vehicles I (4 Credits)**Prerequisites:** AUT 206.

A study of HEV (hybrid electric vehicles) and EV (electric vehicles). Safety procedures will be strongly emphasized. Vehicle systems that will be covered: Hybrid safety and service procedures, introduction to hybrid batteries and service, introduction to hybrid electric motors, generators, and controls, regenerative braking systems, introduction to hybrid vehicle transmissions and transaxles, hybrid vehicle heating and air conditioning, first responder safety and procedures, introduction to manufacturer scan tools, hybrid vehicle diagnostic trouble codes.

AUT 281 Hybrid Electric Vehicles II (4 Credits)**Prerequisites:** AUT 206.**Recommended preparation:** AUT 280.

A study of HEV (hybrid electric vehicles) and EV (electric vehicles) part 2. Safety procedures will be strongly emphasized. Vehicle systems that will be covered include: Hybrid safety and service procedures, advanced hybrid batteries testing and service, advanced testing of hybrid electric motors, generators, and controls along with extensive manufacturer scan tools use and vehicle testing.

Aviation (AV)

AV 101 Introduction to Aviation (3 Credits)

This course introduces the student to the Federal Aviation Regulations/ Aeronautical Information Manual (FAR/AIM). Designed to build an understanding of the pilot credentials required for a career in aviation and help students explore various career options. A variety of employment opportunities are investigated, including commercial, business, corporate, military and general aviation-related business. Emphasis will be given to careers in operations and flight technology. Airplane and helicopter pilot careers will be emphasized.

AV 104 Introduction to Aircraft Systems (4 Credits)

Introduces the student to the training aircraft that are used in general aviation, and will look in detail at those aircraft used in this program. Aircraft in current use for training by industry will be studied and emphasis placed on basic aircraft systems operations, including emergencies. Applicable Federal Aviation Regulations, including the use of Minimum Equipment Lists, will be studied.

AV 108 Meteorology I (4 Credits)

A survey course in atmospheric science that covers weather basics and atmospheric circulations. Included is a systematic development of the following: the atmosphere, energy and temperature, wind, atmospheric moisture, horizontal and vertical pressure patterns, clouds, atmospheric circulation, stability, air masses, fronts, fog, icing, thunderstorms, jet streams and turbulence. Students will study surface weather observations, routine weather reports and forecasts, surface maps and constant pressure maps.

AV 110 Private Pilot - Airplane (5 Credits)**Recommended preparation:** MTH 020 or higher.

Provides initial ground instruction in aeronautical skills and knowledge for the FAA Private Pilot certificate. Involves an introduction to fundamentals of flight, aerodynamics, flight operations, airspace, weather and weather products, flight planning, decision-making, human factors, human factors in aviation, and crew resource management. Comprehensive course that prepares student for the FAA Private Pilot airman knowledge written exam.

AV 112 Technically Advanced Aircraft (2 Credits)

Covers the differences in design, handling characteristics, capability and operation of complex avionics packages in today's modern aircraft. Concentrates on the Garmin 430, Garmin 500, Garmin 750, and Garmin 1000 glass cockpit systems, providing hands-on training in the programming and utilization of advanced automated flight decks.

AV 115 Private Pilot-Helicopter (5 Credits)**Recommended preparation:** MTH 020 or higher.

Covers fundamentals of flight, flight operations, aviation weather, performance, navigation, aircraft systems, aeronautical publications, FAA regulations, flight planning, radio procedures, meteorology and human factors. Comprehensive course that prepares student for the FAA Private Pilot airman knowledge exam.

AV 117 Helicopter Fundamentals (3 Credits)**Recommended preparation:** MTH 20.

This course covers fundamentals of helicopter flight, flight operations, helicopter performance, navigation, helicopter systems, aeronautical publications, helicopter flight maneuvers, flight planning, radio procedures, meteorology, and human factors.

AV 150 Aerodynamics (4 Credits)**Recommended preparation:** MTH 85, MTH 111, or higher.

An in-depth study of aerodynamics, beginning with a brief history of the development of flight and flight theory. The physics of lift, drag, weight and thrust are related to airfoil and aircraft design and operational characteristics. Aircraft stability and control are related to aircraft performance and safety. Students will demonstrate their knowledge of aerodynamics through projects in which they predict aircraft performance.

AV 188 Special Studies: Aviation (1-5 Credits)

Explores topics of current interest in the discipline.

AV 199 Selected Topics: Aviation (1-8 Credits)

This course is in development.

AV 200 Aviation Law (3 Credits)

This course offers an introductory analysis of legal concepts related to the aviation industry, including aircraft operations, airports, fixed based operators (FBOs), contracts, insurance and liability, regulatory statutes, and case law. The historical development of aviation law in the United States is included.

AV 201 Airport Management (3 Credits)

This course is a study of the development of airports and the functions and responsibilities of airport management. This course provides an historical background and studies the roles of various governmental agencies in the management and regulation of airports.

AV 204 Advanced Aircraft Systems (4 Credits)**Recommended preparation:** AV 104.

Encompasses a detailed study of aircraft systems and structures and enables the student to progress into heavier, more complex single and multi-engine aircraft. Aircraft in current use by industry will be studied with an emphasis placed on operations, including emergencies. Applicable FAR and Minimum Equipment Lists, will be studied.

AV 208 Meteorology II (4 Credits)**Recommended preparation:** AV 108 or instructor approval.

Focuses on application of meteorology theory and the availability, understanding and use of weather products. Emphasis is placed on maximizing aircraft performance and minimizing exposure to weather hazards. Includes examining the weather forecasting models, detailed use and interpretation of graphic weather products, access to telephone and internet weather briefing sites, and utilization of weather products.

AV 210 Instrument - Airplane (5 Credits)

Prerequisites: AV 110 (or Private Pilot Certificate).

The instrument rating ground school prepares students for the FAA Instrument airman knowledge test and an FAA Instrument Rating. Includes an in-depth study of basic attitude instrument flying, IFR navigation systems and procedures, aircraft flight instruments, aviation weather, applicable FARs and the instrument charts required for IFR flight.

AV 215 Instrument Helicopter (5 Credits)

Prerequisites: AV 115 (or Private Pilot Certificate).

The instrument rating ground school for helicopter prepares students for the FAA Instrument knowledge test and an FAA Instrument Rating. Includes an in-depth study of aircraft flight instruments, basic attitude instrument flying, IFR navigation systems and procedures, aviation weather, applicable FARs, and the instrument charts required for IFR flight.

AV 220 Commercial Pilot-Airplane (4 Credits)

Prerequisites: AV 110 (or Private Pilot Certificate).

Ground instruction of aeronautical skills and knowledge applicable to the FAA Commercial Pilot Certification portion of the Professional Pilot training syllabus. Covers night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance, complex aircraft operations, advanced airplane systems, commercial operations and FAA Regulations for commercial pilots and noncommercial flight operations, with emphasis on human factors, crew resource management, and decision-making.

AV 222A Airplane Flight Lab (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222A, AV222B, AV222C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222B Airplane Flight Lab (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222A, AV222B, AV222C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222C Airplane Flight Lab (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222A, AV222B, AV222C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222D Airplane Flight Lab (1 Credit)

Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 222A, AV 222B, AV 222C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222D, AV 222E, cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222E Airplane Flight Lab (1 Credit)

Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 222A, AV 222B, AV 222C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222D, AV 222E, cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222F Airplane Flight Lab (1 Credit)

Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 222A, AV 222B, AV 222C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222F and AV 222G covers night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance, complex aircraft operations, advanced airplane systems, commercial operations and FAA Regulations for commercial pilots and noncommercial flight operations, with emphasis on human factors, crew resource management and decision-making. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222G Airplane Flight Lab (1 Credit)

Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 222A, AV 222B, AV 222C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222F and AV 222G covers night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance, complex aircraft operations, advanced airplane systems, commercial operations and FAA Regulations for commercial pilots and noncommercial flight operations, with emphasis on human factors, crew resource management and decision-making. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222H Airplane Flight Lab (1 Credit)

Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, AV 222I, AV 222J, AV 250 (or Certified Flight Instructor/Instrument Instructor Pilot Certificates) and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222K, AV 222H emphasize engine failure, multiengine aerodynamics, minimum controllable airspeed, propeller feathering, V-speeds, flight planning, decision-making, human factors and crew resource management. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222I Airplane Flight Lab (1 Credit)

Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222I, AV 222J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222J Airplane Flight Lab (1 Credit)

Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222I, AV 222J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 222K Airplane Flight Lab (1 Credit)

Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, AV 222I, AV 222J, AV 250 (or Certified Flight Instructor/Instrument Instructor Pilot Certificates) and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 222K, AV 222H emphasize engine failure, multiengine aerodynamics, minimum controllable airspeed, propeller feathering, V-speeds, flight planning, decision-making, human factors and crew resource management. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 225 Commercial Pilot-Helicopter (4 Credits)

Prerequisites: AV 115 (or Private Pilot Certificate).

Reviews the principles of flight, aircraft systems, pertinent federal aviation regulations and airman publications and service in order to prepare the student for the FAA Commercial Helicopter Pilot airman knowledge exam.

AV 227A Helicopter Flt Lab Series I (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 227A, AV227B, AV227C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 227B Helicopter Flt Lab Series I (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 227A, AV227B, AV227C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 227C Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 227A, AV227B, AV227C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 227D Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 227A, AV 227B, AV 227C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 227D, AV 227E, AV 227N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training.

AV 227E Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 227A, AV 227B, AV 227C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV 227D, AV 227E, AV 227N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training.

AV 227F Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

AV227F, AV227G, AV227H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 227G Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV227F, AV227G, AV227H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 227H Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV227F, AV227G, AV227H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 227I Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 225 (or Commercial Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227F, AV 227G, AV 227H, AV 227N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 227I, AV 227J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training.

AV 227J Helicopter Flt Lab Series I (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 225 (or Commercial Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227F, AV 227G, AV 227H, AV 227N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 227I, AV 227J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training.

AV 227N Helicopter Flt Lab Series I (1 Credit)

Prerequisites with Concurrency: AV 115 (or Private Pilot Certificate), AV 227A, AV 227B, AV 227C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 227D, AV 227E, AV 227N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training.

AV 228A Helicopter Flt Lab Series II (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228A, AV228B, AV228C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 228B Helicopter Flt Lab Series II (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228A, AV228B, AV228C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 228C Helicopter Flt Lab Series II (1 Credit)

Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228A, AV228B, AV228C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 228D Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 228A, AV 228B, AV 228C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228D, AV 228E, AV 228N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training.

AV 228E Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 228A, AV 228B, AV 228C, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228D, AV 228E, AV 228N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training.

AV 228F Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV228F, AV228G, AV228H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 228G Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV228F, AV228G, AV228H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 228H Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV228F, AV228G, AV228H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements.

AV 228I Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 225 (or Commercial Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228F, AV 228G, AV 228H, AV 228N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228I, AV 228J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training.

AV 228J Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215, 225 (or Instrument Pilot Certificate and Commercial Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228F, AV 228G, AV 228H, AV 228N, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228I, AV 228J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training.

AV 228N Helicopter Flt Lab Series II (1 Credit)

Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 228A, AV 228B, AV 228C and instructor approval based on proof of valid Second Class (or higher) Medical Certificate. AV 228D, AV 228E, AV 228N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. Ensures compliance with Federal Aviation Administration flight hour and certification requirements. Students will earn the basic night vision goggle endorsement coincident to their instrument training.

AV 230 Multiengine Pilot (2 Credits)

Prerequisites: AV 220 (or Commercial Pilot Certificate) and AV 250 (or Certified Flight Instructor/Flight Instructor with Instrument). Ground instruction of aeronautical skills and knowledge applicable to the commercial multi-engine pilot certification. Emphasis is on engine failure, multiengine aerodynamics, minimum controllable airspeed, propeller feathering, V-speeds, flight planning, decision-making, human factors, and crew resource management.

AV 235 Human Factors (4 Credits)

An introduction to the field of human behavior and characteristics as critical factors in the design and operation of electronic/machine systems. Emphasis is on crew resource management and human factors, including the study of human performance in complex systems with an examination of personality, stress, anxiety, fatigue, communication skills, decision-making, situational awareness, analysis of aviation and accidents, and practical application of human factors and performance to modern aviation.

AV 245 Advanced Helicopter Operations (4 Credits)

The course will address advanced helicopter operations in a ground school environment. Students will be introduced to operations of turbine helicopters. The mountain flying phase will provide students with a working knowledge of operations in and around mountainous terrain. The external load phase covers the basic skills of flying with an external longline attached to the aircraft. The night vision goggle (NVG) phase will introduce the student to a new realm of flying safely at night, and will be completed using an Internet based FAA approved Part 141 training syllabus and classroom instruction. Students will also be introduced to the unique aspect of overwater operations. NVG course licensing fee applies. See aviation program director for current course fee.

AV 246 Aviation Safety (3 Credits)

A detailed introduction into aspects of aviation safety, intended to promote flight safety in the general aviation and training environment. Topics include risk management, pilot psychology, human factors, accident trends, analysis of accident reports, and safety survival.

AV 250 Certified Flight Instructor-Airplane (5 Credits)

Prerequisites: AV 210 (or Instrument Rating) and AV 220 (or Commercial Pilot Certificate).

Provides the flight instructor applicant with fundamental concepts and practice for successful flight instruction at the recreational, private and commercial pilot level. Elements include fundamentals of instruction, developing lesson plans for private pilot and commercial pilot syllabus, designing curriculum, creating objective evaluation and grading criteria, and practical application in presenting technical material in an interactive classroom setting. Two FAA airman knowledge tests are required to obtain the CFI certificate, and a third is recommended. See Aviation Program director for current fees.

AV 255 Certified Flight Instructor-Helicopter (5 Credits)

Prerequisites: AV 215 (or Instrument Pilot Certificate), AV 225 (or Commercial Pilot Certificate and instructor approval based on proof of valid Second Class (or higher) Medical Certificate).

Teaches techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice instructing will be required. Student will prepare for the FAA Fundamentals of Instruction (FOI), CFI Helicopter, and Advanced Ground Instructor (AGI) exams. See Aviation Program director for current fee schedule.

AV 271 Introduction to Unmanned Aerial Systems (4 Credits)

Prerequisites: instructor approval.

This course introduces students to the history of Unmanned Aerial Systems (UAS) and surveys current UAS platforms, sensors, terminology, challenges to integrating unmanned systems into the national airspace system, operational theory, and the Federal Aviation Administration (FAA) certificate of authorization (COA) process.

AV 272 Unmanned Aerial Systems (UAS) Operations (5 Credits)

Recommended preparation: AV 271.

Surveys current UAS platforms, sensors, and terminology. Explores integration and application of UAS resources in United States Airspace. Focuses on building and executing simulated operations in a noncombative environment.

AV 273 Unmanned Aerial Sys Ops Maint (5 Credits)

Prerequisites: AV 272.

Recommended preparation: AV 271.

Progression to higher level simulation and mission planning/ execution. Includes a transition from the classroom setting to field operations for actual launches, recoveries, and maintenance of Unmanned Aerial Systems.

AV 288 Special Studies: Aviation (1-5 Credits)

Explores topics of current interest in the discipline.

AV 299 Selected Topics: Aviation (1-8 Credits)

This course is in development.

Baking and Pastry Arts (BAK)

BAK 100 Want to be a Pastry Chef? (2 Credits)

This course serves as an introduction to the field of baking and pastry arts. It is designed for students considering declaring Baking and Pastry Arts as a major; or those taking courses to enhance your placement scores to enter the next Cascade Culinary Institute cohort start. This course will enable students to experience an introduction to baking and pastry arts with a demonstration and hands on class that covers the basics of baking techniques and flavor profiling. Students will "get a taste" of the baking industry, while learning the secrets of being a successful pastry professional.

BAK 101 Introduction to Baking & Pastry (4 Credits)

This introductory level course covers the basic theory and skill sets used throughout the field of baking and pastry. Topics covered include the use of hand tools and equipment found in a bakeshop, as well as the exploration of baking and pastry ingredients and their functions. Students will gain a working knowledge of the major methods such as creaming, blending, foaming, meringues, pre-cooked, cut-in, lamination, straight dough, custards, frozen desserts, chocolates, and sauces. Students will also taste and evaluate products they create in class to enhance their understanding of the course material.

BAK 110 Baking and Pastry Foundations I (4 Credits)

Prerequisites with concurrency: CUL 90; CUL 102; and choose either WR 121 or BA 214.

Learn about the baking industry, nomenclature, equipment, kitchen operations, knife skills, baking techniques, science, ratios, and standardized recipes. Learn about and produce fruit desserts; cookies; meringues; pate a choux and basic custards.

BAK 140 Baking and Pastry Foundations II (4 Credits)

Prerequisites: BAK 110.

Learn production of breads and yeast doughs, laminate doughs, pies, and tarts. Topics include stages of yeast dough production, product identification, wheat based flours, baker's percentage, gluten development, lean straight doughs, soft-crust breads, basic laminate doughs.

BAK 170 Baking and Pastry Foundations III (4 Credits)

Prerequisites: BAK 110.

Produce quick breads and dessert foundation sauces, make and bake cake layers, and assemble classic cakes. Topics include menu planning and balancing flavors and textures in desserts.

BAK 180 Custards and Frozen Desserts (4 Credits)

Prerequisites: CUL 110 or BAK 110.

Prepare and present a variety of custards, puddings, Bavarians, mousses, still-frozen, and churn-frozen desserts, ice creams, granitas, sorbets and sherbets.

BAK 188 Special Studies, Baking and Pastry Arts (1-6 Credits)

Special Studies in Baking and Pastry Arts.

BAK 199 Selected Topics: Baking and Pastry Arts (1-6 Credits)

Provides opportunity for students with exceptional background or need to continue beyond normal Baking and Pastry Arts program content. Content and credit(s) earned are established by mutual agreement between instructor and student and detailed in written agreement at the start of the term.

BAK 210 Modern Sugar and Chocolate Decor (4 Credits)

Prerequisites: BAK 110 or CUL 110.

Prepare a variety of chocolate and sugar decorations and develop sculpting techniques. Learn tempering chocolate, use of molds, and transfer sheets. Practice various sugar techniques including pulled sugar, blown sugar, piped sugar, and poured sugar in addition to airbrushing techniques to create a variety of showpieces.

BAK 215 Laminated Dough and Viennoiserie (4 Credits)

Prerequisites: BAK 140 or CUL 140.

Learn the basic principles of laminated dough and the art of viennoiserie. Prepare European and American enriched yeasted doughs including classic and contemporary varieties of brioche, croissants, Danish, yeasted coffee cakes, doughnuts and sweet rolls. Learn ingredient selection, product identification, retail merchandising, formulation, shaping, proofing, and baking quality laminated products.

BAK 220 Wedding Celebration and Specialty Cakes (4 Credits)**Prerequisites:** BAK 110 or CUL 110.

Learn the history of making celebration cakes including baking, assembly, and decorating. Bake sponge cakes, make buttercream, gum-paste flowers, royal icing piped decorations, and rolled fondant. Produce wedding and celebration cakes incorporating all of these elements, from design, baking, assembly, covering, and decorating.

BAK 225 Entremets (4 Credits)**Prerequisites:** BAK 140 or CUL 140.**Recommended preparation:** BAK 180.

Learn principles and techniques of creating entremets. Lecture and lab topics include: the history of entremets, European design, technique, and assembly. Utilize a variety of techniques to create layers of flavor and texture while incorporating multiple finishing and decorating styles. Apply traditional and modern applications of glazing, and sugar and chocolate decor.

BAK 230 Plated Desserts and Presentation (4 Credits)**Prerequisites:** BAK 140 or CUL 140.**Recommended preparation:** BAK 180.

Learn the principles and techniques of plated, banquet, buffet, and table-side desserts. Explore history, decor, purchasing, costing, flavor, presentation, and design sweet and savory desserts. Review high-volume production, portion control, and waste management. Create a final dessert incorporating all topics, including individual design, flavor, and decor.

BAK 235S Classical French Pastries (4 Credits)**Prerequisites:** CUL 140 or BAK 140.

Produce a variety of classical and modern French cakes or "entremets." Decorate using printed logos, chocolate, and sugar. Utilize updated methods of traditional French recipes using fresh ingredients. Prepare classic French tarts, practicing different types of crusts, doughs, and fillings.

BAK 240 The Craft of Artisan Breads (4 Credits)**Prerequisites:** CUL 110 or BAK 110.

Learn the principles and techniques of preparing multigrain breads, sourdoughs, bagels, pretzels, holiday or seasonal, and flat breads. Emphasis placed on regional and international breads, handling grains (such as soakers) for specialty breads, mixing, shaping, finishing, and innovative baking methods.

BAK 245S Advanced Sugar Decor and Chocolate Sculpting (4 Credits)**Prerequisites:** BAK 210.

Produce a variety of chocolate and sugar decorations using various techniques. Learn to apply chocolate colors with a spray gun, use molds, and make cutout decorations and silk screens. Explore various sugar techniques as pastillage, saturated sugar, pulled sugar (ribbons and flowers), blown, spun, piped, bubble, straw, and poured sugar and airbrushing techniques used to create a variety of showpieces.

BAK 250 Petit Fours, Candies and Classical Mignardise (4 Credits)**Prerequisites:** CUL 110 or BAK 110.

Make individual mini French pastries and petit fours such as éclairs, fruit tartelettes, macarons, and madeleines. Practice French pastry elements such as pastry cream, buttercream, glazes, cream-based, fruit-based, and chocolate-based fillings, and doughs. Create petit fours displays; make sugar confectioneries such as pâté de fruit, guimauve, praline, caramels, nougats, lollipops, and gummies. Learn how to package and display candies.

BAK 255S Artisan Breads with Heirloom Whole Grains (4 Credits)**Prerequisites:** BAK 110 or CUL 110.

Make a variety of specialty breads such as multigrain, rye, flax seed, organic baguette, and organic spelt. Make products with multiple flours, mixed fermentation techniques, and various production processes. Analyze different flours and the health and nutritional benefits of the breads made from them.

BAK 260 Advanced Wedding, Celebration, and Specialty Cakes (4 Credits)**Prerequisites:** BAK 220.

Practice advanced principles of baking, assembly, piping, and decorating of specialty cakes and wedding cakes. Learn design theory; including theme, color, texture, and flavor. Learn basic cake business practices such as selection of ingredients, equipment, tools, retail pricing, consumer trends, delivery, on site construction and client consultation. Produce several single layer and tiered cakes, incorporating advanced techniques; including buttercream, rolled fondant, pastillage, royal icing piped decorations and gum paste flowers. Utilize other techniques such as over-piping, bridgework, stringwork, smocking, painting, embossing, airbrushing, applique and stenciling.

BAK 280 Baking and Pastry Arts Industry Internship (6 Credits)**Prerequisites:** BAK 140.

Supervised work experience designed to expand career knowledge and experiential confidence while increasing knowledge, speed, timing, organization and the ability to execute industry skills on a repetitive basis. Students will receive a diverse work experience designed on a systematic rotation of different stations in the kitchen, dining room and general operations positions.

BAK 298 Independent Study: Baking (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Biology (BI)

BI 101 General Biology: Cells & Genes (4 Credits)

Designed to fulfill general education requirements, this course is intended for non-major students whose program requires biology courses. Centers on concepts of unity of living organisms including evolution, biochemistry, cell biology genetics and development. Need not be taken in sequence. Lab meets first week of classes.

BI 102 General Biology: Evolution (4 Credits)

Designed to fulfill general education requirements, this course is intended for non-major students whose program requires biology courses. Focus is on concepts of biological diversity including the evidence for and mechanisms of evolution, sexual selection, and adaptations to local environments. Need not be taken in sequence. Lab meets the first week of classes. This course includes animal dissection.

BI 103 General Biology: Ecology (4 Credits)

Designed to fulfill general education requirements, this course is intended for non-major students whose program requires biology courses. Focus is on ecological concepts including interactions between organisms and the abiotic environment, co-evolutionary adaptations, and Central Oregon flora and/or fauna. Scheduled labs may include outdoor field trips. Need not be taken in sequence. Lab meets the first week of classes.

BI 105 Essentials of Human Biology (3 Credits)

Introductory human biology course covering structure and function of the body. Topics include relevant terminology, selected anatomical structures, normal function of human body systems, as well as the impact of selected pathological processes and age. Designed for Allied Health programs.

BI 121 Anatomy and Function I (4 Credits)

Covers body organization, the cell, skin, blood, heart and circulation, immunity, respiration, bones and skeletal muscles. Designed for pharmacy technician, medical assisting and massage therapy programs. Lecture and lab are taken simultaneously; they are not offered as separate classes. Preserved animal tissues are used in some labs.

BI 122 Anatomy and Function II (4 Credits)

Recommended preparation: BI 121.

Covers the nervous system, eyes, ears, reproduction, genetics, digestion, urinary system, hormones and diabetes. Designed for pharmacy technician, medical assisting and massage therapy programs. Lecture and lab are taken simultaneously; not offered as separate classes. Preserved animal tissues are used in some labs.

BI 142 Introduction to Marine Biology (4 Credits)

Examines the physical, chemical, and biological aspects of the marine environment with emphasis on ecology, biodiversity, sustainability and conservation of marine resources. Laboratory focuses on field experience through a multi-day trip to the Oregon Coast.

BI 188 Special Studies: Biology (1-6 Credits)

Explores topics of current interest in the discipline. P/NP grading.

BI 202 General Botany (4 Credits)

Recommended preparation: At least one previous biology course (BI 101, 102, 103, 211, 212, 213).

Studies plant anatomy, human interactions with plants, and especially plant taxonomy within an evolutionary framework. Focuses on flowering plant families common in Central Oregon and identification using taxonomic keys.

BI 205 Scientific Terminology: Latin and Greek Roots (3 Credits)

Designed for majors in natural science and social science wishing to enhance their understanding of the basic Latin and Greek prefixes, suffixes, and language roots that are applicable to study and reading in science-related fields. Develops skill in how words are formed, the history, meaning, pronunciation and spelling of scientific terms.

BI 211 Principles of Biology (5 Credits)

Prerequisites: Minimum placement into WR 121 or WR 121 plus WR 98.

Prerequisites with concurrency: CH 104 or CH 221.

Introduces basic principles common to all living organisms. Emphasizes the relationship between structure and function at the molecular and cellular levels of life. Emphasizes the structure of macromolecules that make up the cell. Explores the evolution of cellular morphology and the chemical processes of cellular function. Explores the genetic basis of evolution and how genetic information flows from DNA to RNA and from RNA to proteins. Designed for majors in the life sciences. BI 211 must be taken before BI 212 and BI 213. Living animals (insects) will be studied and processed in this class.

BI 212 Principles of Biology (5 Credits)

Prerequisites: BI 211.

Emphasizes transformations of energy and matter, systems level biology, and the structure and function of ecosystems. Studies the interrelationships between all forms of life and their environment. Emphasizes aspects of plant morphology and physiology that influence ecosystem function. Designed for majors in life sciences as well as those pursuing botany. Field Trips may be required.

BI 213 Principles of Biology (5 Credits)

Prerequisites: BI 211.

Examines evolutionary biology as well as animal diversity and systematics, morphology and physiology. Designed for majors in life sciences. This course includes animal dissection.

BI 231 Human Anatomy and Physiology I (4 Credits)

Prerequisites: WR 065 or minimum placement into WR 121 or (WR 121 plus WR 098).

Examines the structure and function of the human body utilizing a systems approach. Emphasizes body organization, cells, tissues, as well as microscopic and gross anatomy along with the functional roles of the integumentary, skeletal and muscular systems, and concludes with nerve cells and tissue. Concurrent labs include hands-on dissections of a variety of tissues, organs, rats, fetal pigs and/or cats. First course of a sequence for students in pre-nursing and other pre-professional health programs. This course includes animal dissection and cadaver observation.

BI 232 Human Anatomy and Physiology II (4 Credits)

Prerequisites: BI 231.

Continuation of examination of the structure and function of the human body utilizing a systems approach with an emphasis on anatomical and physiological relationships between nervous, endocrine and cardiovascular systems. Concurrent labs include hands-on dissections of a variety of tissues, organs, fetal pigs and/or cats. For students in pre-nursing and other pre-professional health programs. This course includes animal dissection and cadaver observation.

BI 233 Human Anatomy and Physiology III (4 Credits)

Prerequisites: BI 232.

Continuation of examination of the structure and function of the human body utilizing a systems approach. BI 233 emphasizes the anatomical and physiological relationships between the lymphatic/immune, respiratory, digestive, urinary, and reproductive systems. Concurrent labs include hands-on dissections of a variety of tissues, organs, fetal pigs and/or cats. For students in pre-nursing and other pre-professional health programs. This course includes animal dissection and cadaver observation.

BI 234 Microbiology (4 Credits)

Prerequisites: WR 065 (or higher) or minimum placement into WR 121 or WR 121 plus WR 098, and (BI 101, or BI 231 or BI 211).

Learn the characteristics and disease-causing features of microorganisms, especially the bacteria and viruses that cause serious infectious diseases in humans. Covers defense mechanisms against infections and disease, and the development of immunity against future infections. The mechanisms of action of certain classes of anti-microbial drugs are discussed. Also covers some of the historically-common human infections and diseases. Designed especially for students in nursing, pre-pharmacy and other pre-professional health programs.

BI 280 Co-op Work Experience Biology (1-4 Credits)**Prerequisites:** instructor approval.

Provides experience in which students apply previous biology classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

BI 288 Special Studies: Biology (1-4 Credits)

Explores topics of current interest in the discipline.

BI 299 Selected Topics: Biology (1-5 Credits)

This course is in development.

Business (BA)

BA 101 Introduction to Business (4 Credits)

In this course students will learn about the many exciting and challenging facets of business and its dynamic role in today's environment. Students will gain a working knowledge of components of business including discussion of management, marketing, entrepreneurship and finance. During this course students will be introduced to topics which are covered in greater depth in higher level business courses. Students are encouraged to use this course to explore the breadth of business topics offered in the Business Administration degrees and identify specific areas of interest or specialization.

BA 104 Business Math (3 Credits)**Prerequisites with concurrency:** MTH 060 (or higher) or minimum placement into MTH 065.

Designed to equip students with skills to handle everyday arithmetic problems relative to a business environment and lay the foundation for other business courses including computer classes that use basic business math as examples and assignments. Topics include ratio, proportion, percent, interest, time value of money, markup and discounts, payroll, stocks and bonds, and depreciation.

BA 111 Applied Accounting I (3 Credits)**Prerequisites with concurrency:** MTH 060 (or higher) or minimum placement into MTH 065.

Designed to acquaint students with the basic functions of the bookkeeping and accounting process—journalizing transactions into the journal, posting to the general ledger, analyzing and adjusting the ledger, preparing simple financial statements for a service business and gaining an understanding and working knowledge of the overall payroll function. No previous accounting is required.

BA 112 Applied Accounting II (3 Credits)**Prerequisites:** BA 111.

Continuation of Applied Accounting I. Provides a detailed study of the mechanical and theoretical aspects of the bookkeeping and accounting process as it relates to a merchandising business.

BA 113 Applied Accounting III (3 Credits)**Prerequisites:** BA 112.

Continuation of Applied Accounting II. Provides an in-depth, more detailed background of specific areas of accounting to effectively deal with most accounting situations as they relate to all business forms.

BA 120 Introduction to Supply Chain Management (4 Credits)**Recommended preparation:** BA 101.

This course introduces the student to supply chain management which encompasses all activities associated with the flow and transformation of goods and services from beginning to the end user.

BA 121 Logistics Management (4 Credits)**Recommended preparation:** BA 101.

This course introduces the student to logistics management processes. Attention is given to such issues as transportation management, warehouse and facility location management, inventory management, and customer service strategies.

BA 123 Introduction to Transportation Logistics (4 Credits)**Recommended preparation:** BA 101.

This course provides a working knowledge of the processes involved in dispatching trucks, trip assembly, and transportation terminology.

BA 124 Trucking Operations Management (4 Credits)**Prerequisites:** BA 123.

This course provides a working knowledge of the basic regulations governing the movement of domestic cargo. Additionally, the student will understand how the various modalities of domestic and International cargo combine to move freight in the global supply chain.

BA 177 Payroll Accounting (3 Credits)**Recommended preparation:** or to be taken with BA 112 or BA 212.

Provides the fundamental accounting skills to calculate payroll for any business organization. Topics include calculating payroll based on current laws and regulations, recording payroll transactions in the general journal and general ledger, and completing required federal payroll tax forms and reports.

BA 178 Customer Service (3 Credits)

This course introduces principles of effective customer service. Students will learn to develop and implement customer service strategies using systems, technologies, and communication skills to serve diverse customer needs. By evaluating elements of customer service culture and delivery, students will understand standards of service excellence, causes of service breakdowns, and service recovery techniques.

BA 188 Special Studies: Business (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** completion of most Level I and Level II classes from the AAS degree.

Engages students with projects from local businesses in the areas of accounting, marketing, management and operations.

BA 199 Selected Topics: Business (1-5 Credits)**Prerequisites:** instructor approval.

Offers selected topics of study through workshop and independent study formats. Provides opportunities for students to investigate topics of interest beyond what is covered in current degrees.

BA 206 Management Fundamentals I (4 Credits)**Recommended preparation:** BA 101.

Introduces students to the theory and vocabulary of management in a business setting. All of the major theoretical foundations for understanding individual and group behavior and leadership are reviewed in a lecture and discussion instructional format.

BA 207 Management Fundamentals II (4 Credits)**Recommended preparation:** BA 206.

Covers the scope of activities and roles required to be an effective manager. Applying individual and group behavior and leadership theories, and exploring the critical skills of self-management, communication, logical thinking and team building, the major functional areas of management are examined in depth through the exploration of practical applications. Case study analysis and discussion are used extensively as the instructional methods.

BA 211 Financial Accounting I (4 Credits)**Recommended preparation:** MTH 060.

Introduces financial accounting theory, including the accounting cycle, recording transactions, financial analysis, and reporting corporate financial information in accordance with generally accepted accounting principles. BA 111, 112, and 113 are required for AAS accounting specialization.

BA 212 Financial Accounting II (4 Credits)**Recommended preparation:** BA 211.

Continues the presentation of fundamental accounting issues begun in BA 211, with emphasis on corporate investing and financing activities and preparation of the statement of cash flows.

BA 213 Managerial Accounting (4 Credits)**Recommended preparation:** BA 212.

Introduces managerial accounting theory, including cost-volume-profit analysis, product costing, budgeting, capital investing, and cost management in manufacturing and service organizations.

BA 214 Business Communications (3 Credits)**Recommended preparation:** WR 065.

Introduces students to prevailing practices of written and oral communication in business organizations, with special attention to audience-adaptation strategies and developing a modern communication style. Includes instruction in formatting techniques, document design, graphics, research strategies and documentation.

BA 217 Accounting Fundamentals (4 Credits)**Recommended preparation:** MTH 60.

Introduces non-business majors to the accounting process and the informational reports it generates. Topics include the analyzing, recording, summarizing, and reporting of business transactions, with a special focus on using accounting reports to make informed business decisions. This course is for non-business majors and no previous accounting is required.

BA 218 Personal Finance (3 Credits)

Gives students skills in basic money management. Investigates spending habits and develops personal and family financial budgets. Also focuses on dealing with financial institutions, applying for loans and establishing personal credit. Develops understanding of managing major household expenses. Develops skill in renting, buying and selling residential property. Also focuses on buying and leasing transportation, personal income taxes and different types of insurance. Covers scope and planning of investments and retirement planning. Students develop understanding of different investments including mutual funds, stock market, real estate as an investment and Social Security. Also covers wills and trusts.

BA 220 Business Analysis and Budgeting (4 Credits)**Prerequisites:** BA 104; BA 112; and CIS 131.**Recommended preparation:** CIS 125E.

This course is designed to develop mathematical analytical skills in performing the daily tasks of a manager or salesperson. The course has a threefold focus: strengthening understanding and use of business terminology in regards to financial information; development of spreadsheet skills in evaluating the costing, pricing and financing strategies of products and services; and development of skills in evaluating and making budgeting, financial and investment decisions. This is a hands-on, skills-oriented course.

BA 222 Business Finance (4 Credits)**Prerequisites:** BA 104 and choose BA 113 or BA 212.

Targets role of financial management in business and provides understanding of the effect of finance on business decisions. The course covers financial forecasting, capital budgeting and risk, financial institutions, securities markets, the investment process and working capital management.

BA 223 Marketing Principles I (4 Credits)**Recommended preparation:** BA 101.

Develops skills in understanding and developing strategies in the marketing environment. Covers principles and techniques of market research, consumer behavior, product development, pricing, distribution and promotion. Establishes basis for creating a marketing plan.

BA 224 Human Resources Management (4 Credits)**Recommended preparation:** BA 206.

Covers principles and techniques of human resources management. Includes the following topics: hiring practices, orientation, training, job enrichment, motivation, and performance and review. Covers wage policies, benefits programs and how to comply with a myriad of legal requirements.

BA 226 Business Law I (4 Credits)**Recommended preparation:** sophomore standing, WR 121 and BA 101.

Introduces general concepts, principles and individual conduct of business. The overview of law presented by this course introduces the general concepts of contract law which forms the foundation for the general conduct of business. Covers contract formation, dispute resolution, warranties, legal forms of business, and credit and collections. Emphasizes managing risk in the business environment.

BA 228 Computer Accounting Applications (3 Credits)**Recommended preparation:** CIS 131 and either BA 111 or BA 211.

Introduces double-entry, fully-integrated computerized accounting software on the microcomputer. Students will get hands-on experience recording a variety of business transactions and preparing financial statements using the software.

BA 229 QuickBooks (3 Credits)**Recommended preparation:** CIS 131 and either BA 111 or BA 211.

Introduces students to QuickBooks accounting software. It is designed to give students the basic skills to effectively use QuickBooks and to reinforce the concepts students learned in their first accounting course. Students will get hands-on experience using the software, including recording a variety of accounting transactions and creating financial statements and other financial reports useful in making business decisions.

BA 232 Branding (4 Credits)**Recommended preparation:** BA 223.

Branding is a fundamental element of a competitive marketing strategy. Students will develop skills to conduct the necessary research for a firm to develop a brand identity and brand strategy. This will include the writing of a brand brief, the use of typography and color theory as well as creating compelling content for various touch points that reinforce the brand.

BA 233 Internet Marketing (4 Credits)**Recommended preparation:** BA 223.

Building on the marketing concepts from BA 223, this course develops marketing skills in pricing, promotion and distribution strategies while using the internet. Design and content development for email, website and social media marketing based in an understanding of consumer behavior will also be covered. Additional topics include site optimization along with how to use analytic tools that will determine effectiveness of Internet marketing efforts. Note: this course does not cover HTML programming.

BA 237 Marketing Research (4 Credits)**Recommended preparation:** BA 223. Credits: 4 Lecture: 4.

Effective marketing research is essential to modern business development. The marketing concept is, by definition, customer driven. Without an accurate and complete assessment of customer needs and wants, business risk is increased. Marketing research has become the driving force of business excellence in the 21st century. This course will explore the best methodologies for confirming strategic initiatives before committing tactical assets. Marketing research provides the critical and essential input for crafting a strategy and developing a business model.

BA 239 Advertising (4 Credits)**Recommended preparation:** BA 223.

This course develops understanding of the principles and techniques necessary to create an advertising campaign for a business with a focus on the promotion component of the marketing mix. Examines the ways in which advertising fits into the scheme of business marketing. Also discusses advertising and its relationships with other promotional activities. Includes a thorough look into the use of different media choices and the planning of advertising campaigns. Also covers some of the basics regarding the design of commercials and printed copy. Includes work on real-life advertising campaigns.

BA 249 Retailing (4 Credits)**Recommended preparation:** BA 223.

Develops skills in understanding and developing strategies in the retail environment. Examines the retail industry including store location, layout, display, merchandise selection, inventory and operational controls and promotion. Includes tours of local retail stores.

BA 250 Entrepreneurship (4 Credits)

This course provides a solid foundation in entrepreneurship and small business management. Students will learn about the challenges facing entrepreneurship today, business management strategies, guerrilla marketing for success, the importance of financial planning and how to effectively present an elevator pitch. Additionally, students will learn about the various legal forms of business ownership, sources of financing a business, and E-Commerce. A balance between the practical learning and "real life" situations will be followed throughout the course.

BA 253 Business Plan Elements (4 Credits)

This course focuses on the elements of a business plan- the feasibility analysis, marketing plan, management plan, operations, pro forma financials, and how to present the plan.

BA 254 Business Strategies (4 Credits)

This course is an in depth look at business strategies covering management, financials, operations and selling with a focus on application.

BA 261 Consumer Behavior (4 Credits)**Recommended preparation:** BA 223.

This course explores the determinants of consumer buying behavior and the process consumers use to make buying decisions. Study includes psychological and sociological principles and their impact on purchasing behaviors. Understanding of these behaviors and the purchase process are used to help design marketing strategies.

BA 271 Product Development Process (4 Credits)

This course covers the product development process from cradle to grave.

BA 272 Product Development Strategies (4 Credits)

This course is an in depth look at each of the phases of the product development process with a focus on application.

BA 280 Co-op Work Experience Business (1-3 Credits)**Prerequisites:** instructor approval.

Provides work learning credit for student employment in fields pertaining to the business curriculum. Credit is given based upon a total workload of 100 hours per term and completion of learning objectives. Learning experience coordinated with student's supervisor. P/NP grading.

BA 285 Business Human Relations (3 Credits)**Recommended preparation:** WR 121.

Examines the sociological and psychological aspects of the workplace with practical applications. Based on the premise that the practice of sound human relations is essential to success in any context. Group exercises, discussion, and lecture are the pedagogies used, in that order of importance.

BA 286 Managing Business Processes (4 Credits)**Recommended preparation:** BA 101 and BA 206.

Introductory course in understanding and managing business processes. Develops understanding of general concepts and principles of process management. Includes implementation procedures and specific tools used in analyzing processes, uncovering problems and finding solutions to those problems.

BA 290 Business Seminar (3 Credits)**Prerequisites:** BA 206; BA 113; BA 220; and BA 223.

BA 290 is the capstone course for all specializations in the Associate of Applied Science degree in Business. It is an opportunity for students to demonstrate all they have learned in the areas of accounting, management, finance, marketing and operations. It also allows for the opportunity to demonstrate communication and technology skills. The end result will be a great sample of work for the portfolio that students can use in seeking employment or advancement. This is a hands-on, skills-oriented course.

BA 298 Independent Study: Business (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Chemistry (CH)

CH 104 Introduction to Chemistry I (5 Credits)**Prerequisites:** MTH 95 or MTH 105 (or higher) or minimum placement into MTH 105.

Introduces basic principles of general chemistry, including atomic theory, chemical formulas and equations, bonding, stoichiometry, acid/base chemistry, and solutions. Supporting laboratory work included. Not designed for science majors.

CH 105 Introduction to Chemistry II (5 Credits)**Prerequisites:** CH 104.

Builds on concepts from CH 104 introducing basic principles of general and organic chemistry, including bonding in carbon compounds, equilibrium, stereochemistry and functional group chemistry. Supporting laboratory work included. Not designed for science majors.

CH 106 Introduction to Chemistry III (5 Credits)**Prerequisites:** CH 105.

Builds on concepts from CH 105 introducing basic principles of general and biochemistry, including consideration of protein, carbohydrate and lipid structure and metabolism, bioenergetics, enzymes and nucleic acid chemistry.

CH 188 Special Studies: Chemistry (1-4 Credits)

Explores topics of current interest in the discipline.

CH 221 General Chemistry I (5 Credits)**Prerequisites:** MTH 111, 112, 113, or 251 or higher, or minimum placement into MTH 112.

Explores experimental and theoretical principles of chemistry including matter, measurement, atomic structure, periodicity, stoichiometry, solutions, molecular structure, bonding, oxidation/reduction and thermochemistry. The course is algebra-based and includes supporting laboratory work. This course is appropriate for science and engineering majors. High school chemistry is recommended.

CH 222 General Chemistry II (5 Credits)**Prerequisites:** CH 221.

This course builds on concepts from CH 221, by exploring experimental and theoretical principles of chemistry including gases, liquids, solids, solutions, kinetics, equilibrium, acids and bases. The course is algebra-based and includes supporting laboratory work. This course is appropriate for science and engineering majors.

CH 223 General Chemistry III (5 Credits)**Prerequisites:** CH 222.

This course builds on concepts from CH 222 by exploring experimental and theoretical principles of chemistry including solubility equilibria, acid-base equilibria, electrochemistry, nuclear chemistry, metals and organic compounds. The course is algebra-based and includes supporting laboratory work. This course is appropriate for science and engineering majors.

CH 288 Special Studies: Chemistry (1-4 Credits)

Explores topics of current interest in the discipline.

Chinese (CHN)

CHN 101 Mandarin Chinese I (4 Credits)

Introduces Mandarin Chinese language presented within the context of Chinese culture. First course of a three-course sequence. Introduces students to the sound system of Mandarin Chinese and moves on to basic skills in listening, speaking, reading, and copying a limited number of Chinese characters.

CHN 102 Mandarin Chinese II (4 Credits)**Prerequisites:** CHN 101.

Introduces Mandarin Chinese language presented within the context of Chinese culture. Second course of a three-course sequence. Develops fundamental language skills (listening, speaking, reading, and writing) in communicative context.

CHN 103 Mandarin Chinese III (4 Credits)**Prerequisites:** CHN 102.

Introduces Mandarin Chinese language presented within the context of Chinese culture. Third course of a three-course sequence. Expands on effective communicative skills in both the written and spoken language with particular attention to handling uncomplicated social situations and developing writing and reading to meet a number of practical everyday needs.

CHN 110 Chinese Characters (4 Credits)**Recommended preparation:** CHN 101.

An introductory course on Chinese Simplified Characters, with an emphasis on the recognition, writing, and etymology of said characters. This course will help the beginning student of Chinese, or those who have an interest in studying Chinese characters, learn to recognize many of the most common characters, write those characters using correct stroke order, and learn the etymology of many of those characters. Students will also gain an understanding of the importance of Chinese characters in Chinese culture, and Chinese character's influence in Asia in general. Note: This is not a calligraphy course.

CHN 140 Contemporary Chinese Cultures (4 Credits)

Provides overviews of the dynamic ideologies, political policies, economics, geography, social structures, mass media presentations, and arts and literature, since the formation of the People's Republic of China in 1949 to the present. No background in Chinese languages is required.

CHN 141 Chinese Culture Through Film (4 Credits)

Introduction to the history, politics, society and economy of China through viewing and analyzing cinema. Examines how traditional Asian visual arts and centuries-old cultural tradition influenced filmmakers. No background in Chinese languages is required.

CHN 201 Second Year Mandarin Chinese I (4 Credits)**Prerequisites:** CHN 103.

The first course of a three-course sequence in intermediate Mandarin Chinese language and culture. This course will focus on effective communication in the Mandarin Chinese language, emphasizing both the written and spoken language, as well as an understanding of the practices and products of Chinese culture. Particular attention will be given to exploring the relationship between Chinese language, literature, philosophy, and culture.

CHN 202 Second Year Mandarin Chinese II (4 Credits)**Prerequisites:** CHN 201.

The second course of a three-course sequence in intermediate Mandarin Chinese language and culture. This course will focus on effective communication in the Mandarin Chinese language, emphasizing both the written and spoken language, as well as an understanding of the practices and products of Chinese culture. Particular attention will be given to exploring the relationship between Chinese language, literature, philosophy, and culture.

CHN 203 Second Year Mandarin Chinese III (4 Credits)**Prerequisites:** CHN 202.

The third course of a three-course sequence in intermediate Mandarin Chinese language and culture. This course will focus on effective communication in the Mandarin Chinese language, emphasizing both the written and spoken language, as well as an understanding of the practices and products of Chinese culture. Particular attention will be given to exploring the relationship between Chinese language, literature, philosophy, and culture.

CHN 298 Independent Study: Chinese (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study in Chinese to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Communication (COMM)

COMM 111 Fundamentals of Public Speaking (4 Credits)**Recommended preparation:** or to be taken with WR 121.

Emphasizes enhancing the relationship between speaker and audience through the content, organization and delivery of short oral presentations. Helps relieve student speech anxiety.

COMM 114 Argumentation and Critical Discourse (3 Credits)**Recommended preparation:** or to be taken with COMM 111 or WR 121.

Explores theories of argumentation. Develops skills of inquiry and advocacy through oral and written discourse, including critical analysis and rules of evidence. Practices planning, constructing and delivering persuasive arguments in a variety of extemporaneous formats.

COMM 115 Introduction to Intercultural Communication (4 Credits)

Explores the influence of cultural differences in communication styles and social values and their impact on work, family, legal and economic systems.

COMM 188 Special Studies: Communication (1-4 Credits)

Explores topics of current interest in the discipline.

COMM 199 Selected Topics: Communication (1-4 Credits)

Course will cover relevant topics in Communication as determined by instructor.

COMM 218 Interpersonal Communication (3 Credits)

Promotes enhanced personal and work relationships by presenting the theoretical concepts and practical skills used in effective one-to-one communication.

COMM 219 Small Group Communication (4 Credits)

Provides theory and practice in teamwork, leadership, and conflict management through participation in small group situations. The emphasis will be on task-oriented, decision-making groups.

COMM 220 Gender Communication (3 Credits)

Introduces the differences of communication styles across gender identities and provides tools to manage those differences. Reviews how communication is used to create, structure and maintain gender identities in a variety of contexts.

COMM 230 Introduction to the Rhetoric of Film (3 Credits)**Recommended preparation:** or to be taken with WR 121.

Introduces the visual and aural languages of moving pictures (film and video) and provides the tools necessary to analyze the social impact of both overt persuasion (in propaganda and commercials) and covert persuasion (in entertainment). Films that manage audience perceptions of race, class, gender, religion politics and the environment will be discussed.

COMM 234 Introduction to Visual Rhetoric (3 Credits)

Analyzes the power of visual communication and persuasion, including composition, color and content, and how such concepts produce both overt and covert influence on the ideas, attitudes and behaviors of others.

COMM 241 Media, Communication, Society (4 Credits)

Analyzes the social and cultural impact of media, including broadcast, print, film and digital communication. Examines careers in selected areas of media.

COMM 242 Introduction to Audio Broadcasting and Podcasting (4 Credits)

Covers audio production and delivery techniques for broadcast or podcast through the creation of original PSAs and news-stories.

COMM 250 Listening (1 Credit)

Introduces practical skills in listening to increase understanding and to help others.

COMM 251 Emotional Intelligence (1 Credit)

Explores the biological roots of emotion and introduces the skills needed for the appropriate management and sharing of their feelings. This one-credit course is currently available on request.

COMM 252 Team Skills (1 Credit)

Provides an overview of the systems nature of small groups with a focus on decision-making, leadership and the communication climate of team settings.

COMM 253 Conflict Management (1 Credit)

Explores the concepts of conflict and various techniques used for successful conflict management.

COMM 255 Free Expression and Public Assembly (3 Credits)

Provides a comprehensive overview of civic rights and responsibilities under Federal and State laws pertaining to free expression and public demonstrations.

COMM 270 Communicating Love (3 Credits)**Recommended preparation:** or to be taken with: WR 121.

Provides an overview of the bio-psychological roots of romantic/erotic love, a critique of media images of love and offers practical training in communication skills that maintain and enhance long-term love relationships.

COMM 280 Co-op Work Experience Communication (1-4 Credits)**Prerequisites:** instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

COMM 298 Independent Study: Communication (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Provides topics of study in communication with individual research or field study. P/NP grading.

COMM 299 Selected Topics: Communication (1-4 Credits)**Prerequisites:** Instructor approval.

Explores an area of communication not included in the regular curriculum. Possible topics include gender communication, media issues and relational communication.

Computer & Information Systems (CIS)

CIS 010 Computer Keyboarding (1 Credit)

Develops touch keystroking skills for persons who will be using computer terminals for information processing. Emphasis on proper techniques, speed and accuracy development on alphabetic keyboard and numeric keypad. For non-office administration majors. P/NP grading.

CIS 070 Introduction to Computers: Windows (2 Credits)

Students will gain confidence in the use of personal computers and the Windows operating system. Topics include fundamental computer terminology, introductory use of a graphic user interface including mouse usage, windows, menus, icons and dialog boxes. Also included are file management and an introduction to word processing, Web browsing and email. P/NP grading.

CIS 099 Selected Topics: Computer and Information Systems (1-4 Credits)

This course is in development.

CIS 101 Information Technology Orientation (3 Credits)

Provides an understanding of the computer-related programs available to students and their pathways to further education and employment. Students will explore the training and productivity habits essential for work in IT-related fields. Students will research, plan, and document knowledge and skills used in both academic and professional IT work.

CIS 120 Computer Concepts (4 Credits)

Recommended preparation: CIS 010 and CIS 070 or equivalent computer skills.

Follows the Internet and Computing Core Certificate (IC3) national standard for digital literacy used at numerous colleges and universities across the country as well as industry. The course objectives are broken down into three modules: Computer Fundamentals, Key Applications, and Living Online. This class provides students with the knowledge and skills needed to use computers successfully at the college level.

CIS 122 Introduction to Programming (4 Credits)

Recommended preparation: (CIS 120 or CIS 124) and CIS 131.

Introduction to computer programming for those with little or no programming experience. Provides a strong, fundamental understanding of programming. Introduces students to elementary programming concepts of algorithm design, control structures, and user interface. Students will use the basic constructs of programming including constants, variables, expressions and control structures for sequential, iterative and decision processing to solve a variety of problems.

CIS 124 IT Fundamentals (4 Credits)

Prerequisites: CIS 120 or COCC Computer Competency.

Explores the skills and knowledge required to identify and explain the basics of computing, IT infrastructure, software development, and database use. Identify and explain computer components, install software, establish network connectivity, and prevent security risks.

CIS 125A Access (4 Credits)

Recommended preparation: CIS 131.

Introduction to the most popular desktop database software, Microsoft Access. This course will help students prepare for the latest Microsoft Office certification for Access (#77-885) which helps students validate the skills industries require. The course teaches users how to create and modify database tables, forms, queries and reports. The focus is on optimizing the databases for efficient data entry and generating comprehensive reports. Database design issues are discussed but not emphasized in this course.

CIS 125A1 AutoCAD 1 (4 Credits)

Recommended preparation: or to be taken with CIS 120 or CIS 124.

First course in a two-term sequence introducing AutoCAD software as a drafting tool. Includes file handling, basic command function, drafting techniques, presentation and plotting. Uses architectural and mechanical applications in lab exercises to demonstrate AutoCAD commands. Work will be completed with AutoCAD.

CIS 125A2 AutoCAD 2 (4 Credits)

Recommended preparation: CIS 125A1.

Second course in a two-term sequence covering intermediate AutoCAD commands including dimension styles, templates, CAD standards, attribute blocks, attribute extraction, external references, object linking/embedding, advanced drawing set-up and plotting, and the program parameter file. Work will be completed with AutoCAD.

CIS 125DV Digital Video Productions (4 Credits)

Recommended preparation: CIS 120 or CIS 124.

Uses Adobe Premiere video editing software and the tools and techniques of camera setup, lighting, audio optimization, and developing creative content for distribution on the Web.

CIS 125E Excel (4 Credits)

Recommended preparation: (CIS 120 or CIS 124) and CIS 131.

Covers intermediate and advanced features of Excel 2010 such as lists, pivot tables, working with multiple worksheets, templates, what-if-analysis, data tables, advanced formulas and functions, goal seek, solver, consolidating and importing data. Students will apply these Excel features to create and revise business worksheets.

CIS 125G Photoshop (4 Credits)

Recommended preparation: CIS 120 or CIS 124.

Covers the learning objectives as outlined by Adobe to become an Adobe Certified Associate (ACA) in visual communication using Adobe Photoshop. Outcomes include an overall understanding of Photoshop as well as setting project requirements, identifying design elements, manipulating images, and evaluating digital images.

CIS 125I Adobe Illustrator (4 Credits)

Recommended preparation: CIS 120 or CIS 124.

Consistent with objectives for the Adobe Certified Associate (ACA) in Graphic Design & Illustration and provides instruction in drawing, editing and layout techniques using Adobe Illustrator. Introduces the basic illustrator tools, composition rules, and complete vector-based projects such as simple illustrations, logotype, posters, and postcards.

CIS 125V Visio (4 Credits)

Recommended preparation: CIS 120 or CIS 124.

Introduces Microsoft Visio, a vector-based illustration tool. Learn fundamental skills while creating several types of basic diagrams including workflows, flowcharts, organizational charts, directional maps, network and floor plans.

CIS 125WA Web Animation (4 Credits)

Recommended preparation: CIS 124.

Explores the tools and technologies used to create vector and bitmap web animations, as well as interactivity in rich web content. Class topics include: keyframe and path-based motion graphics, vector vs. bitmap images, programming interactivity for rollover buttons, special effects, and sound. Covers the principles of two dimension animation and its uses on the web. Students make effective computer animations that can be marketed and delivered through the web.

CIS 131 Software Applications (4 Credits)

Prerequisites: CIS 120 or CIS 124 or COCC Computer Competency.

Recommended preparation: MTH 060 or MTH 085 or BA 104.

Explore features and techniques of both Microsoft Word and Microsoft Excel, focusing on skills that are common to IT and business users. Practice skills to prepare for the Microsoft Office Certification.

CIS 133JS Introduction to JavaScript (4 Credits)**Prerequisites:** CIS 122.**Recommended preparation:** CIS 195.

Expands on existing Web development skills by introducing JavaScript for client-side scripting. Students will learn JavaScript language/syntax, functions, objects, arrays and event handling as they are used for dynamic page content form validation, user interaction and navigation menus.

CIS 133P Introduction to PHP (4 Credits)**Prerequisites:** CIS 122.**Recommended preparation:** CIS 195 and CIS135DB.

Covers programming PHP with MySQL. Examines basic techniques of problem-solving, PHP language syntax, using PHP with MySQL, and designing dynamic web pages. Students learn basic program design and construction techniques.

CIS 135A1 AutoDESK Revit 1 (4 Credits)**Recommended preparation:** CIS 125A1.

Introduces fundamental aspects of architectural drafting with AutoDESK Revit software. Covers drafting of residential and light commercial buildings, sections and elevations, schedules, design layouts, details and working drawings.

CIS 135A2 AutoDESK Revit 2 (4 Credits)**Recommended preparation:** CIS 135A1.

Continues with AutoDESK Revit, covering construction drawing sets, commercial planning, residential remodeling, drawing details and drawing production. Term culminates with targeted project covering aspects studied in Revit.

CIS 135C1 AutoCAD Civil 3D (4 Credits)**Recommended preparation:** CIS 125A2.

Students will learn basic civil drafting theory along with developing drawings that include plats, related civil infrastructure, public utilities, contours and roads. Work will be completed with AutoCAD Civil 3D.

CIS 135DB Database Theory/SQL (4 Credits)**Recommended preparation:** (CIS 120 or CIS 124 or IC3 certification) and CIS 131.

Introduces database concepts. Includes the parts of a database and database management systems as well as database design theory, the concept of normalization, and data models. Introduces SQL and several of the most popular database management systems such as Access, Microsoft SQL Server and MySQL.

CIS 135S1 SolidWorks 1 (4 Credits)

Introduces engineering graphics used in design and manufacturing. Includes practical applications using solid modeling software to capture design intent through part development and to create assemblies using these parts. Adheres to industrial standards and formats.

CIS 135S2 SolidWorks 2 (4 Credits)**Recommended preparation:** CIS 135S1.

Continues the study of engineering graphics used in design and manufacturing. Includes practical applications using solid modeling software for detailed drawings, working drawing sets, sheet metal modeling, content reuse and functional design. Adheres to industrial standards and formats.

CIS 140 A+ Essentials I (4 Credits)**Corequisites:** CIS 145.**Recommended preparation:** CIS 120 or CIS 124.

A+ Essentials is the starting point for a career in IT. Covers the fundamentals of computer technology, installation and configuration of PCs, laptops and related hardware, and basic networking concepts. Prepare for the vendor neutral CompTIA A+ Essentials certification exam (220-901). CIS 140 and 145 utilize one textbook. To become A+ certified requires you to pass both certification exams.

CIS 145 A+ Essentials II (4 Credits)**Corequisites:** CIS 140.**Recommended preparation:** CIS 120 or CIS 124.

Prepares students with the skills and knowledge associated with the CompTIAs A+ 220-902 outcomes. Covers the skills required to install and configure PC operating systems, as well as configuring common features (e.g. network connectivity and email) for mobile operating systems Android and Apple iOS. CIS 140 and CIS 145 utilize one textbook. To become A+ certified requires you to pass both certification exams.

CIS 151C Cisco Internetworking (4 Credits)**Prerequisites:** CIS 179 or Comptia Network + certification.

2First of a three-course sequence to prepare the student to take the Cisco Certified Network Associate (CCNA) certification exam. The class uses the Cisco Academy online curriculum, CCNA 5.0, Introduction to Networks. Students explore the TCP/IP and Open Systems Interconnect (OSI) models, local area networks (LANs), Ethernet, cabling, topologies, configuring routers and switches, IPv4 and IPv6 addressing, subnetting, network standards and protocols. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term.

CIS 152C Cisco Router Configuration (4 Credits)**Prerequisites:** CIS 151C.

Second of a three-course sequence to prepare the student to take the Cisco Certified Network Associate (CCNA) certification exam. Cisco Routing and Switching implements the Cisco Academy online curriculum, CCNA 5.0, Routing and Switching Essentials, developed by Cisco Systems experts. Explores switch VLANs, trunks and Inter-VLAN routing, 1Pv4 and 1Pv6 static and dynamic routing, OSPFv2 and OSPFv3, DHCP and DNS for 1Pv4 and 1Pv6, NAT, and access-lists for 1Pv4 and 1Pv6. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term.

CIS 154C Cisco VLAN and WAN Technologies (4 Credits)**Prerequisites:** CIS 152C.

Third of a three-course sequence to prepare the student to take the Cisco Certified Network Associate (CCNA) certification exam. Cisco Scaling and Connecting Networks implements the Cisco Academy online curricula, CCNA 5.0, Scaling Networks and Connecting Networks. Students explore WAN technologies such as FrameRelay, PPP, and PPPoE, enhanced switching technologies, Etherchannel, multi-area OSPF and EIGRP, and network monitoring with Syslog, SNMP, and NetFlow. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term.

CIS 178 Internet in Depth (4 Credits)**Recommended preparation:** CIS 120 or CIS 124.

Introduces the concepts and technologies of the Internet. Explores a wide variety of Internet protocols and examines the history and infrastructure of the Internet. Learn about web applications, E-commerce, social media, and how to create and publish a Web site with common design tools. Topics include World Wide Web, secure use of the Internet, web browser and e-mail basics, searching the Web, E-learning resources, mass communication and real-time communication on the Internet.

CIS 179 Networking Essentials (4 Credits)**Prerequisites:** CIS 140 and CIS 145.

The course covers network technologies, installation and configuration, media and topologies, management, and security. The outcomes prepare students for job roles, which include network administrator, network technician, network installer, help desk technician and IT cable installer and the CompTIA N10-005 certification exam.

CIS 179CL Cloud Essentials (4 Credits)

Covers cloud services from a business perspective. Topics include the business value of cloud computing, cloud types, steps to a successful adoption of the cloud, impact and changes on IT service management, as well as risks and consequences.

CIS 179L Linux Essentials (4 Credits)**Prerequisites:** CIS 120 or CIS 124 or COCC Computer Competency.

Introduces Linux and helps students to 1) understand Linux and the open source industry while providing knowledge of the most popular open source applications; 2) understand the major components of the Linux operating system and have the technical proficiency to work on the Linux command line; and, 3) understand the basics of security and administration related topics such as user/group management, working on the command line, and permissions.

CIS 188 Special Studies I (1-4 Credits)

Explores topics of current interest in the discipline. P/NP grading.

CIS 195 Web Development I (4 Credits)**Recommended preparation:** CIS 120 or CIS 124.

Explores the use of development tools, HTML and CSS to create valid websites for a variety of topics. Practice site planning, design, navigation, usability and publishing.

CIS 197 CMS Web Development: WordPress (4 Credits)**Recommended preparation:** CIS 195 Web Development I.

Examines the basics of database-driven websites created using WordPress content management system (CMS), an extremely flexible and scalable technology used for making websites that need database functionality and regular content updates. Students learn through hands-on projects how to install, configure, and manage websites connected to a database. Students will learn how to create rich content for websites that offer both functionality and scalability using WordPress. Other content management systems will be explored.

CIS 198 Computer and Information Systems Projects (3 Credits)**Recommended preparation:** (CIS 120 or CIS 124) and CIS 131.

Students are placed in local businesses working on small projects that a local business might need. Student is responsible for project, documentation and users' manuals, if necessary. Student is sponsored by a CIS instructor.

CIS 199 Selected Topics: Computer and Information Systems (1-7 Credits)**Prerequisites:** instructor approval.

This course is in development.

CIS 233P Web Programming (4 Credits)**Prerequisites:** CIS 133P.**Recommended preparation:** CIS 133JS.

Introduces students to techniques used to create interactive, dynamic content. Students will design interactive user interfaces (using JavaScript and XML) which will interact with custom databases residing on a server (using PHP and MySQL). The course will explore the concepts of event-driven programming to create interactive interfaces using dynamic content. Students will write server-side scripts, design custom databases to both store and provide access to content. The course will conclude with a final project where students will design their own dynamic websites.

CIS 235 IT in Business (4 Credits)**Recommended preparation:** (CIS 120 or CIS 124) and CIS 131.

Uses advanced software features in Word, Excel, PowerPoint and Access to solve and analyze business problems using integration of the applications in a business environment.

CIS 244 Information Systems Analysis (4 Credits)**Recommended preparation:** (CIS 120 or CIS 124) and CIS 131.

Provides broad overview of the skills necessary for a systems analyst, consultant or project manager to work as an independent contractor or as part of an IT department. Topics include information systems concepts and tools, goal setting, project management, working in teams, documentation and communication.

CIS 276 Advanced SQL (4 Credits)**Recommended preparation:** CIS 122 and CIS 135DB.

Focuses on design, development and implementation of SQL programming for all types of relational database applications including client/server and Internet databases. The course introduces students to the procedural language used to extend SQL in a programmatic manner. Students will learn to write complicated interactive and embedded SQL statements. Emphasis will be on using Microsoft SQL server.

CIS 279L Linux+ (4 Credits)**Recommended preparation:** CIS 179 or CIS 179L.

Follows the CompTIA Linux+ exam outcomes and competencies and is therefore 'vendor neutral'. While previous experience with other PC operating systems is expected, this course will prepare you to work as a Linux administrator, network support, network technician, and more. Students will understand the fundamentals of Linux technology, learn all areas of the Linux infrastructure, and demonstrate how to use vendor products and software.

CIS 2790P Cybersecurity Operations (4 Credits)

Prepares students for the work and requirements of creating and managing a security operations center. Prepares students for the Cisco 210-250 exam - Understanding Cisco Cybersecurity Fundamentals and includes responsibilities in establishing teams to monitor and respond to information security incidents.

CIS 279SC Windows Server Configuration (4 Credits)**Prerequisites:** CIS 179 or Comptia Network+ certification.

Prepares the student to plan and begin implementing the Microsoft server operating system in an enterprise environment. It includes the outcomes and hands-on experience required to build the knowledge and skills needed to pass the associated Microsoft IT professional certification.

CIS 279SE Security+ (4 Credits)**Prerequisites:** CIS 179.**Recommended preparation:** CIS 279L.

The course outcomes cover: network security; compliance and operational security; threats and vulnerabilities; application, data and host security; access control and identity management and cryptography. The material prepares students to pass the CompTIA Security+ certification. Security+ is an international, vendor-neutral certification.

CIS 279SM Windows Server Management (4 Credits)**Prerequisites:** CIS 279SC.

Prepares the student to manage, maintain, and troubleshoot the Microsoft server operating system in an enterprise environment. It includes the outcomes and hands-on experience required to build the knowledge and skills needed to pass the associated Microsoft IT professional certification.

CIS 279SS Windows Server Services (4 Credits)**Prerequisites:** CIS279SM.

Prepares the student to plan, implement, maintain and troubleshoot Microsoft server operating system advanced services in an enterprise environment. It includes the outcomes and hands-on experience required to build the knowledge and skills needed to pass the associated Microsoft IT professional certification.

CIS 279WC Windows Client (4 Credits)**Recommended preparation:** CIS 179.

This course prepares the student to plan, implement and manage the Microsoft Windows operating system in an enterprise environment. It includes the outcomes and hands-on experience required to build the knowledge and skills needed to pass the associated Microsoft IT professional certification.

CIS 280 Co-op Work Experience CIS (1-3 Credits)**Prerequisites:** instructor approval.

A learning strategy designed to enhance students' knowledge, personal development, professional development and professional preparation by integrating academic study with practical experience. Students complete on-the-job training in a computer environment (requires a minimum of 33 clock hours of work for each credit hour earned). P/NP grading.

CIS 284 Cisco CCNA Security (4 Credits)**Prerequisites:** CIS 154C or CCNA certification.

Introduces security related issues and provides essential skills network administrators need in order to provide security for a computer network. Covers protective security technologies including TCP packet analysis, network device hardening, advanced firewall techniques, cryptography, intrusion prevention systems, LAN security, virtual private networks, network attacks and mitigation techniques, and security policy planning.

CIS 284EH Ethical Hacking (4 Credits)**Prerequisites:** CIS 279L.**Recommended preparation:** CIS 151C, CIS 152C.

Preparation in network penetration testing methodologies in order to help businesses discover and mitigate security weaknesses, using the Linux and Windows operating systems. Learn security related topics such as: firewalls, intrusion detection systems, vulnerability scanners, packet sniffing, port scanning, cryptography, log analysis, web application attacks, exploitation tools, scripting languages, the Metasploit framework, VPNs, SSL, port redirection, security policies, compliance regulations, and professional code of conduct.

CIS 288 Special Studies II (1-4 Credits)

Explores topics of current interest in the discipline. P/NP grading.

CIS 295 Web Development II (4 Credits)**Recommended preparation:** CIS 195.

Expands on existing HTML/CSS skills and explores the process of making websites, particularly e-commerce sites for clients. Students will practice site planning, development, content management and client relations as they create, document and present a web site project and portfolio. Topics include web site design, search engine optimization, web page usability, and responsive mobile web design.

CIS 297 CIS Professional Capstone (4 Credits)

This course addresses knowledge, skills and outcomes useful to IT professionals in a variety of disciplines. Students will explore and acquire job exploration skills, including interview skills, search skills, and resume-building skills to optimize job market opportunities. An integrated approach is used to combine project design components relative to job goals and capstone activities to assist in entering the job market with an array of job and technical analysis and design skills. The CIS capstone course is expected to be taken in a degree-seeking student's last term. Prerequisite with concurrency: CIS 244.

CIS 298 Independent Study: CIS (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

CIS 299 Selected Topics: CIS (1-7 Credits)

This course is in development.

Computer Science (CS)

CS 160 Computer Science Orientation (4 Credits)**Prerequisites with concurrency:** MTH 111 or higher.**Recommended preparation:** CIS 120 or CIS 124.

Provides a broad overview of the discipline of computer science. Learn the foundations of computer science such as problem solving and algorithms, programming concepts, and computer hardware. Research careers available in computer science, pathways to computer careers, and reflect on some of the influences computers have had and continue to have on society. Write programs in a variety of programming languages.

CS 161 Computer Science I (4 Credits)**Prerequisites:** MTH 112 or MTH 251. .**Recommended preparation:** CS 160.

Examines the nature of computer programming; includes discussion of a computer model, methods of problem solving and programming structures; information representation; algorithm construction; object-oriented design using Java.

CS 162 Computer Science II (4 Credits)**Prerequisites:** CS 161.**Prerequisites with concurrency:** MTH231.

CS 162 emphasizes the development of data structures, algorithm analysis, recursion, and sorting. However we will also explore/review several basic programming constructs, Inheritance, Interfaces, Exceptions, and Files/Streams. A strict emphasis will be placed on software engineering methods; proper program development and attention to program planning and documentation.

CS 260 Data Structures (4 Credits)**Prerequisites:** CS 162 and MTH 231.

Covers general-purpose data structures and algorithms, software engineering of these structures, and the application of these engineering concepts to real world problems. Topics covered include managing complexity, complexity analysis, stacks, queues, lists, trees, heaps, hash tables, sets, maps, and graphs.

Criminal Justice (CJ)

CJ 100 Survey of the Criminal Justice System (3 Credits)

Introductory survey of the functional components of the U.S. criminal justice system. Includes law enforcement, the courts and corrections.

CJ 101 Introduction to Criminology (4 Credits)

Interdisciplinary approach to theoretical perspectives on the causes, treatment and prevention of crime.

CJ 110 Law Enforcement (3 Credits)

Surveys the roles and responsibilities of local, state and federal law enforcement agencies in American society. Looks at historical development, role concept and conflicts, professionalization, current enforcement practices and career opportunities.

CJ 120 Judicial Process (3 Credits)

Examines the history and development of court systems and processes in the American justice system. Organization, administration and roles of the federal and state courts are examined, as well as distinctions between civil, criminal and appellate courts.

CJ 123 Spanish for Law Enforcement Personnel (2 Credits)**Recommended preparation:** SPAN 101.

Designed for students who are interested or are currently enrolled in the Criminal Justice program as well as current criminal justice employees. Emphasizes important daily phrases that someone in the criminal justice fields may encounter. Students' basic skills in listening, reading, writing and speaking are developed as well as exposure to the culture of Spanish-speaking citizens and their customs that directly affect interaction with criminal justice professionals.

CJ 152 Rape Aggression Defense (RAD) for Women (1 Credit)**Prerequisites:** instructor approval.

Introduces women to the program of realistic self-defense tactics and techniques called the Rape Aggression Defense (RAD) System. Topics include: awareness, prevention, risk reduction and avoidance, and basic hands-on defense training. P/NP grading.

CJ 153 Ethical Issues in Criminal Justice (3 Credits)

This course outlines various ethical systems and applies them to the individual's analysis and evaluation of ethical dilemmas, duties and responsibilities in the field of criminal justice. The students will explore his/her own ethical framework and decision making while learning to integrate the obligations to society and the codes of conduct prescribed by professional criminal justice organizations and agencies. An emphasis will be placed on the ethical and responsible use of discretion, authority and power as endowed by society.

CJ 188 Special Studies: Criminal Justice (1-4 Credits)**Prerequisites:** instructor approval.

Explores topics of current interest in the discipline.

CJ 199 Special Topics: Criminal Justice (1-4 Credits)

Presents selected topics of study in criminal justice offered on a temporary or experimental basis.

CJ 201 Introduction to Juvenile Justice (3 Credits)

Introduces the historical reason for establishment of juvenile courts in the United States, current juvenile justice process, and functions of various components within the system. Prevention, intervention and rehabilitation aspects are covered in terms of Oregon's juvenile court law, as well as potential alternatives for change.

CJ 204 Controversies in Criminal Justice (3 Credits)

This course defines, describes and evaluates the crises and conflicts which face law enforcement agencies today. Topics include: use of force, police pursuits, recruitment and the death penalty.

CJ 207 Seminar In Criminal Justice (3 Credits)

Examines current controversial issues, questions and procedures within the criminal justice system.

CJ 210 Criminal Investigation I (3 Credits)

Examines history, fundamentals and scientific resources involved in criminal investigation. Emphasizes practical aspects of the investigator's approach to criminal acts, crime scene, gathering facts and information, seizing evidence, reporting the total investigation and presenting evidence within court.

CJ 211 Criminal Investigation II (3 Credits)

Reviews fundamental and scientific resources involved in criminal investigations. Examines in depth criminal investigation techniques and skills necessary to conduct investigations into the more serious and complex crimes.

CJ 214 Crime, Justice and Diversity (4 Credits)

Takes an in-depth look at current research and theories of racial and ethnic discrimination within the United States' criminal justice system. This course examines the best and most recent research on patterns of criminal behavior and victimization, police practices, court processing and sentencing, the death penalty, and correctional programs, while making every effort to incorporate discussion of all major race groups found in the U.S.. Additionally, this course will outline the current federal regulations regarding cultural competence in professional practice.

CJ 220 Introduction to Substantive Law (3 Credits)

Examines basic concepts of substantive law and criminal procedural law. Explores effects of substantive laws upon the lives of American citizens through topics such as crimes involving property, fraud and deception, or against persons, state and public order.

CJ 222 Search And Seizure (3 Credits)

Study of procedural aspects of criminal law, i.e., how criminal law is enforced and administered by agents of the criminal justice system. Emphasis on examining the law of arrest, searches and seizures, and interrogation of suspects.

CJ 230 Juvenile Corrections (3 Credits)

Studies historical and contemporary perspectives on juvenile offenders, juvenile code and juvenile court procedures. Describes treatment programs and differences between adult and juvenile court procedures.

CJ 234 The World of Violent Criminals (3 Credits)

The World of Violent Criminals takes a scholarly, comprehensive and empirical examination of serial murder in the United States. This course is intended for students interested in understanding multiple homicide, the nature of serial killing, the offenders and their victims. Students will be exposed to concepts and information that will help prepare them to understand society's most dangerous criminals.

CJ 243 Drugs and Crime in Society (3 Credits)

Introduction to problems of substance abuse, including alcohol, in our society. Equips criminal justice, social service and other human service workers with increased awareness of today's drug technology and options for dealing with substance abusers.

CJ 250 Domestic Terrorism and Emergency Management (4 Credits)

Recommended preparation: WR 121.

Defines domestic terrorism, considers the motivations of terrorists, considers policy proposals, emergency management and law enforcement techniques in response to terrorism and terrorist threats while investigating tensions inherent in democracies between civil liberties and national security. Partners with the Department of Homeland Security's Emergency Management Institute to offer students basic FEMA certifications relevant to law enforcement.

CJ 253 Corrections (4 Credits)

Focuses on historical background, current practices and contemporary issues within correctional processes, institutions and policies pertaining to offenders. Emphasizes the goals of corrections, including deterrence and rehabilitation and the role of local, state and federal corrections in the criminal justice system, including community corrections.

CJ 280 Co-op Work Experience Criminal Justice (1-3 Credits)

Prerequisites: instructor approval.

Recommended preparation: sophomore standing and a minimum of 12 credit hours completed in criminal justice courses.

Provides an opportunity to work for a local agency in a field of criminal justice applying classroom theory with on-the-job experience. Learning experience will be coordinated with student's supervisor. Students must pass a criminal history check. P/NP grading.

CJ 281 CWE Criminal Justice II (2 Credits)

Prerequisites: CJ 280 and instructor approval.

CJ 281 provides a continuing opportunity to work for a local agency in a field of criminal justice with on the job experience (see CJ 280). P/NP grading.

CJ 282 CWE Criminal Justice III (2 Credits)

Prerequisites: CJ 281 and instructor approval.

Provides a continuing opportunity to work for a local agency in a field of criminal justice with on the job experience (see CJ 280). P/NP grading.

CJ 298 Independent Study: Criminal Justice (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study in criminal justice to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Culinary Arts (CUL)

CUL 090 Applied Math for Culinary Arts (4 Credits)

Prerequisites: MTH 020 or minimum placement into MTH 060.

Learn culinary mathematics including customary and metric units of measurement, decimals and fractions, unit conversions, yield percent, food and beverage costing and markup methods, kitchen ratios, baker's percent and butcher's yield percent.

CUL 100 Want to be a Chef? (2 Credits)

This course serves as an introduction to the field of culinary arts.

Students considering declaring either Culinary Arts or Baking and Pastry Arts as a major, or students taking courses to enhance their placement scores to enter the next Cascade Culinary Institute cohort start, will find that this course will enable them to experience an introduction to cooking with a demonstration-based class that covers the basics of cooking technique and flavor profiling. Students will "get a taste" of the restaurant industry, while learning the secrets of being a successful culinary professional.

CUL 101 Introduction to Culinary Arts (4 Credits)

Experience the basic theory and skill sets used throughout the field of culinary arts. Topics covered include the use of hand tools and equipment found in the professional kitchen, as well as the exploration of ingredients and their functions. Students will gain a working knowledge of the fundamentals of kitchen operations, basic knife skills; an overview of stock, sauce and soup preparation; and coverage of the primary dry heat, moist heat and combination heat cooking methods. Students will also taste and evaluate products they create in class to enhance their understanding of the course material.

CUL 102 Food Safety and Sanitation (2 Credits)

Learn causes and prevention of foodborne illnesses, how to handle foodborne illness outbreaks and emergencies, good personal hygiene, time and temperature control, preventing cross-contamination, safe food preparation, receiving and storing food, methods of thawing, cooking, cooling, and reheating food and Hazard Analysis and Critical Control Points (HACCP). Take the National Restaurant Association Educational Foundation (NRAEF) ServSafe™ examination and earn a certificate with a passing grade.

CUL 105 International Exchange Preparation (2 Credits)

Prerequisites: Instructor approval.

Explore the social and cultural aspects of various countries including their cuisine, language, music, art, celebrations, and rituals. This serves primarily as a preparatory course for the Cascade Culinary Institute's Exchange Program. P/NP grading.

CUL 110 Culinary Foundations I (4 Credits)

Prerequisites with concurrency: CUL 090; CUL 102; and either WR 121 or BA 214.

Learn the history of the culinary industry, nomenclature, equipment, kitchen operations, basic knife skills, cooking methods, and ratios and techniques in contrast to recipe usage. Learn about and produce stocks and soups.

CUL 140 Culinary Foundations II (4 Credits)

Prerequisites: CUL 110.

Learn about and prepare classical mother sauces, contemporary sauces, small sauces, vegetables, grains, starches, pasta, and eggs. Use food science principles related to primary cooking techniques, show station organization, workflow and overall time management. Practice proper use of commercial equipment and reinforcement of understanding of ingredients, measurement, formulas, and techniques.

CUL 170 Culinary Foundations III (4 Credits)

Prerequisites: CUL 140.

Identify, butcher, fabricate, and cook a variety of meat, poultry and seafood products emphasizing proper technique. Practice small sauce production and the preparation of vegetables, grains, legumes and pastas as accompaniments. Apply modern composition and presentation techniques utilized in the restaurant industry.

CUL 180 Modern Garde Manger (4 Credits)

Learn about and prepare cold foods such as canapés, hors d'oeuvres, salads, sandwiches, cold soups, cheeses, forcemeat, condiments, crackers, and pickles. Learn about the role of garnishes, food preservation, and contemporary buffet presentation. Prerequisite with concurrency: CUL 140.

CUL 188 Special Studies Culinary Arts (1-6 Credits)

Explores topics of current interest in the discipline.

CUL 199 Selected Topics: Culinary Arts (1-6 Credits)

Provides opportunity for students with exceptional background or need to continue beyond normal Culinary Arts program content. Content and credit(s) earned are established by mutual agreement between instructor and student and detailed in written agreement at the start of the term.

CUL 200 Comprehensive Kitchen Operations for the Restaurant Industry (5 Credits)

Prerequisites: CUL 140 or BAK 140.

Recommended preparation: Culinary Arts Majors: BAK 101, Baking & Pastry Majors: CUL 101.

Learn to prepare modern and seasonal dishes in a restaurant setting putting previously learned skills into practice in the college's dining room. Emphasis on cooking techniques and ingredients used in contemporary and classical cuisines and cover planning and ordering for production, station organization, preparation and plating, timing, palate development and other production realities of a restaurant.

CUL 220 International Cuisine and Global Flavor Profiling (4 Credits)

Prerequisites: CUL 140.

Trace common global ingredients used in many regional dishes. Explore other cultures through the understanding of global culinary heritages. Examine food in the context of culture, geography, history and the influences cuisines have had on each other. Learn how the attitudes and tastes of more global and knowledgeable customers creates the expectation of diversity in a professional culinarian's repertoire.

CUL 225 Applied Harvesting and Food Preservation Principles (4 Credits)

Learn about the importance of sourcing seasonal foods relating to pricing, flavor, and quality. Conduct harvesting techniques of plant based foods, and participate in slaughtering process of animal based foods. Process the harvested items and apply a diversity of preservation techniques including canning, smoking, pickling, freezing, freeze-drying, dehydrating, etc. Execute a final harvest event for regional farmers and ranchers to celebrate the partnership with them and the Cascade Culinary Institute.

CUL 230 Culinary Nutrition and Applied Techniques of Healthy Cooking (4 Credits)

Prerequisites: CUL 140 or BAK 140.

Prepare flavorful food and study its impact upon the body. Learn about current dietary guidelines, along with the function of nutrients within the body. Execute modern, healthy cooking techniques in the lab portion of this course exposing students to meeting nutritional needs and requests of health conscious diners. Learn about healthful menu and recipe design and reengineer classical recipes, producing healthful and flavorful alternatives.

CUL 235S Farm-to-Table and Sustainable Cuisine Practices (4 Credits)

Prerequisites: CUL 200.

Serves as an overview of sustainable harvesting techniques for plants and animals and the application of preservation techniques. Students will learn about the importance of sourcing seasonal foods as it relates to pricing, flavor and quality. Students will conduct harvesting techniques of plant based foods, and participate in the slaughtering process of animal based foods. Students will process the harvested items and conduct a diversity of preservation techniques to include canning, smoking, pickling, freezing, freeze-drying, dehydrating, etc. Students will execute a final harvest event for regional farmers and ranchers to celebrate the partnership with Cascade Culinary Institute and local sustainable agricultural partners.

CUL 240 Butchery (4 Credits)

Prerequisites: CUL 170.

Learn about the muscle and bone structure of beef, veal, pork, lamb, game, poultry and specialty meats; fabricate sub-primal and foodservice cuts; and apply tying and trussing methods. Introduction to meat inspection processes, quality and yield grading, costing and yield testing, purchasing specifications, and basic information concerning the farm-to-table trail. Discuss preferred cooking methods for all meats, proper knife selection, and butchery equipment. Sanitation and safety standards are emphasized throughout.

CUL 242 Charcuterie (4 Credits)

Prerequisites: CUL 240.

Learn professional skills in variations of hors d'oeuvres and savories, seasonings, condiments, stuffed meats and curing, pickling and smoking of meat, fish and poultry. Develop proficiency in sausage-making, pâtés, terrines, galantines, and stuffed meats. Prepare a variety of charcuterie products from fresh sausage to dry cured salamis.

CUL 245S Modernist Cuisine and the Evolution of Cooking (4 Credits)

Prerequisites: CUL 170.

Learn about and apply techniques of spherification, thermal immersion, liquid nitrogen for flash freezing, hydrocolloids for thickening and gelling in the kitchen to a variety of foods. Review food pairing methods with the goal of inspiring new food combinations which are theoretically sound on a basis of their flavor.

CUL 255S Event Planning and Execution with Modern Banquet Cookery (4 Credits)

Prerequisites: CUL 170.

This course examines the varied ways in which banquets and catering events may be executed. Terms relating to equipment, food preparation, service and presentation will be discussed. Students will prepare a menu each day, following the principles and techniques associated with preparing and serving food to large groups, as well as concentrating on principles of modern batch cookery. An emphasis will be placed on maintaining quality and foundational cooking methodology. Students will also learn how to organize, plan and operate a banquet kitchen. Cooking applications are at an advanced level in preparation for later work in the public restaurants.

CUL 265S Advanced Skill Development and Culinary Competition Mastery (4 Credits)

Prerequisites: CUL 170.

Competitions play a vital role in culinary arts as they continually raise the standards of culinary excellence. There is no better way for culinarians to hone their craft than by putting their skills and knowledge to the test in a competitive format. Continually raises the standards of culinary excellence and professionalism. Nurtures the creativity of individual chefs. Provides a showcase for individual skills, techniques and styles.

CUL 270 Culinary Arts Capstone (5 Credits)**Prerequisites:** CUL 170 or BAK 170, and CUL 200.

A culmination of all the skills learned in the Culinary Arts program. Students operate a fine dining, a la carte restaurant and demonstrate back of the house skills (food safety and sanitation, knife cuts, dry heat cooking methods, moist heat cooking methods, combination cooking methods, vegetable cookery, starch cookery, sauce cookery, and final plate presentation) as well as guest interaction and dining room service.

CUL 276A Regional World Cuisines: Africa (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-Africa. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 276C Regional World Cuisines: Caribbean (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-Caribbean. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 276F Regional World Cuisines: France (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-France. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 276G Regional World Cuisines: Germany (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-Germany. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 276I Regional World Cuisines: Italy (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-Italy. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 276J Regional World Cuisines: Asia (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-Asia. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 276S Regional World Cuisines: Spain (4 Credits)**Prerequisites:** CUL 170.

This course utilizes ingredients and techniques used in a specific regional cuisine-Spain. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history, and the influence a region's cuisine has worldwide.

CUL 280 Culinary Arts Industry Internship (1-6 Credits)**Prerequisites:** CUL 140.

Serves as a supervised work experience within the culinary arts industry designed to expand career knowledge and experiential confidence while increasing knowledge, speed, timing, organization and ability to execute industry skills on a repetitive basis. Students will receive a diverse work experience that is designed on a systematic rotation of different stations in the kitchen, dining room and general operations positions. Students can complete 100% of the experience in competencies that are relevant to the program curriculum, as it is outlined in the course syllabus and internship agreement. The internship is concluded by a final supervisor evaluation.

CUL 298 Independent Study: Culinary (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Dental Assisting (DA)

DA 110 Basic Dental Assisting (4 Credits)**Corequisites:** DA 115, DA 125, DA 134, DA 145.

General overview of the Dental Assisting profession through lecture, discussions, demonstrations, laboratory activities and on-site clinic visitation. Includes examining dentistry as a profession, charting and data collection, taking and recording vital signs, four-handed dentistry and equipment use and maintenance. Laboratory portion gives students initial skills for the clinical experience in the areas of instrument identification and transfer, oral-evacuation and use of the air-water syringe. Infection control protocols established by OSHA, the Oregon Board of Dentistry and the Centers for Disease Control and Prevention will be implemented. See DA 115 for Dental Assisting program prerequisites.

DA 115 Dental Science (5 Credits)**Prerequisites:** CIS 010; CIS 120 or Computer Competency Test; HHP 252; MTH 095 or higher; Choose one of the following Psychology Courses: PSY 101, PSY 201, PSY 215 or PSY 216; COMM 218, and WR 121.**Corequisites:** DA 110, DA 125, DA 134, DA 145.

Explores the following areas of study: basic anatomy and physiology, head and neck anatomy, dental embryology, oral histology, anatomy of the face and oral cavity and tooth morphology.

DA 120 Advanced Dental Assisting (4 Credits)**Prerequisites:** DA 110.**Corequisites:** DA 130, DA 135, DA 151, DA 181, DA 190.

Continuation of DA 110 and furthers student's knowledge of the dental assisting profession. Includes lecture, power point presentations, videos, discussions, demonstrations and lab participation. Covers the advanced dental assisting skills of dental dam placement and procedures involved with the dental specialties of endodontics, periodontics and oral surgery. Also covers expanded functions such as coronal polishing, suture removal and pit and fissure sealants in accordance with the Oregon Board of Dentistry.

DA 125 Dental Infection Control (3 Credits)**Corequisites:** DA 110, DA 115, DA 134, DA 145.

Covers the principles of infection control related to the dental office, including an introduction to microbiology, along with cross-contamination and hazard control. The course covers OSHA Standards of Hazard Communication and Blood-borne Pathogens. Aseptic techniques and infection control procedures will be applied in the laboratory setting and assessed through competencies. The management of Safety Data Sheets and labeling of hazardous material will be addressed. See DA 115 for Dental Assisting program prerequisites.

DA 130 Dental Materials I (4 Credits)**Corequisites:** DA 120, DA 135, DA 151, DA 181, DA 190.

Examines the properties of amalgam and composite materials. Provides skills in chairside assisting during the placement of Tofflemire matrices, amalgam restorations, and composite restorations on a dexter. Offers lecture and laboratory experiences manipulating materials such as, alginate impression materials to take impressions, and gypsum products to pour casts. Includes the fabrication of custom methylmethacrylate impression trays, light cured trays, and vacuum formed bleach trays. Covers pouring models, trimming for diagnostic casts, and taking bite registrations. See DA 120 for second term Dental Assisting program prerequisites.

DA 131 Dental Materials II (4 Credits)**Prerequisites:** DA 130.**Corequisites:** DA 150, DA 160, DA 182, DA 191.

Provides a fundamental knowledge of the materials commonly used in dental practice, including the physical, chemical, and manipulative characteristics of cements, bases, cavity liners, cavity varnishes, composites, and resins. The laboratory component offers experience in the correct manipulation of these materials. Covers the skills of cleaning and polishing removable prostheses, and the fabrication of several types of provisional restorations. The didactic portion examines restorative options such as crowns, bridges, inlays, onlays, full dentures, and partial dentures.

DA 134 Dental Radiology I (3 Credits)**Corequisites:** DA 110, DA 115, DA 125, DA 145.

Explores the basic principles of radiography, the history of radiation and an introduction to the physics of radiation. Also covers the biological effects of radiation for both the safety and comfort of the patient and the operator. Introduces the radiographic unit and dental x-ray film. See DA 115 for Dental Assisting program prerequisites.

DA 135 Dental Radiology II (4 Credits)**Prerequisites:** DA 134.**Corequisites:** DA 120, DA 130, DA 151, DA 181, DA 190.

Focuses on the integration of knowledge and skills acquired during DA 134 – Dental Radiology I as the student transitions from the didactic study of radiography to the lab and clinical application. Performance of diagnostic exposure techniques using a variety of image receptors to a predetermined level of competency on both lab manikins and clinical patients. Interpretation of radiographic images for exposure and technique errors, anatomic landmarks, restorations, dental materials and diseases. Focuses on clinical patient management, using interpersonal skills and patient education, while adhering to appropriate infection control protocols.

DA 145 Preventive Dentistry (3 Credits)**Corequisites:** DA 110, DA 115, DA 125, DA 134.

Covers the components of preventive dentistry including oral hygiene instruction, plaque control, fluoride therapy, dental sealants and dietary considerations for the dental patient. Clinical skills include the completion of a coronal polish sequence and fluoride tray therapy on both a manikin and a fellow student patient. Identifies the pros and cons of Fluoride Varnish and Silver Nitrate therapies used in dental practices. Includes a discussion of the operation and procedures associated with Pediatric Dentistry. A capstone Service Learning project, related to the topic of Preventive Dentistry, will be selected, completed and presented to the class. See DA 115 for Dental Assisting program prerequisites.

DA 150 Intro to Dental Office Management (3 Credits)**Corequisites:** DA 131, DA 160, DA 182, DA 191.

Covers key competencies related to office practices and administrative responsibilities of the dental assistant as identified by the American Dental Association. Covers dental record preparation and maintenance, applicable computer applications, legal issues, general office management principles and professionalism in the dental office. Provides related instruction in computation. Teaches cover letter and resume writing, interviewing skills and HIPAA regulations. See DA 131 for third term Dental Assisting program prerequisites.

DA 151 Dental Computing (2 Credits)**Corequisites:** DA 120, DA 130, DA 135, DA 181, DA 190.

Computers are an integral part of today's dental offices. They have become the method of choice for managing patient dental records, appointment scheduling, charting, processing insurance claims and establishing financial arrangements. Computer systems allow for the generation of reports, patient statements, professional and patient correspondence, treatment plans, and fees for service. This course is designed to give students the training necessary to successfully complete these front-office tasks. See DA 120 for second term Dental Assisting program prerequisites.

DA 160 Oral Medicine (3 Credits)**Corequisites:** DA 131, DA 150, DA 182, DA 191.

Part one is an introduction to the study of Oral Pathology and Dental Pharmacology. Part two focuses on the role of the dental assistant when caring for compromised patients and in dealing with dental/medical emergencies in the dental office. See DA 131 for third term Dental Assisting program prerequisites.

DA 180 Co-op Work Experience Dental Assisting (1-4 Credits)**Prerequisites:** Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

DA 181 Dental Seminar I (1 Credit)**Corequisites:** DA 120, DA 130, DA 135, DA 151, DA 190.

Discusses the various aspect of practicum I. Guest speakers representing dental specialties and alternative dental employment possibilities will be scheduled. Students will share work-related experiences with the instructor and their peers. Addresses employment opportunities, completing job applications, and interviewing skills. See DA 120 for second term Dental Assisting prerequisites. P/NP grading.

DA 182 Dental Seminar II (1 Credit)**Corequisites:** DA 131, DA 150, DA 160, DA 191.

Seminar discussions on various aspects of spring term practicums in local dental offices. Guest speakers representing dental specialties and alternative dental employment possibilities will be scheduled. Students will share work-related experiences with the instructor and their peers. Covers employment opportunities, resume writing, completing job applications, and interviewing skills. Student will also prepare for the Dental Assisting National Board (DANB) General Chairside Exam. See DA 131 for third term Dental Assisting program prerequisites. P/NP grading.

DA 188 Special Studies: Dental Assisting (1-4 Credits)

Explores topics of current interest in the discipline.

DA 190 Dental Assisting Practicum I (1-5 Credits)**Corequisites:** DA 120, DA 130, DA 135, DA 151, DA 181.

A supervised, unpaid learning experience which takes place on-site at the COCC Dental and Radiology Clinics and at various community outreach facilities. Provides students with the opportunity to perform clearly identified competencies within the clinical setting. Each credit is equivalent to 30 hours in the clinical setting. See DA 120 for second term Dental Assisting program prerequisites. P/NP grading.

DA 191 Dental Assisting Practicum II (1-8 Credits)**Prerequisites:** DA 190.**Corequisites:** DA 131, DA 150, DA 160, DA 182.

A supervised, unpaid learning experience which takes place on site at a minimum of two prearranged clinical facilities. Provides students with the opportunity to perform clearly identified competencies within the clinical setting. Each credit is equivalent to 30 hours in the clinical setting. P/NP grading.

DA 199 Selected Topics: Dental Assisting (1-4 Credits)

This course is in development.

DA 298 Independent Study: Dental Assisting (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Economics (EC)

EC 188 Special Studies: Economics (1-4 Credits)

Explores topics of current interest in the discipline.

EC 199 Selected Topics: Economics (4 Credits)

This course is in development.

EC 201 Microeconomics (4 Credits)**Recommended preparation:** or to be taken with WR 121 and MTH 065.

Microeconomics is the study of how individuals and firms make choices in the face of scarcity. This course will build economic intuition about the consequences of our consumption and production decisions. We consider how goods and services are allocated and how market forces such as technology, market power and government intervention shape the setting in which these decisions are made.

EC 202 Macroeconomics (4 Credits)**Recommended preparation:** or to be taken with WR 121 and MTH 065.

Macroeconomics is the study of how economic health is measured and the fiscal and monetary policies used by government to maintain it. This class examines money, banking and the story of the Federal Reserve; how the government uses taxes and spending to achieve economic growth and stability; and the role of international monetary policies including trade deficits, surpluses and exchange rates. The course uncovers the theory of business cycles and teaches students how to model economic growth and the effects of inflation.

EC 230 Contemporary World Economic Issues: International Economics (4 Credits)**Prerequisites:** EC 201 or EC 202.**Recommended preparation:** MTH 095 and WR 121.

Provides an introductory survey of economic, political, social, and cultural dimensions of globalization. Covers issues and problems related to international economics and international economic institutions. Includes trade and the balance of payments; trade competition between the U.S. and other nations; reform and restructure of global economies; economic development and problems of developing nations.

EC 280 Co-op Work Experience Economics (1-4 Credits)**Prerequisites:** Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

EC 285 Introduction to Political Economy (4 Credits)**Prerequisites:** EC 201 or EC 202.**Recommended preparation:** MTH 95 and WR 121.

Covers specific topics related to the United States economy from a systems/institutional perspective. Includes key institutions that make up the U.S. economy such as, corporations, government, the market system, labor unions, monetary and financial institutions, and others. Examines three problem areas: environmental degradation and resource depletion; social and political inequality; and economic instability. Introduces possible solutions based on institutional change and develops viable economic alternatives based on principles of environmental sustainability, equity and economic stability.

EC 298 Independent Study: Economics (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study in economics to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Education (ED)

ED 112 Children's Lit & Curriculum (3 Credits)

This course provides an overview of children's literature across the early childhood curriculum (preschool-primary grades) from a curricular perspective. Different genres of children's literature will be examined as it relates to curricular areas: literacy, math, science, history, health, movement, music, and the arts. This course is recommended for early childhood and education majors. This course will address the importance of literacy acquisition of young children (preschool through the primary grades) and how children's literature can support co-curricular standards, goal, and objectives.

ED 140 Introduction to Early Childhood Education (4 Credits)

Beginning course in early childhood education which focuses on the teacher as a professional (advocacy, ethical practices, work-force issues, associations); provides strategies to manage an effective program operation; how to plan a safe, healthy learning environment; and gives an overview of the philosophy and history of ECE. Three hours of supervised weekly field placement required.

ED 141 Youth Mentoring and Advocacy (3 Credits)

Recommended preparation: Prior experience volunteering or working with youth.

Provides the opportunity to develop leadership, supervisory, and mentoring skills by participating in youth advocacy civic engagement through community service projects and volunteer roles (field placement). Topics include creating safe, engaging, and developmentally appropriate activities, team work, communication techniques, group dynamics, project management, organization and evaluation. Appropriate for those interested in supporting youth both in and out school settings, including after-school programs and specialized areas of focus, including: creative arts, recreation, academic support, and enrichment.

ED 150 Environments & Curriculum in Early Childhood Education (4 Credits)

Recommended preparation: ED 140.

Utilizes knowledge in child development to design, implement and evaluate activities in the major domains of development for children ages birth to 8 years. Three hours of supervised weekly field placement required.

ED 151 Observation & Guidance in Early Childhood Education Learning (4 Credits)

Recommended preparation: ED 140.

Introduces observation techniques and tools to accurately collect data on children and how to use assessments to make appropriate decisions about the child's needs regarding programming and the early childhood education environment. Three hours of supervised weekly field placement required.

ED 152 Family, School and Community Relationships in ECE (3 Credits)

Introduces communication skills needed to enhance partnerships between families, schools and communities in early childhood education. Three hours of supervised weekly field placement required.

ED 172 Language and Literacy in Early Childhood Education (3 Credits)

Recommended preparation: ED 140.

Covers language and literacy development as it relates to early childhood education. Also covers the history of literacy development, the family's role, how young children learn to read and write, using books with children, concepts of print, comprehension, differing abilities in literacy development, and the role of observation and assessment. Three hours of supervised weekly field placement required.

ED 173 Movement, Music and the Arts in Early Childhood Education (3 Credits)

Recommended preparation: ED 140.

Introduces physical education, rhythmic activities, visual arts, and performing arts in the early childhood years. Covers basic motor skills and artistic processes, from a developmental perspective. Three hours of supervised weekly field placement required.

ED 174 Math, Science, and Technology in Early Childhood Education (3 Credits)

Recommended preparation: ED 140.

Introduces program and curricular activities that enhance a child's development of math, science, and technology understanding and skills. Processes explored are constructivist in nature, with a focus on interdisciplinary approaches. Three hours of supervised weekly field placement required.

ED 176 Supporting Social, Emotional, and Mental Health in Early Childhood (3 Credits)

This course provides the student with knowledge about common social, emotional and mental health concerns in early childhood and explores developmentally appropriate classroom guidance strategies for supporting children's social and emotional skills.

ED 188 Special Studies: Practicum (1-4 Credits)

Explores topics of current interest in the discipline.

ED 199 Selected Topics: Early Childhood Education (1-4 Credits)

This course is in development.

ED 200 Introduction to Education (3 Credits)

Recommended preparation: WR 121.

Survey of the field and foundations of education, especially the teaching profession and the role of education in society. Explores philosophical, economic, legal, ethical, historical, psychological and social foundations of teaching and learning, and includes an overview of educational methods and approaches. Specializations within the field and training requirements for prospective teachers will also be addressed.

ED 210 Practicum in Teaching (3 Credits)

Recommended preparation: WR 121 and ED 200 or instructor approval.

Acquaints potential educators with roles and responsibilities of teachers at elementary and secondary levels. The student will observe and work as an instructional assistant in a local classroom to assess interests and potential for making teaching a career. ED 210 includes six hours field placement per week.

ED 216 Purpose, Structure and Function of Education in a Democracy (3 Credits)

Recommended preparation: WR 121.

Analyzes the system of education in a democratic society. This course introduces the historical, social, philosophical, political, legal and economic foundations of education to provide a framework from which to analyze contemporary educational issues.

ED 219 Multicultural Issues in Education Settings (3 Credits)

Recommended preparation: WR 121.

Examines the context of working with students, school, communities and workplaces. Explores the diversity of learners, learning cultures (urban, suburban, and rural) and the diversity among learners within those different cultures. Considers the influence of culture on one's learning.

ED 224 Anti-Bias Curriculum in Education (4 Credits)

Recommended preparation: ED 140.

Early Childhood comprises a critical timeframe in human development for building a foundation for identity and meaningful engagement in an increasingly diverse world. Future educators and early learning advocates will develop awareness of cultural consciousness in early childhood and elementary classrooms. Focuses on identity development, ethnocentrism, racism, stereotype threat, and discrimination. Includes techniques for developing multi-cultural, anti-bias curriculum specific to early childhood and elementary classrooms.

ED 235 Teaching and Learning in a Digital Age (3 Credits)

This course will explore the integration and application of technology into the early childhood and primary elementary years curricula. Students will investigate, discuss and apply the theories and practices of educational technology specifically within the context of early childhood education. Additionally, students will develop skills and knowledge that will enable them to use responsibly various technologies to create and assess technology-enriched learning environments that reflect developmentally appropriate practices while being engaging and safe.

ED 240 Purposeful Learning and Active Exploration through Play (4 Credits)

Recommended preparation: ED 140.

Explores why open-exploration, discovery, and play are fundamentally important parts of children's development, the role of play in learning, and ways that adults can support and promote play. Considers current research and implications of play, as an important vehicle for developing self-regulation as well as for promoting language, cognition, and social competence, in an era of standards-driven curriculum. Prospective early childhood and elementary educators will grow in their understanding of their role in facilitating children's learning. Focuses on the role of purposeful learning and active exploration through play through the elementary grades.

ED 243 Nutrition, Health and Safety for Young Children (3 Credits)

Recommended preparation: ED 140.

Provides an understanding of the essential elements of health, safety, and nutrition for young children. Methods and materials for enhancing motor development will be examined.

ED 245 Trauma Sensitive Classrooms (3 Credits)

Recommended preparation: ED 140, ED 200, or ED 265.

Addresses the role of the education environment in supporting lifelong coping mechanisms. Addresses the impact of stress on children's overall development. Explores Adverse Childhood Experiences (ACEs) and the role of mindfulness and resiliency-based programs to address and mitigate the effects of early trauma. Addresses the impact of stressors on children's participation, relationships, and overall success in learning environments. Explores strategies and resources for designing and leading Trauma Sensitive Classrooms.

ED 250 Advanced Curriculum Development & Teaching Methods in Early Childhood Education (4 Credits)

Recommended preparation: WR 121, ED 140, ED 150, and ED 151.

Compares and contrasts various teaching methods for children ages 3 to 8 years. Focuses on constructivist teaching methodology and strategies, based on best practices in early childhood education. Three hours of supervised weekly field placement required.

ED 253 Learning Across the Lifespan (3 Credits)

Recommended preparation: WR 121.

Explores how learning occurs at all ages from early childhood through adulthood, major and emerging learning theories, individual learning styles including one's own learning styles, self-reflection on implications of how learning occurs, and the impact of these issues on the development and delivery of instruction.

ED 261 Early Childhood Education Practicum I (3 Credits)

Students participate in weekly online discussions and six hours of practicum work in an ECE setting. Students select, with their COCC practicum supervisor, an appropriate early learning practicum placement. All ECE courses required for an Early Childhood Education AAS degree need to be successfully completed before taking ED 261. P/NP grading.

ED 262 Early Childhood Education Practicum II (3 Credits)

Recommended preparation: ED 261.

Students participate in weekly online discussions and six hours of practicum work in an ECE setting. Students select, with their COCC practicum supervisor, an appropriate early learning practicum placement. P/NP grading.

ED 265 Children at Risk (3 Credits)

Issues of child abuse are presented from the multidisciplinary perspectives of education, criminal justice and psychology. Topics covered include definition and prevalence of child abuse, lifelong effects, prevention, identification and intervention. The course will focus on biopsychosocial outcomes and education concerns, as well as legal processes and implications from criminal justice.

ED 269 Exceptional Children in Early Childhood Education (3 Credits)

Recommended preparation: ED 140, ED 151.

Acquaints students with the exceptional child and his/her family. Local resources are explored to understand the referral process for children, birth to 5 years of age. Explores typical and atypical development and common delays and disabilities in all domains of child development. Includes discussion about teaching methods and strategies that are adapted or modified to meet individual child needs. Three hours of supervised weekly field placement required.

ED 290 English Language Development in the Primary Classroom (4 Credits)

This is an introductory course that will explore how to best meet the needs of English Language Learners in early childhood and elementary classrooms. We will examine how language skills are acquired and how to assess what stage of language acquisition students are in. We will also explore a variety of effective teaching strategies and materials that can be used in the classroom to help students develop both social and academic language proficiency. Three hours of field placement is required.

ED 298 Independent Study: Education (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study in education to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

ED 299 Selected Topics: Education (1-4 Credits)

This course is in development.

Emergency Medicine (EMT)

EMT 151 Emergency Medical Technician Part A (5 Credits)

Prerequisites: Department approval, WR 065 or higher or placement into WR 121, MTH 020 or higher or placement into MTH 060.

Develops skills in pre-hospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Part 1 of 2-part National EMS Standards Curriculum course. Students must complete an eight (8) hour "shift" hospital field experience. Required prior to first class: documentation of cleared criminal background check, current immunizations, current American Heart Association BLS for the Healthcare Provider (CPR) certification.

EMT 152 Emergency Medical Technician Part B (5 Credits)

Prerequisites: Department approval and EMT 151 (completed at COCC within one academic year).

Develops skills in pre-hospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Part 2 of 2-part National EMS Standards Curriculum course. Students must complete an eight (8) hour "shift" EMS agency ride-a-long.

EMT 163 Advanced EMT Part I (5 Credits)

Prerequisites: students must have a Valid Oregon EMT license, HealthCare provider CPR card, pass a criminal history check, and complete clinical site required immunizations to attend this course. This is part 1 of a 2-part course. The Advanced Emergency Medical Technician course prepares the AEMT student to provide prehospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Areas of study include an introduction to emergency medical services systems, roles and responsibilities of AEMT's, anatomy and physiology, medical emergencies, trauma, special considerations for working in the prehospital setting and providing patient transportation.

EMT 164 Advanced EMT Part II (5 Credits)

Prerequisites: EMT163 (within the current or previous academic year at COCC); students must have a valid Oregon EMT license, HealthCare provider CPR card, pass a criminal history check, and complete clinical site required immunizations to attend this course. This is part 2 of a 2-part course. The Advanced Emergency Medical Technician course prepares the AEMT student to provide prehospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Areas of study include an introduction to emergency medical services systems, roles and responsibilities of AEMT's, anatomy and physiology, medical emergencies, trauma, special considerations for working in the pre hospital setting and providing patient transportation.

EMT 170 Emergency Response Communication/Documentation (2 Credits)

Covers principles of therapeutic communication, verbal, written, and electronic communications in the provision of EMS, documentation of elements of patient assessment, care and transport, communication systems, radio types, reports, codes and correct techniques.

EMT 171 Emergency Response Patient Transport (2 Credits)

Covers ambulance operations, laws, maintenance, safety, emergency response driving, and route planning. Includes mandatory ten-hour field-driving course. Required prior to first class: valid Oregon driver's license.

EMT 188 Special Studies: Emergency Medical Technician (1-5 Credits)

Explores topics of current interest in the discipline.

EMT 195 Crisis Intervention (3 Credits)

Prepares the student to deal with situations facing both the patient and caregiver. Included are all facets of crisis intervention techniques and recent advances in critical incident stress debriefing intervention.

EMT 199 Selected Topics: Emergency Medical Technician (1-5 Credits)

This course is in development.

EMT 280 Paramedic Co-op Work Experience (4 Credits)

Prerequisites: students will have needed to pass all didactic and clinical requirements EMT 290, EMT 291, EMT 292, EMT 293, EMT 294, EMT 295, EMT 296, EMT 297, and EMT 298; department approval.

Provides the educational field internship experience on an Advanced Life Support (ALS) transporting ambulance required to prepare the student to achieve licensure as a Paramedic. The field internship allows the paramedic student to apply previously learned theory and skills while under the direct observation and guidance of a preceptor. Student must have successfully completed all paramedic Lecture/Lab clinical requirements in order to register for this course. Student must pass a terminal competency exam at the completion of all CWE requirements. This course will meet the 4 credits of CWE required for completion of the paramedic program.

EMT 280A Paramedic Co-op Work Experience (1 Credit)

Prerequisites: EMT 290, EMT 291, EMT 296 and department approval.

This is a 1 credit elective CWE offering available only to students affiliated with an agency that is a 911 Advanced Life Support (ALS) transporting agency. Provides the educational field internship experience required to prepare the student to achieve licensure as a Paramedic. The filed internship allows the paramedic student to apply previously learned theory and skills while under the direct observation and guidance of a preceptor.

EMT 280B Paramedic Co-op Work Experience (2 Credits)

Prerequisites: EMT 294, EMT 295 and department approval.

If a student has taken two 1-credit CWEs during the academic year, this 2-credit CWE must be taken in order to reach 4 credits of CWE required by the program. The CWE will provide the educational field internship experience on an Advanced Life Support Ambulance, required to prepare the student to achieve licensure as a Paramedic. The field internship allows the paramedic student to apply learned theory and skills in the internship setting while under the direct observation and guidance of a preceptor. Students must pass a terminal competency exam at the completion of all CWE requirements. Students will need 4 credits of CWE for completion of the Paramedicine degree. This course is meant to be taken during the Summer Term, if the student completed two 1-credit EMT 280A courses in the Winter and Spring Terms.

EMT 280C Paramedic Co-op Work Experience (3 Credits)

Prerequisites: EMT 294, EMT 295 and department approval.

If a student has taken a 1-credit CWE during the academic year, this 3-credit CWE must be taken in order to reach 4 credits of CWE required by the program. The CWE will provide the educational field internship experience on an Advanced Life Support Ambulance, required to prepare the student to achieve licensure as a Paramedic. The field internship allows the paramedic student to apply learned theory and skills in the internship setting while under the direct observation and guidance of a preceptor. Students must pass a terminal competency exam at the completion of all CWE requirements. Students will need 4 credits of CWE for completion of the Paramedicine degree. This course is meant to be taken if the student completed one 1-credit EMT 280A courses during either the Winter or Spring Terms.

EMT 288 Special Studies: Emergency Medical Technician (1-5 Credits)

Explores topics of current interest in the discipline.

EMT 290 Paramedic Part I (8 Credits)**Corequisites:** EMT 291.

First term of a three-term Didactic Series, including EMT 292 and EMT 294. Focuses on patient assessment; airway/ventilation; pathophysiology of shock; general pharmacology; and respiratory, cardiovascular, neurological, behavioral, and acute abdominal emergencies. Lab setting will begin the process of students' learning of required skills needed of a paramedic, such as IV establishment, medication administration, and patient assessments for a variety of patient presentations.

EMT 291 Paramedic Part I Clinical (3 Credits)**Corequisites:** EMT 290.

This is a competency-based clinical experience, which emphasizes patient assessment, formulation of presumptive diagnoses and treatment plans. The clinical experiences are performed at local hospitals. This is the first of three courses in the clinical setting for a paramedic student. Student must have been accepted into the second year paramedic program.

EMT 292 Paramedic Part II (8 Credits)**Prerequisites:** EMT 290 and EMT 291.**Corequisites:** EMT 293.

Offers second term of a three-term course, which includes EMT 290 and EMT 294. Focuses on anaphylactic, toxicological, environmental, geriatric, pediatric, neonatal, and endocrine emergencies; infectious diseases; capnography; special patient populations; hematology; psychiatric care; crime scene preservation; genitourinary care; and trauma care. Applies didactic knowledge to campus-based laboratory skills practice.

EMT 293 Paramedic Clinical Part II (3 Credits)**Prerequisites:** EMT 290 and EMT 291.**Corequisites:** EMT 292.

This is a competency-based clinical experience, which emphasizes patient assessment, formulation of presumptive diagnoses and treatment plans. The clinical experiences are performed at local hospitals. This is the second of three courses in the clinical setting for a paramedic student. Student must have been accepted into the second year paramedic program.

EMT 294 Paramedic Part III (8 Credits)**Prerequisites:** EMT 292 and EMT 293.**Corequisites:** EMT 295.

Offers third term of a three-term course, which includes EMT 290 and EMT 292. Continues on anaphylactic, toxicological, environmental, geriatric, pediatric, neonatal, and endocrine emergencies; infectious diseases; capnography; special patient populations; hematology; psychiatric care; crime scene preservation; genitourinary care; and trauma care. Applies didactic knowledge to campus-based laboratory skills practice.

EMT 295 Paramedic Clinical Part III (3 Credits)**Prerequisites:** EMT 292 and EMT 293.**Corequisites:** EMT 294.

This is a competency-based clinical experience, which emphasizes patient assessment, formulation of presumptive diagnoses and treatment plans. The clinical experiences are performed at local hospitals. This is the third of three courses in the clinical setting for a paramedic student. Student must have been accepted into the second year paramedic program.

EMT 296 Advanced Cardiac Life Support (ACLS) (1 Credit)

The Advanced Cardiovascular Life Support (ACLS) Provider course is designed for healthcare providers who either direct or participate in the management of cardiopulmonary arrest or other cardiovascular emergencies. Through didactic instruction and active participation in simulated cases, the students will enhance their skills and clinical decision-making abilities for the diagnosis and treatment of cardiopulmonary arrest, acute arrhythmia, Stroke, and acute coronary syndromes. At successful completion, students will receive an AHA ACLS card. Department approval is required.

EMT 297 Pediatric Advanced Life Support (PALS) (1 Credit)**Prerequisites:** department approval.

In the Pediatric Advanced Life Support (PALS) course, you will reinforce and enhance your skills in the treatment of pediatric arrest and periarrest through active participation in a series of simulated pediatric emergencies. These simulations are designed to reinforce the important concepts of systematic approach to pediatric assessment, basic life support, PALS treatment algorithms, and effective resuscitation team dynamics. After successful completion of course, students will receive an AHA PALS card. The goal of the PALS course is to improve the quality of care provided to seriously ill or injured children, resulting in improved outcomes.

EMT 298 Prehospital Trauma Life Support (PHTLS) (1 Credit)**Prerequisites:** department approval.

In the Prehospital Trauma Life Support (PHTLS) course, you will reinforce and enhance your skills in the treatment of trauma-associated patients through active participation in a series of simulated traumatic emergencies. These simulations are designed to reinforce the important concepts of systematic approach to recognition, assessment, and treatment of a multitude of multisystem trauma patients. After successful completion, students will receive an NAEMT PHTLS card.

EMT 299 Selected Topics: Emergency Medical Technician (1-5 Credits)

This course is in development.

Engineering (ENGR)

ENGR 188 Special Studies: Engineering (1-6 Credits)

Provides an opportunity to explore an area of engineering by doing a special project or to gain practical experience by working with a professional engineer.

ENGR 199 Selected Topics: Engineering (1-6 Credits)

This course is in development.

ENGR 201 Electrical Fundamentals (4 Credits)**Recommended preparation:** PH 202/212 and MTH 251/252.

Topics covered in this course include: DC and 1st order transient analysis, Ohm's Law, Kirchhoff's Law (KCL and KVL), nodal analysis, branch analysis, source transformations, Thevenin and Norton equivalent circuits, maximum power transfer, operational amplifiers, inductance, capacitance, and transient response of RL and RC.

ENGR 202 Electrical Fundamentals II (4 Credits)**Recommended preparation:** ENGR 201 and MTH 251/252.

Topics covered in this course include: AC and 2nd order transient analysis, sinusoids and phasors, sinusoidal steady-state analysis, nodal analysis, branch analysis, source transformations, Thevenin's and Norton's equivalent circuits, sinusoidal steady-state power calculation, and balanced three-phase circuits.

ENGR 211 Statics (4 Credits)**Prerequisites:** MTH 251 and PH 211.

Analyzes forces induced in structures and machines by various types of loading.

ENGR 212 Dynamics (4 Credits)**Prerequisites:** ENGR 211 and MTH 252.

Studies kinematics, Newton's law of motion, and work-energy and impulse-momentum relationships as applied to engineering systems.

ENGR 213 Strength Of Material (4 Credits)**Prerequisites:** ENGR 211 and MTH 252.

Studies properties of structure materials. Analyzes stress and deformation in axially-loaded members, in circular shafts and beams and in statically indeterminate systems containing these components.

Engineering-General (GE)

GE 101 Engineering Orientation (3 Credits)

Introduces students to many different engineering fields through guest lectures, field trips, and hands-on engineering projects and problem-solving exercises. Develops understanding of similarities and differences between the engineering fields. Discusses professional engineering testing and licensing requirements.

GE 102 Engineering Problem Solving and Technology (3 Credits)**Recommended preparation:** MTH 112.

Introduces the use of Microsoft Excel for the solution of engineering problems and familiarizes students with the decision making and report preparation process in engineering design. Development of spreadsheets for analyzing engineering problems and preparation of final design reports that outline in detail design evaluation, recommendation and implementation.

English & Literature (ENG)

ENG 104 Introduction to Literature: Fiction (4 Credits)**Recommended preparation:** WR 121.

Explores human purpose, literary structures, and cultural values within a variety of short stories and/or novels. Features close reading, interpretation and evaluation of selected works of fiction, with attention to authors' contexts and their creative processes, narrative elements, and reader responses. Explores topics and literatures from diverse viewpoints, backgrounds, and perspectives.

ENG 105 Introduction to Literature: Drama (4 Credits)**Recommended preparation:** WR 121.

Examines drama as literature, through its traditions, imaginative purposes and organizing visions, such as tragedy, comedy and realism. Close reading and interpretation of selected plays with attention to the cultural contexts of their creation and to the literary dimensions of character, dialogue, plot, setting, language and theme. Need not be taken in sequence.

ENG 106 Introduction to Literature: Poetry (4 Credits)**Recommended preparation:** WR 121.

Explores critical and personal pleasures of poetry as a powerful and compact means to express feelings and ideas and respond to the varieties of human experience. Close reading of a wide range of poetry with attention to poets' roles, literary traditions and poetic strategies expressed through tone, speaker, situation and event, theme, irony, language, images, sounds, rhythms, symbols, open and closed poetic forms. Need not be taken in sequence.

ENG 107 Western World Literature: Ancient (4 Credits)**Recommended preparation:** WR 121.

Explores origins of Western culture through a study of representative Greek, Roman and other literary philosophical and historical texts. Mythology and the hero's quest as incorporated in Homer and Virgil may form the core of the readings. Need not be taken in sequence.

ENG 108 Western World Literature: Middle Ages (4 Credits)**Recommended preparation:** WR 121.

Survey of representative texts explores Middle Ages, Renaissance, up to the 18th century Enlightenment, including rise of Christianity, chivalry, and the vision quest. Need not be taken in sequence.

ENG 109 Western World Literature: Modern (4 Credits)**Recommended preparation:** WR 121.

Surveys representative texts, authors, and genres from the late 18th century to the present; explores modern Western world literary movements and their historical-intellectual contexts, from romanticism and realism to post-colonialism and contemporary global trends. Need not be taken in sequence.

ENG 180 Co-op Work Experience English and Literature (1-4 Credits)**Prerequisites:** Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

ENG 188 Special Studies: Literature (1-4 Credits)

Explores topics of current interest in the discipline.

ENG 199 Selected Topics: Literature (1-4 Credits)

This course is in development.

ENG 201 Shakespeare (4 Credits)**Recommended preparation:** WR 121.

The major plays of Shakespeare's early and middle periods. May also include selected study of his sonnets. Need not be taken in sequence.

ENG 202 Shakespeare (4 Credits)**Recommended preparation:** WR 121.

The major plays of Shakespeare's middle and later periods. May also include selected study of his sonnets. Need not be taken in sequence.

ENG 204 Survey British Literature I (4 Credits)**Recommended preparation:** WR 121.

Examines representative texts from the heroic age (Medieval) through the Enlightenment (18th century). Literary forms such as the epic, chivalric romance, morality play and folk ballad, lyric and narrative poetry, drama, the speculative essay, prose non-fiction and the novel are studied. Explores relations between texts and their cultural and historic contexts. Need not be taken in sequence.

ENG 205 Survey British Literature II (4 Credits)**Recommended preparation:** WR 121.

Examines representative texts from the Romantic period through Contemporary literature. The romance of nature, industrial growth, urban experience, the rise of new class identities and alienation of the individual are themes in this period. Literary forms such as lyric and narrative poetry, short stories, the novel, and the drama of social realism and literature of the absurd are studied. Explores relations between texts and their cultural and historical contexts. Need not be taken in sequence.

ENG 212 Autobiography (4 Credits)**Recommended preparation:** WR 121.

Examines diverse modes of autobiographical writing as texts that represent the self in society and where writers construct and represent memories. Explores the ways in which writers construct and represent memory and the impact these narratives have on our understanding of the political and cultural context in which they are produced. Explores autobiography from various places and periods.

ENG 221 Introduction to Children's Literature (4 Credits)**Recommended preparation:** WR 121.

Provides an overview of children's literature for toddlers through teens by examining the different genres of children's literature, including picture books, myths and folklore, poetry, nonfiction, historical fiction, and fantasy, as well as the criteria for evaluation of each genre. This course is recommended for education majors as well as parents (present and future) who are interested in children's literature and issues related to children's literature.

ENG 232C Topics in American Literature: Contemporary Fiction (4 Credits)**Recommended preparation:** WR 121.

In-depth study of several works of contemporary (late 20th/21st century) American fiction.

ENG 232M Topics in American Literature: Literature & Medicine (4 Credits)**Recommended preparation:** WR 121.

This course examines fiction, poetry, drama and creative nonfiction by and about members of the health professions. The goal is to understand multiple perspectives on illness, health, and healing as presented in the course material.

ENG 250 Introduction to Folklore and Mythology (4 Credits)**Recommended preparation:** WR 121.

Study of the systematic ways to explain how and why so many of the world's great religions, past and present, share similar stories, heroes and ways of attempting to understand and explain the unknowable. Analyzes tales from, among other locales, India, China, Africa, and North and South America. Some of the key myths include those of the Aztecs and Mayans, Native North Americans, the Sumerians and the Gnostics. The first few weeks of the course will provide an introduction to folklore. It will then provide insight into the social, psychological and aesthetic nature of mythology and an introduction to the theoretical approaches to understanding mythology.

ENG 253 Survey American Literature I (4 Credits)**Recommended preparation:** WR 121.

Reading and interpretation of writings from the diverse cultures which inhabited, colonized or developed this country through material from the Civil War period. Includes the Native American oral tradition, the journals of Columbus and other explorers, the diaries of settlers in the British colonies, and more traditional forms of literature through the mid-19th century. Need not be taken in sequence.

ENG 254 Survey American Literature II (4 Credits)**Recommended preparation:** WR 121.

Covers selected works of American literature written during the late 19th century and the 20th century. Covers the transition from Realism and Naturalism to Modernism, the Jazz Age, the Harlem Renaissance, the Confessional and "Beat" poets and writers and late 20th century short fiction. Need not be taken in sequence.

ENG 256 Folklore and US Popular Culture (4 Credits)**Recommended preparation:** WR 121.

Explores the relationship between folklore and popular culture, with special emphasis on the analysis of legends, myths, icons, stereotypes, heroes, rituals, and celebrations.

ENG 260 Introduction to Women Writers (4 Credits)**Recommended preparation:** WR 121.

Focuses on the achievements and perspectives of women writers through critical analysis of their literary works and literary strategies. Uses a chronological, stylistic or thematic approach.

ENG 288 Special Studies: Literature (1-4 Credits)

Explores topics of current interest in the discipline.

ENG 299 Selected Topics: Literature (1-4 Credits)

This course is in development.

Ethnic Studies (ES)

ES 101 Introduction to Ethnic Studies (4 Credits)

Introduction to the multidisciplinary field of Ethnic Studies. Explores the ways that ethnicity, race, and racism shape the historical and contemporary experiences of people of color in the United States. Introduces students to a broad range of cultural and political contexts, social problems, and histories to understand how racial formation and ethnic identity constructions emerged through and maintain systems of social inequality, while also providing insight into the various modes of resistance and struggles for a just society.

ES 199 Selected Topics: Ethnic Studies (1-4 Credits)

Selected topics in Ethnic Studies.

ES 211 Introduction to Native American Studies (4 Credits)**Recommended preparation:** ES 101.

Provides an introduction to the history, social organization, political experience, and artistic expression of indigenous peoples of the western hemisphere, focusing primarily on American Indians. Explores the various historical and contemporary struggles, concerns, and achievements of American Indians using an interdisciplinary approach. Prioritizes the voices of those within Indian communities in describing their own lives and experiences.

ES 212 Introduction to African American Studies (4 Credits)**Recommended preparation:** ES 101.

This course examines the historical, political, social, and cultural issues that shape the experiences of African Americans both in the past and present. The course will cover many of the historical and contemporary concerns and issues facing African American communities with particular attention to the voices within these communities.

ES 213 Introduction to Chican@/Latin@ Studies (4 Credits)**Recommended preparation:** WR 121.

This course examines historical, political, social, and cultural issues in Chicano and Latino communities and surveys scholarship in Chicano and Latino studies. This course also explores the historical construction of race, ethnicity and identity with attention to how U.S. foreign policy in Latin America has influenced perceptions within and outside of the Chican@/Latin@ communities.

ES 214 Introduction to Asian/Pacific Islander American Studies (4 Credits)**Recommended preparation:** ES 101.

Explores interdisciplinary research on Americans of Chinese, Filipino, Japanese, Korean, Southeast Asian, South Asian, and Pacific Island ancestry. Surveys the diversity of histories, cultures, and experiences that contribute to the broad category of Asian American. Focuses particular attention to the multiplicity of voices and experiences of that shape the lives of Asians in the United States.

ES 298 Independent Study: Ethnic Studies (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study in ethnic studies to focus on outcomes not addressed in existing courses or of special interest to a student. P/ NP grading.

ES 299 Selected Topics: Ethnic Studies (1-4 Credits)

Selected topics in Ethnic Studies.

Film Arts (FA)

FA 101 Introduction to Film (4 Credits)**Recommended preparation:** WR 121.

Focuses on audio-visual narratives, with an emphasis on how the collaborative process of combining cinematography, editing, sound, mise-en-scene, and acting constructs meaning and communicates ideas.

FA 125 World Cinema (4 Credits)**Recommended preparation:** WR 121.

Introduction to comparative study of compelling feature films and their directors from around the globe, analyzing subject matter, theme, genre, narrative structure, character, film style and technique as expressions of diverse cultural worldviews and distinctive artistic visions.

FA 257 Literature Into Film (4 Credits)**Recommended preparation:** WR 121.

Implements analysis of the structure of motion pictures to teach about structure of literature, allowing students to see the comparative strengths of each form. Aspects of narrative to be compared include plot and structure, character development, point of view, figurative discourse, symbol and allegory and means of controlling and expressing passage of time.

FA 288 Special Studies: Film Arts (1-4 Credits)

Explores topics of current interest in the discipline.

FA 298 Independent Study: Film Arts (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** Prior coursework in the discipline.

Individualized, advanced study in film arts to focus on outcomes not addressed in existing courses or of special interest to a student.

FA 299 Selected Topics: Film Arts (1-4 Credits)

This course is in development.

Fish & Wildlife (FW)

FW 135 Museum Techniques (1 Credit)

Hands on technique course focusing on preparing and preserving mammal and bird specimens for use in education and research. Students will complete a minimum of three projects which requires skinning and preserving wildlife specimens suitable for study and display.

FW 199 Selected Topics: Fish/Wildlife (1-4 Credits)**Prerequisites:** instructor approval.

Provides students with hands-on field experience and aids students in acquiring experience which may meet basic qualification standards required by federal agencies. Content and credit earned by mutual agreement between instructor and student in detailed written agreement.

FW 212 Survey of Northwest Birds (2 Credits)**Recommended preparation:** BI 102 or BI 213 or FOR 241A.

This course is an introduction to bird systematics, and surveys ecologically, economically, and socially important bird species in the Pacific Northwest with an emphasis on field identification and basic life history.

FW 218 Survey of Northwest Mammals (2 Credits)**Recommended preparation:** BI 102 or BI 213 or FOR 241A.

This course is an introduction to mammal systematics, and surveys ecologically, economically, and socially important mammal species in the Pacific Northwest with an emphasis on identification and basic life history.

FW 251 Wildlife Conservation (3 Credits)**Recommended preparation:** WR 121.

Introduces fundamentals of wildlife ecology and management and their role in wildlife conservation. Examines history of wildlife management, current issues and case examples in wildlife conservation.

Foods & Nutrition (FN)

FN 225 Human Nutrition (4 Credits)

In-depth introduction to the science of nutrition, stressing characteristics of nutrients and their food sources. Examines digestion, absorption and metabolism of nutrients. Includes individualized diet analysis and current-interest topics including weight management and some disease therapies. Emphasis is placed on use of scientific research criteria for evaluation of current nutrition articles.

Forestry (FOR)

FOR 100 Forestry Program Orientation (1 Credit)

Provides students with an orientation to the Forest Resources Technology program. Designed to give students knowledge and tools to succeed in the Forest Resources AAS, the natural resources work force, and in an academic career beyond COCC. The course is required of all students seeking the Forest Resources Technology AAS degree, and is highly recommended for students in the Wildland Fire program. P/NP grading.

FOR 110 Wildland Fire Science I (2 Credits)

Focuses on the effects of Wildland Fire Policy, current fire suppression strategies and tactics; weather, topography, fuel models and how each interact to effect fire behavior. Additional topics include the wildland fire environment as it relates to situational awareness and personal safety. An overview of modern wildland firefighting with an emphasis on understanding and applying fireline safety. Course cannot be challenged, but will be waived for those with proof of wildland fire single resource status.

FOR 111 Forestry Perspectives (4 Credits)

Introduction to the entire discipline of forestry, including the history of forest use and management, North American forest regions, forest ecology, mensuration and management, forest products and the importance of forest resources other than wood fiber. Also provides overview of state, regional and local employment opportunities.

FOR 126 Field Studies Pacific NW Forests (1 Credit)

This course examines the ecology, management, and human uses of Pacific Northwest forests. Field experience takes place during a 4-day field trip to the Oregon coast and Northern California and includes visiting forest environments, forest product manufacturing facilities, field lectures and guided tours, as well as individual and small-group exercises.

FOR 127 Plants of the Pacific Northwest (1 Credit)

Identification, classification and distribution of shrubs, forbs, and grasses found in low-, mid-, and high-elevation Oregon habitat types. Emphasis is placed upon proper field identification through use of terminology and taxonomic keys. Also discusses sensitive plants and noxious weeds.

FOR 130 Chainsaw Use and Maintenance (2 Credits)

Covers basic tree falling, bucking and limbing techniques. Equipment safety, use, maintenance and repairs of saws is covered. Designed for inexperienced or novice chainsaw operators or can be used as refresher course for experienced saw operators.

FOR 180 Co-op Work Experience Forestry (1-7 Credits)

Provides opportunity for on-the-job training in forestry field operations, forest products manufacturing or work related to these areas. Normally undertaken during summer months on a full-time basis but can occur any term.

FOR 188 Special Studies: Forestry (1-4 Credits)

Explores topics of current interest in the discipline.

FOR 195 Wilderness Concepts (2 Credits)

Introduction to concepts of wilderness and wilderness management principles. Introduction to the history of wilderness and the National Wilderness Preservation System.

FOR 199 Selected Topics: Forestry (1-5 Credits)

Prerequisites: instructor approval.

Provides opportunity for students with exceptional background or need to continue beyond normal program content. Content and credit earned by mutual agreement between instructor and student and detailed in written agreement. Maximum of three credits may be applied to degree.

FOR 208 Soils: Sustainable Ecosystems (4 Credits)

Focuses on the basics of Soil Science, ranging from physical properties to use and management. Soils with respect to traditional agricultural, wildlands and rangelands, watersheds and modern environmental perspectives will be discussed. New and current events of soils applications and the science of soils in the world around us will be reviewed to better understand the role soil has in our everyday lives. Lab component will include in and out of classroom lab work and field trips.

FOR 209 Fire Ecology and Effects (3 Credits)

Discusses the role of fire in Pacific Northwest ecosystems. Identifies effects on flora, fauna, soils, water; fire and cultural/visual resource management; fire and insect interactions. Covers the effects of fire on different forest and range ecosystems.

FOR 210 Wildland Fire Science II (2 Credits)

A study of hazardous fuel management and treatment practices. Incorporates current fuel measurement and analysis techniques, fire behavior prediction models and hazardous wildland fuel mitigation methods.

FOR 211 Supervision and Leadership (3 Credits)

Covers basic human relations and management skills as applied to first-line supervision in forestry, fire science and EMS. Defines work environment. Identifies and discusses subordinate, peer, and supervisory relationships. Case studies, including students' own work experiences will be used.

FOR 215 Forest Resource Capstone (3 Credits)

Prerequisites: instructor approval.

Students conduct a sample survey of a large area and present their findings, along with recommendations for management of the area, in a written report. Oral presentation also made to department staff. Limited to second year students or those who have fulfilled majority of Forest Resources Technology Degree requirements.

FOR 230A Map, Compass and GPS (3 Credits)

Teaches the basic skills of field and forest navigation with compass and GPS. Competency obtained in pacing, paper and computer map use, compass and basic GPS use.

FOR 230B Forest Surveying (3 Credits)

Recommended preparation: FOR 230A or instructor approval.

Studies basic surveying techniques and equipment emphasizing traversing, differential leveling, profiling, GPS mapping and basic coordinate geometry.

FOR 235 Resource Measurements (4 Credits)

Recommended preparation: MTH 085 or higher.

Students will learn the fundamentals of measuring and quantifying natural resources, including cruising and scaling timber to determine merchantable volume, quantifying wildlife and fisheries habitat, measuring and estimating forage production for wildlife and livestock, and sampling wildlife populations. Course will also introduce basic statistical concepts and their applications in resource management. First course in the sequence of FOR 235, FOR 236, and FOR 237.

FOR 236 Aerial Photo (3 Credits)

Recommended preparation: MTH 086 or higher and FOR 230B.

Covers practical use of aerial photographs including photo interpretation, navigation, scale, area and distance determination, corner search, basic type-mapping and GPS application. Second course in the sequence of FOR 235, FOR 236, and FOR 237.

FOR 237 Resource Sampling (4 Credits)

Recommended preparation: MTH 086 or higher, FOR 235, and FOR 236.

Includes instruction in log scaling, tree measurement techniques, sampling statistics, tree volume and tree taper equations, sampling and field procedures for equal probability (sample tree and fixed area) and variable probability (3P and point sampling) sampling systems. Final course in the sequence of FOR 235, FOR 236, and FOR 237.

FOR 240A Forest Ecology (3 Credits)

Provides students with an overview of basic plant structure and function and introduces students to functioning of forest ecosystems. Class will examine the physical environment and how it affects growth and distribution of organisms and ecological processes. Course concludes with an examination of communities, disturbance and succession.

FOR 240B Wildlife Ecology (3 Credits)

Recommended preparation: FOR 240A.

Explores wildlife ecology and biodiversity in context of forest and range management. Focuses on relationship between wildlife and forest and range ecosystems, and examines the role of forest and range management in wildlife habitat management.

FOR 241A Field Dendrology (3 Credits)

Identification, classification, and distribution of common trees and shrubs found in the Western United States and major tree species of North America. The course emphasizes botanical nomenclature and proper identification using plant keys and field characteristics.

FOR 241B Dendrology (3 Credits)

Covers identification, classification and distribution of plant communities (tree, shrub, forb and grass) found within Oregon and major North American plant communities. This class covers in lecture format the structure and function of the primary organs and tissues that comprise woody plants. This course is the classroom portion of FOR 241A. Course does not need to follow FOR 241A.

FOR 251 Recreational Resource Management (3 Credits)

Overview of recreational resource management including study of land and water resources used for outdoor recreation. Includes planning and management of natural and cultural resources for long-term resource productivity.

FOR 255 Resource Interpretation (3 Credits)

Introduces fundamental theories of interpretation and active and passive techniques of interpretation including: activities, presentations, signage, brochures and information kiosks. Course allows optional certification as an interpreter.

FOR 260 Conservation of Natural Resources (3 Credits)

Recommended preparation: WR 121.

Examines current utilization and issues surrounding natural resources availability and management, as well as the effect of human population on resource use and the environment. Includes critical analysis of sustainable development and resource use concepts, including principles of conservation and management. Emphasis placed on current issues. Two-day field trip required.

FOR 271 Applied Forest Ecology (3 Credits)

Recommended preparation: FOR 240A and FOR 241A.

Applies principles of forest ecology to develop a basic understanding of forest stand dynamics and silvicultural principles. Emphasis is placed on stand development, regeneration and stand analysis. Students will develop a practical understanding of stand establishment, maintenance and stand data collection. First course in sequence of FOR 271, FOR 272, and FOR 273.

FOR 272 Forest Entomology/Pathology (3 Credits)

Recommended preparation: FOR 240A and FOR 241A.

Emphasizes the recognition and effects of diseases, insects and mammals affecting forest ecosystems in the Pacific Northwest. Course will examine the role of insects, diseases and animals in forest functioning, health and management, as well as control measures and integrated pest management. Lab work is largely field-based and emphasizes identification of damaging forest insects and diseases common in Oregon. Second course in the sequence of FOR 271, FOR 272, and FOR 273.

FOR 273 Silviculture and Harvesting Systems (5 Credits)

Recommended preparation: FOR 271, FOR 272, and FOR 235.

Emphasizes interrelated systems of silviculture and harvesting. Discussions provide an understanding of the various treatments and harvesting systems applied to forest stands to meet various management objectives for forest ecosystems. Topics include forest regeneration processes and intermediate operations (thinning, pruning, etc.) and different methods of timber harvest. Observation and data collection will be performed in lab sections. Written reports interpreting prescriptions and harvest systems will be required. Last course in a sequence of FOR 271, FOR 272, and FOR 273.

FOR 298 Independent Study: Forestry (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

FOR 299 Selected Topics: Forestry (1-5 Credits)

This course is in development.

French (FR)

FR 101 First Year French I (4 Credits)

The first course of a three-course sequence in French. Emphasizes active communication in French. Develops students' basic skills in listening, reading, writing, and speaking.

FR 102 First Year French II (4 Credits)

Prerequisites: FR 101.

The second course of a three-course sequence in French. Continues the development of reading, writing, listening and speaking skills. Particular emphasis on short interactions regarding everyday life.

FR 103 First Year French III (4 Credits)

Prerequisites: FR 102.

The third course of a three-course sequence in French. Continues the development of reading, writing, listening and speaking skills. Prepares students for entry into second-year level at COCC or any other university.

FR 199 Selected Topics: French (1-4 Credits)

This course is in development.

FR 201 Second Year French I (4 Credits)

Recommended preparation: FR 103 or three years of high school French. Continues the work of First Year French, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Emphasis on writing and reading skills. Incorporates culture in all aspects of the course; class taught mostly in French. Course should be taken in sequence.

FR 202 Second Year French II (4 Credits)

Recommended preparation: FR 201 or four years of high school French. Continues the work of FR201, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Incorporates culture in all aspects of the course; class taught mostly in French. Course should be taken in sequence.

FR 203 Second Year French III (4 Credits)

Recommended preparation: FR 202, or one year of IB, AP French in high school, or four years of middle/high school French. Continues the work of French 202, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Incorporates culture, regionalisms, and argot; class taught mostly in French. Course should be taken in sequence.

FR 211 French Conversation and Culture I (3 Credits)

Recommended preparation: FR 103, or two years of high school French. Intended for students who wish to maintain and continue mastering fluency in the acquisition of French. Also an excellent option for the non-degree-seeking student.

FR 212 French Conversation and Culture II (3 Credits)

Recommended preparation: FR 211, or FR 201, or three years of high school French.

Intended for students who wish to maintain and continue mastering fluency in the acquisition of French. Also an excellent option for the non-degree-seeking student.

FR 213 French Conversation and Culture III (3 Credits)

Recommended preparation: FR 212, or 202, or four years of middle/high school French.

Intended for students who wish to maintain and continue mastering fluency in the acquisition of French. Also an excellent option for the non-degree-seeking student.

FR 298 Independent Study: French (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study in French to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

General Science (GS)

GS 104 Physical Science: Physics (4 Credits)

Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

Energy is used as the theme to develop basic understanding of introductory principles of physics. Energy topics include mechanical, acoustic, heat, electric, radiant and nuclear. Emphasis placed on practical application of various energy forms.

GS 105 Physical Science: Chemistry (4 Credits)

Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

Provides an introduction to properties and structures of matter, chemical bonding, solutions, equilibrium, electrolytes, and acids and bases. Also includes quantitative discussions of the mole, stoichiometry and solution concentration.

GS 106 Physical Science: Geology (4 Credits)

Recommended preparation: MTH 060.

Examines how the Earth's interior transfers energy to the surface, with a guided inquiry focus. Students work closely in groups to discover geologic ideas. Field trips will occasionally substitute for labs, with multiple options to ensure accessibility for every student.

GS 107 Physical Science: Astronomy (4 Credits)

Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

Introduction to astronomy including solar system, stellar systems and cosmology. Some individual observing may be required.

GS 199 Selected Topics: General Science (1-6 Credits)

This course is in development.

Geography / Geog Info Systems (GEOG)

GEOG 100 Introduction to Geography (4 Credits)

Designed to examine the key themes, concepts and ideas in geography and to develop a geographical perspective of the contemporary world. A basic foundation of the fundamental themes in geographic education will be extended to the study of places and regions. Emphasis will be placed on the development of cartographic and map interpretation skills.

GEOG 106 Economic Geography (4 Credits)

Recommended preparation: minimum placement into WR 065.

Introduces the distribution of economic activities across the nation and the world. Explores core issues such as economic development, resource distribution and use, global agriculture, changes in manufacturing and the growth of the service sector. Urban patterns are explained in the context of our interrelated, globalized world. Useful course for business majors or any student wanting to understand criteria for business location.

GEOG 107 Cultural Geography (4 Credits)

Recommended preparation: minimum placement into WR 065.

Examination of different cultural traits in the world. Special emphasis on perception of space and landscape, language, world religion and folk and popular culture issues.

GEOG 190 Environmental Geography (4 Credits)

Recommended preparation: WR 121.

Introductory view of the environment and how it is shaped by and shapes human activity. Units include famine, water resources, deforestation, energy use, biodiversity and sustainable land-use practices.

GEOG 198 Field Geography of Central Oregon (3 Credits)

Recommended preparation: WR 121.

Field course that examines natural and cultural landscapes of Central Oregon sub-regions such as the Bend Core, Sisters Country, High Desert, and Upper and Lower Deschutes Basins.

GEOG 199 Selected Topics: Geography (1-4 Credits)

Series of mini-courses focusing on selected geographical topics including the following: an invitation to geography and natural regions of the world (deserts, mountains, humid tropics) and thematic topics.

GEOG 201 World Regional Geography I (4 Credits)

Recommended preparation: WR 121.

Introductory Geography course that explores the following regions: Europe, the former Soviet Union, Anglo-America, Australia and Japan. Evaluate how culture, politics, economics, history and the physical environment help create differences across regions.

GEOG 202 World Regional Geography II (4 Credits)

Recommended preparation: WR 121.

Introductory Geography course that explores the following regions: Latin America, Middle East/North Africa, Sub-Saharan Africa, East, South and Southeast Asia. Evaluate how culture, politics, economics, history and the physical environment help create differences across regions.

GEOG 211 Computer Cartography (4 Credits)

Develops skills needed to produce maps using ArcGIS Desktop software. Outlines cartographic principles and map use. Emphasis on mapping techniques within a GIS. Intended for students enrolled in GIS or UAS programs.

GEOG 212 Tourism And Recreation (3 Credits)

Recommended preparation: WR 065.

Includes a study of various components of the tourist industry and an analysis of the economic and environmental impacts of tourism and recreation upon communities. Examines tourism and recreation in Central Oregon and in other selected parts of the world.

GEOG 213 Geography of Pacific Northwest (3 Credits)

Recommended preparation: WR 065.

General introduction to geographical characteristics of the Pacific Northwest and, through this regional emphasis, to some of the basic principles and concepts of geography as a discipline. Comprises three broad sections dealing in turn with historical geography, physical geography and economic geography.

GEOG 265 Geographic Information Systems (4 Credits)

Introduces students to principles and practice of GIS, while providing experience using ArcGIS Desktop and Spatial Analyst software. Develops both theoretical understanding of GIS and experience in accessing GIS datasets. Students exposed to raster and vector GIS.

GEOG 266 Arc GIS (5 Credits)

Recommended preparation: or to be taken with GEOG 265.

Provides working knowledge of ArcGIS Desktop software. In addition, students undertake designing and developing a GIS database, performing spatial analysis, creating maps, and generating a report using the desktop products.

GEOG 267 Geodatabase Design (5 Credits)

Recommended preparation: GEOG 266.

Covers fundamentals of creating, using, editing, and managing spatial and attribute data stored in a geodatabase in ArcGIS. Topics include data migration; data loading; topology rules; use of subtypes, attribute domains, and relationship classes. Also covered are creation, editing and analysis of geometric networks.

GEOG 270 Map Interpretation and Design (4 Credits)

Recommended preparation: MTH 60 or equivalent.

Looks at the world of maps. How to design, interpret and critique many forms of maps.

GEOG 272 Geography for Teachers (3 Credits)

Recommended preparation: WR 121.

Designed for public and private school teachers in Geography and for all teachers wishing to include geographic content and concepts in their social studies classes. Emphasizes how to teach Geography at any grade level and incorporates the benchmarks and curriculum goals of the state of Oregon Department of Education as well as National Geography standards.

GEOG 273 Spatial Data Collection (5 Credits)

Provides the skills to collect location information for the purpose of integration with a Geographic Information System. The focus is on proper utilization of Global Positioning System (GPS) receivers and data collection. Intended for students enrolled in the second year of GIS or UAS programs, or similar academic preparation (see program director for details).

GEOG 275 GIS Capstone (5 Credits)

Recommended preparation: GEOG 285.

Culmination GIS project. Students are presented with a set of criteria and perform all steps necessary to complete the project including: project planning, designing and developing a GIS database, data collection and editing, performing spatial analysis, creating maps, generating reports and presenting of project output. See instructor for details.

GEOG 278 Physical Geography-Landforms and Water (4 Credits)

Introduction to the science of landforms and the processes that form them, including both internal and external processes, and how these processes interact and form a system. The course will survey different landform types, such as fluvial, Aeolian, glacial, volcanic, coastal, karst, and periglacial landforms and identify where, on a global basis, these landforms are likely to occur.

GEOG 279 Physical Geography-Weather and Climate (4 Credits)

This course is an introduction to the sciences of meteorology and climatology. The focus of study for the meteorology section of the course will be on the troposphere, which is the layer of the atmosphere closest to the earth. The last portion of the course will study climatic classification and the relationship of climate with natural vegetation and human activity.

GEOG 280 Co-op Work Experience GIS (1-3 Credits)

Prerequisites: instructor approval.

Provides opportunity for on-the-job experience in the GIS field. Normally taken summer term, but may occur during any term. See instructor for details.

GEOG 284 GIS Customization (5 Credits)

Recommended preparation: CIS 122.

Utilizes techniques to customize ArcGIS software through use of a current programming language. Publishing content to the Internet and Servers is also undertaken.

GEOG 285 Data Conversion and Documentation (5 Credits)

Recommended preparation: GEOG 266.

Covers a variety of techniques to collect and convert data between various formats, projections and coordinate systems, etc. Cultivates student's ability to research and experiment with data and enhance problem-solving skills. Stresses use of metadata which allows the data user to determine whether a particular data set is suitable for its proposed use.

GEOG 286 Remote Sensing (5 Credits)

Introduces students to the theory and methods of remote sensing through use of satellite imagery. Practical exercises involve use of SPOT, LANDSAT and Quickbird images with ArcGIS/Imagine Analysis software. Digital analysis is discussed and performed including preprocessing, image classification and image evaluation. Intended for students enrolled in the second year of GIS or UAS programs, or similar academic preparation (see program director for details).

GEOG 287 Analysis of Spatial Data (5 Credits)

Recommended preparation: GEOG 266.

Leads students through the analytical capabilities of GIS. Course begins with the more elementary but useful techniques involving locating and describing features, then proceeds to more advanced techniques based on higher-level spatial objects. Lab exercises utilize the Spatial Analyst Extension of ArcGIS to perform analysis of raster datasets.

GEOG 288 Special Studies: GIS (1-5 Credits)**GEOG 290 Environmental Problems (3 Credits)**

Recommended preparation: WR 121.

Examines intentional and inadvertent human modification of the natural environment and local, regional and global problems it may cause. Includes deforestation, urbanization, resource depletion and climate.

GEOG 295 Wilderness and Society (4 Credits)

Cultural and historical overview of the changing attitudes toward wilderness as reflected through literature and the history of federal land legislation. Attempts to define the social and economic values of wilderness lands and where they occur geographically. A reading intensive course.

GEOG 298 Independent Study: Geography (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study in geography to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

GEOG 299 Selected Topics: Geography (1-4 Credits)

This course is in development.

Geology (G)

G 162CV Cascade Volcanoes (3 Credits)

Consists of field studies of selected areas with emphasis on relationship between rock type, geologic setting and topography. Includes lectures, laboratory and weekend field trips. Topic areas include Cascade Volcanoes.

G 199 Selected Topics: Geology (1-6 Credits)

This course is in development.

G 201 Geology I (4 Credits)

Examines the nature of Earth's interior processes from a geologic perspective. Need not be taken in sequence. Field trips will occasionally substitute for labs, with multiple options to ensure accessibility for every student.

G 202 Geology II (4 Credits)

Examines the nature of Earth's surface processes from a geologic perspective. Need not be taken in sequence. Field trips will occasionally substitute for labs, with multiple options to ensure accessibility for every student.

G 203 Geology III (4 Credits)

Examines earth history from a geologic perspective. Need not be taken in sequence. Field trips will occasionally substitute for labs, with multiple options to ensure accessibility for every student.

G 207 Geology of the Pacific Northwest (4 Credits)

This is a one-term introductory lab science course in geology. It provides an introduction to the regional geology of the Pacific Northwest with emphasis on Oregon, Washington and parts of neighboring states and provinces. Includes basic geologic principles, earth materials and geologic history of the Pacific Northwest. Required weekend field trip.

G 299 Selected Topics: Geology (1-6 Credits)

Selected Topics in Geology.

German (GER)

GER 101 First Year German I (4 Credits)

German 101 is designed for beginners. Basic listening, comprehension, speaking, and writing skills will be developed during this course. Focuses on phonetics, genders, descriptions of objects and people, conjugating regular and irregular verbs in the present tense, punctuation, question words, German word order, and vocabulary, which includes the following categories: the alphabet, numbers, and greetings. Communication and German thought processes will be emphasized. Successful completion of this sequence, which should be taken in order, will prepare students for second-year level German at COCC or other universities.

GER 102 First Year German II (4 Credits)

Recommended preparation: GER 101 or one year of high school German. Continues the development of reading, writing, listening and speaking skills. Focuses on usage of *kennen* and *wissen*, the accusative case and prepositions governed by the accusative, modal verbs, verbs with separable prefixes, forming plurals, the formal and informal imperative, and prepositions. Students are encouraged to review GER 101 concepts and vocabulary prior to class.

GER 103 First Year German III (4 Credits)

Recommended preparation: GER 102 or two years of high school German. Continues the development of reading, writing, listening and speaking skills. Focuses on the dative case including indirect objects and prepositions governed by the dative, prepositions that can be accusative or dative, past tense using *sein* and *haben*, coordinating conjunctions, and comparisons. Students are encouraged to review the concepts of GER 101 and GER 102 prior to class.

GER 188 Special Studies: German (1-4 Credits)

Explores topics of current interest in the discipline.

GER 201 Second Year German I (4 Credits)

Recommended preparation: GER 103 or three years of high school German.

Continues, after GER 103, with the development of reading, writing, listening and speaking skills. Focuses on subordinating conjunctions, reflexive pronouns and verbs in the accusative and dative, genitive, adjective endings, and comparisons. Class begins with a review of GER 101, GER 102 and GER 103.

GER 202 Second Year German II (4 Credits)

Recommended preparation: GER 201 or four years of high school German.

Continues with the development of reading, writing, listening and speaking skills. Focuses on the concepts of adjectives used as nouns, the simple past tense, past perfect tense, expressing wishes and expectations, the future tense, relative clauses, negations using *nicht*, *noch nicht*, *noch kein(e)*, and *nicht mehr*, verbs with fixed prepositions, *da-* and *wo-* compounds, and the subjunctive.

GER 203 Second Year German III (4 Credits)

Recommended preparation: GER 202 or four years of high school German.

Continues with the development of reading, writing, listening and speaking skills. Focuses on the concepts of subjunctive I and II, expressing opinions, indirect discourse in present and past subjunctive I, the passive voice and the impersonal use of "man", present participles, review of GER 202 grammar and vocabulary.

GER 298 Independent Study: German (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study in German to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

GER 299 Selected Topics: German (1-4 Credits)

This course is in development.

Health & Human Performance (HHP)

HHP 100 Introduction to Public Health (4 Credits)

Recommended preparation: Completion of WR 065 or higher or minimum placement into WR 121.

Provides an introduction to the core elements of public health science and practice, including health policy, health systems and health ethics. Open to all COCC students who want to know more about the dynamic, multi-disciplinary field of public health, what it is, how it is organized and how it works.

HHP 110 Orientation to Public Health Professions (1 Credit)

Recommended preparation: Completion of WR 065 or minimum placement into WR 121.

Provides an introduction for students interested in health-related careers to the field of public health and its many career opportunities in behavioral and social sciences, community health (including maternal & child health), epidemiology, environmental health, health management and policy, health promotion, health informatics, minority health and health disparities, public health preparedness, gerontology, and global health. Meet public health professionals in class and 'on-the-job,' explore public health interests and academic pathways.

HHP 131 Introduction to Exercise/Sport Science (3 Credits)

Recommended preparation: WR 065 or higher.

Introduces students to the profession of exercise science including an overview of basic concepts and careers in exercise physiology, athletic training, personal training, coaching, sports medicine, physical therapy and fitness management. Provides a comprehensive introduction to any student who is considering a career in the area of health, fitness, wellness, exercise physiology and sports medicine. Also, includes guest speakers currently working in the profession, as well as tours of local fitness facilities. Various fitness certifications are compared and contrasted.

HHP 188 Special Studies: HHP (1-6 Credits)

Explores topics of current interest in the discipline.

HHP 199 Selected Topics: Health and Human Performance Activities (1-6 Credits)

Includes both introductory courses and activities.

HHP 210 Introduction to the Health Care System (3 Credits)

Recommended preparation: HHP 100.

Provides tools to examine and critically assess the U.S. health care delivery system, its components, and the challenges created by its structure. Considers the U.S. health care system from the perspective of multiple players and partners, including consumers/patients, primary health care, hospitals, providers, insurers, and government. Compares and contrasts the U.S. health care system to health care systems in other developed and emerging countries.

HHP 212 CPR - American Heart Association Heartsaver with Pediatric (1 Credit)

The Heartsaver Automatic External Defibrillator (AED) with Pediatric CPR course teaches the basic techniques of adult CPR and use of an AED. Pediatric CPR skills may be taught if students live or work in a setting where children are present. Students also learn to use barrier devices in CPR and give first aid for choking for responsive adult, child and infant victims. Course teaches how to recognize the signs of four major emergencies: heart attack, stroke, cardiac arrest, and foreign-body airway obstruction. Through the American Heart Association. Course meets the Dental Assistant standards.

HHP 212A AHA Basic Life Support for Providers CPR (1 Credit)

Provides the following skills: Basic life support for patients of all ages (including ventilation with a barrier device and a bag-mask device), use of an automatic external defibrillator and relief of choking in responsive and non-responsive patients. Designed for providers who care for patients in a wide variety of settings, both in and out of hospital. In order to receive the AHA BLS Provider Certification card, one must pass a written exam and be able to physically perform all skills required for CPR.

HHP 216 Sociocultural Dimensions of Physical Activity (3 Credits)

This course will provide an overview of physical activity in contemporary society. It will look at relationships with the social processes: interrelationships between physical activity and cultural institutions.

HHP 231 Human Sexuality (3 Credits)

Explores the biological, psychological, and social aspects of human sexuality. Specific topics include historical and cultural perspectives of human sexuality, sexual anatomy and physiology, sexual and reproductive health factors, gender identity, sexual orientations, and lifespan sexual development.

HHP 240 Science of Nutrition (3 Credits)

Prerequisites: CH 104 or 105 or 106 or CH 221 or 222 or 223.

Will introduce nutrition to exercise science, nutrition, dietetics, food science, and health science majors who have taken general chemistry. Concepts of nutrient metabolism and utilization, nutrient deficiencies and toxicities and their relationship to disease prevention and treatment. Meets requirements for COCC AS in EXSS and BS in EXSS at OSU-Cascades.

HHP 242 Stress Management (3 Credits)

Recommended preparation: WR 065 or higher.

Helps students develop a comprehensive approach to the management of stress. Examines the historical, emotional, intellectual, spiritual, psychological and physiological foundations of the stress concept. This broad understanding of stress will be the basis for the study of the role that stress plays in health and disease. Students will experiment with a wide variety of stress management and relaxation techniques.

HHP 243 Occupation Health, AHA BLS CPR (3 Credits)

This class provides an introduction to major concepts and issues in occupational health and safety, including health promotion, injury and disease prevention, and protection of worker populations from environmental hazards. The course will also include a section on stress management with a focus on the application of managing stress on the job, and will include the American Heart Association (AHA) Basic Life Support (BLS) for Health Care Providers (HCP) CPR course which is what we currently teach in our one-credit HHP 212A class.

HHP 246 Introduction to Adapted Physical Activity (3 Credits)

This course will provide an overview of cognitive, neuromuscular, sensory, and orthopedic impairments; understanding accessible physical activity programs for individuals with disabilities. This is a hybrid course where approximately 50% of the course will take place in a traditional face-to-face classroom and 50% will be delivered via Blackboard, your online learning management system, where you will interact with your classmates and with the instructor.

HHP 248 Health Psychology (4 Credits)

Recommended preparation: WR 65 or higher.

Health is defined as "a state of complete physical, mental, and social wellbeing, and not merely the absence of disease" (World Health Organization, 1948). With that definition in mind, this course examines how biological, psychological, social, and environmental factors affect physical health and wellbeing. Specific topics include historical and cultural perspectives of health, the psychology and physiology of stress, health behavior modification with emphases on primary prevention and health promotion, socioeconomic and healthcare inequalities, and an exploration of biopsychosocial factors related to chronic diseases like obesity, heart disease, and HIV AIDS. This course is one of the four pre-Public Health core courses offered.

HHP 252 First Aid & AHA Basic Life Support Provider CPR (3 Credits)

Recommended preparation: WR 065 or higher.

First Aid & CPR instruction. First aid includes: immediate and temporary care for a wide variety of injuries, illnesses, conditions. CPR includes: patients of all ages; ventilation with a face shield, pocket mask and a bag-mask device; use of an automated external defibrillator (AED); relief of choking; both one- and two-person CPR; and compression-only CPR. Practical exam includes individual hands-on testing; successful completion of course results in National Safety Council Standard First Aid - card valid for three years and American Heart Association (AHA) Basic Life Support (BLS) for Provider Adult & Pediatric CPR - card valid for two years.

HHP 252A Fitness/First Aid (3 Credits)

Recommended preparation: WR 65 and MTH 20 or higher.

Introduces both first aid and wellness topics, such as immediate and temporary care for injury and illness, control of bleeding, care for poisoning, splinting, bandaging and transportation, as well as fitness, nutrition and stress management. Students earn first aid and CPR cards in both adult and infant from the National Safety Council upon completion of course.

HHP 258 Holistic Wellness (4 Credits)

Recommended preparation: WR 65 or higher.

Looks beyond health risk factors to broader wellness dimensions (i.e. mental, emotional, spiritual, environmental, cultural & financial). Conventional & alternative paradigms of chronic disease causes plus modalities for healing will be explored through the role of our minds, environment, relationships, spirituality, & social support.

HHP 259 Care and Prevention of Athletic Injury (3 Credits)

Recommended preparation: BI 231, HHP 260 and WR 065 or higher.

Introduces management of athletic injuries, injury recognition and assessment, proper care and treatment of athletic injuries and rehabilitation of athletic injuries. Emphasizes hands-on experience included for mastery of surface anatomy, injury assessment and proficiency in rudimentary injury care and rehabilitation practices.

HHP 260 Anatomical Kinesiology (4 Credits)

Recommended preparation: BI 231 and WR 065 or higher.

This is an introduction to the science of human movement (kinesiology). The class explores the anatomical elements such as muscle action and joint structure and function involved in the gross motor movement. Major emphasis will be on structural anatomy, primary movers of each joint, and muscle utilization for specific sport actions.

HHP 261 Exercise Physiology (4 Credits)

Recommended preparation: MTH 020 or higher and WR 065 or higher.

This course is designed to provide the student with an introductory foundation for understanding the physiology associated with exercise. Emphasis will be placed on how the various tissues and systems of the body adjust to acute work stress and ultimately adapt to chronic exercise training. Course materials will include metabolic, musculoskeletal, cardiovascular, and respiratory adaptations to exercise and exercise training.

HHP 262 Exercise Testing and Prescription (3 Credits)

Recommended preparation: HHP 260 and HHP 261.

The intent is to provide a practical guide for administering safe exercise testing as well as development of safe and effective exercise prescription for all clients including special populations. Specific content to be addressed includes: initial client consultation, risk factor classification, performance of hands-on exercise testing, prescribing appropriate aerobic, anaerobic, flexibility, and resistance exercise plans, periodization, prevention of overtraining, metabolic calculations, & legality including HIPAA laws.

HHP 266 Nutrition for Health (3 Credits)

Recommended preparation: MTH 20 or higher.

Introduces the basics of nutrition for a physically active, healthy lifestyle. The course emphasizes nutrient function, energy production, weight management, body composition, psychosocial health, global impact of nutrition, prevention of nutrition related diseases, food guide pyramid, ergogenic aids fad diets, dieting and nutritional research. Course also includes a computerized nutritional assessment.

HHP 267 Wellness Coaching Fundamentals (3 Credits)

Recommended preparation: WR 65 or higher.

Explore components of behavior change by providing an overview of the dimensions of wellness, coaching technique and models in health. Foundational concepts of positive psychology, including the history, theory and ethics, as well as mindfulness, appreciative inquiry and self-efficacy will be examined and applied.

HHP 268 Sustainable Food and Nutrition (4 Credits)

Recommended preparation: WR 65 or higher.

Farmer and author Wendell Berry once wrote that eating is an "agricultural act". It is also an ethical, cultural, political, and environmental act. In an attempt to understand the full impact of our food choices, this course will explore American food production from start to finish, past to present, and field to fork. Along the way we will answer questions such as: How does a plant grow? What is the difference between conventional vs. organic agriculture? How and why did our current food system evolve? How much does a fast-food cheeseburger really cost? What and why is food biotechnology? Where can I buy a local head of lettuce or leg of lamb? And, ultimately, what should I eat? .

HHP 270 Sport and Exercise Psychology (3 Credits)

Recommended preparation: WR 065 or higher.

Introduces broad range of topics relevant to sport and exercise psychology, including sport personality, motivation, psychological skills training, energy management, attention, imagery, competitive anxiety and mental relaxation. Content is relevant for coaches, athletes and others interested in the psychology of sport.

HHP 280A Practicum-Exercise Science (1-2 Credits)

Prerequisites: instructor approval.

Recommended preparation: complete a minimum of three exercise science classes.

Provides exercise science practicums by the department in conjunction with the community in health & fitness programs including group fitness, personal training, wellness coaching, research, clinical professions such as physical therapy, occupational therapy, athletic training, and cardiac rehabilitation. P/NP grading.

HHP 280B Practicum- Exercise Science (1-2 Credits)

Prerequisites: instructor approval.

Recommended preparation: complete a minimum of three exercise science classes.

Provides Exercise Science practicums by the department in conjunction with the community in health & fitness programs including group fitness, personal training, wellness coaching, research, clinical professions such as physical therapy, occupational therapy, athletic training, and cardiac rehabilitation. P/NP grading.

HHP 281 Practicum-Health Promotion/Public Health (1-2 Credits)

Prerequisites: instructor approval. Recommended preparation: complete a minimum of three Health Promotion/Public Health courses.

Provides practicums co-mentored by department faculty in collaboration with community partners. Practicum sites may include, but are not limited to public health departments, community health centers, health promotion and education programs, local government organizations, environmental health organizations, and social justice organizations. Thirty hours of practicum experience is equivalent to one credit. P/NP grading.

HHP 283 Introduction to Alternative Medicine (4 Credits)

Introduces the historical and sociopolitical context of conventional and "alternative" medical systems in the United States. A number of professional alternative medical practices will be examined as independent systems, and also as components of the larger context of the overall health care system in America.

HHP 291 Lifeguard Training (2 Credits)

Designed to teach the knowledge and skills needed to help prevent and respond to aquatic emergencies, including land and water rescue skills, as well as first aid, CPR and AED. Meets American Red Cross lifeguard training standards. Participants should be comfortable in and around the water and be able to demonstrate proficient swimming technique.

HHP 295 Health and Fitness (3 Credits)

Recommended preparation: or to be taken with WR 65 and MTH 20 or higher.

Introduces a comprehensive overview of wellness concepts including fitness, nutrition, stress, disease prevention, and various other lifestyle factors that improve the quality of life. Each student's health and fitness is individually evaluated through a series of tests measuring cardiovascular endurance, strength, body composition, flexibility, blood pressure, nutrition, stress levels and blood lipid and blood glucose.

HHP 298 Independent Study: HHP (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study in health and human performance to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

HHP 299 Selected Topics: HHP (1-3 Credits)

Health topics requiring advanced level of critical thinking, writing and/or other skills.

Health and Human Performance Activity (HHPA)

HHPA 102 Beginning Rock Climbing (1 Credit)

Provides an introduction to rock climbing.

HHPA 103 Training for Rock Climbing (1 Credit)

Provides training for rock climbing.

HHPA 104 Intermediate Rock Climbing (1 Credit)

This class focuses on preparing the student to transition into a lead sport climber. This class builds upon the skills covered in the beginning rock climbing courses, including advanced belay techniques, belay/ rappel transitions, and anchor building in a sport climbing environment. Students will develop a plans to improve their climbing techniques, strength and endurance.

HHPA 105 Backpacking (1 Credit)

Provides instruction for backpacking.

HHPA 106 Snowshoeing (1 Credit)

Provides an introduction to snowshoeing.

HHPA 107 Backcountry Skiing (1 Credit)

Provides an introduction to backcountry skiing.

HHPA 109 Whitewater Kayaking I (1 Credit)

Provides introduction to whitewater kayaking.

HHPA 110 Whitewater Rafting I (1 Credit)

Provides introduction to whitewater rafting.

HHPA 112 Beginning Mountain Biking (1 Credit)

Introduction to mountain biking which will include local trail systems.

HHPA 114 Intermediate Mountain Biking (1 Credit)

Designed to build upon fundamental mountain bike skills. Trail etiquette and basic nutrition will be reviewed. Introduces intermediate bike maintenance and advanced riding techniques. Rides will take place on local trails. Previous mountain biking experience is necessary.

HHPA 115 Wilderness Training: Beginning (1 Credit)

Introduces a variety of outdoor activities, which may include: rock climbing, whitewater rafting, kayaking, canoeing, snowshoeing, caving, hiking, and cross-country skiing. Develops basic skills in outdoor activities and learns about appropriate preparation for participation.

HHPA 120 Tai Chi/Qigong (1 Credit)

Introduces the basic techniques of Tai Chi Yang style simplified form and three Qigong exercises, as well as theories and concepts for better health and relaxation through meditation in movement. Can accommodate all levels.

HHPA 122 Yoga-Beginning (1 Credit)

Introduces the basic techniques of yoga incorporating a wide range of yoga styles. Classes vary according to instructor offerings, which include Ashtanga, Hatha, Vinyasa, Yin, Restorative and Kundalini.

HHPA 125 Yoga-Intermediate (1 Credit)

Appropriate for any student who has a yoga background and is familiar with basic yoga postures, breathing and intentions. Self-exploration is enhanced through the introduction of variations of alternative movements to basic poses such as arm balances. Following a dynamic warm-up, students will participate in a flow-type session with quick movements to increase heart rate. Deep stretch and shavasana will conclude each class. Students will often work in pairs on advanced postures.

HHPA 126 Yoga-All Levels (1 Credit)

Modification and additional variation in postures for students wanting a more challenging practice, using a blend of different yoga styles. Appropriate for all levels.

HHPA 127 Yoga for Athletes (1 Credit)

Designed for anyone (novice to advanced) who aspires to utilize the benefits of yoga to boost their athletic performance in any sport. Although not required, it may be helpful to have had an introductory course prior to this class. A dynamic, flow-style of Vinyasa practice linking breath and movement with modifications emphasizing safety and anatomical clarity. The practice will utilize traditional asanas (poses) to build a foundation for a robust athletic yoga tool. The importance of strength will be equally emphasized with Yin like deep-style stretching. Rest and recovery will be given equal time with an intro to the benefits of restorative practice utilizing props (bolsters).

HHPA 128 Yoga/Pilates Blend (1 Credit)

Focuses on a blend of two modalities, with the flexibility of yoga and core strength training of Pilates.

HHPA 130 Total Fitness (1 Credit)

High-intensity, physically demanding activity class geared toward improving overall physical fitness in a supportive team atmosphere. Various forms of games, skills, exercises, and activities will be used to improve weakness areas as well as further enhance areas in which the student already excels physically. All levels welcome but a positive, can-do attitude is a must.

HHPA 132 Jogging (1 Credit)

Focuses on improving running economy and cardiovascular fitness through various running-related activities. Students will run at both on and off campus sites. Runners of all levels welcome.

HHPA 133 Ski Conditioning-Nordic (1 Credit)

An outdoor/indoor conditioning class for all levels of Nordic skiers. Goal of the class is to provide ski-specific cardiovascular fitness and muscular strength as well as improving Nordic ski technique. Various ski-specific drills and exercises will be used in a fun group atmosphere.

HHPA 134 Circuit Training (1 Credit)

Traditional circuit training class for total body conditioning that includes interval training via different apparatuses and core circuit training using various forms of equipment. Emphasizes improvement in both core strength and cardiovascular fitness. Appropriate for all levels of fitness and exercise experience.

HHPA 135 Cycling: Studio (1 Credit)

Introduces indoor studio cycling skills to all fitness and experience level of cyclists. Emphasizes proper form and designed to provide a fun mode of enhancing cardiovascular fitness in a group setting.

HHPA 136 Boot Camp (1 Credit)

Introduction to exercises that improve cardiovascular endurance, muscular strength and flexibility in a supportive team atmosphere. Utilizes interval training, core strength, plyometrics, running, games and weights and is appropriate for all levels of fitness and experience.

HHPA 137 Progressive Walking (1 Credit)

A group class designed to prepare and progressively improve cardiovascular fitness through walking. An emphasis will be placed on monitoring intensity through heart rate. All levels of walkers are welcome.

HHPA 138 Ki Aikido (1 Credit)

Introduces the martial art of Ki Aikido, a form of self-defense and non-fighting to all levels of experience in Ki Aikido. It is based upon coordination of mind and body, not only in throwing, but also in the art of falling (ukemi).

HHPA 140 Basketball (1 Credit)

This activity class teaches all the fundamental skills and rules of basketball to all levels of basketball players. There will be an emphasis on team play.

HHPA 141 Golf (1 Credit)

Held at local golf courses and is taught by local professional golf instructors. Instruction of basic golf skills to all levels of golf players. Golf clubs may be available for use in class (contact the department for more information).

HHPA 142 Beginning Rugby (1 Credit)

Familiarizes students with the rules, skills, strategy, fitness level and basic concepts of modern Rugby Union Football. Equips students to be an informed Rugby participant.

HHPA 143 Softball (1 Credit)

Focuses on fundamental skill development and team play for all levels of softball players.

HHPA 144 Soccer (1 Credit)

Focuses on fundamental skill development and team play for all levels of soccer players.

HHPA 146 Tennis I (1 Credit)

Focuses on skill development for beginning tennis players. Students will learn through various drills and court games.

HHPA 147 Tennis II (1 Credit)

Recommended Preparation: HHPA 146.

Geared toward students with intermediate or advanced tennis skills. Students will work towards improving current tennis skill level and strategy by means of practice as well as feedback from the instructor.

HHPA 148 Volleyball-All Levels (1 Credit)

Focuses on fundamental volleyball skill development and team play for beginning students and continuing students who want to enhance their skill level.

HHPA 149 Volleyball-Doubles (1 Credit)

Provides rules and strategy of doubles volleyball. Includes communication with teammates on the courts due to the faster pace of the game.

HHPA 150 Cultural Dance Fitness (1 Credit)

Designed to introduce individuals to various types of energetic dance styles from Africa to the Caribbean in a fun, dance fitness setting as well as learning the art of choreography. Integrates several dance styles (i.e., West African, Dance Hall, Hip-Hop) to a variety of beats and rhythms from around the world. Designed for all levels.

HHPA 153 Aerobic Dance-Hip Hop (1 Credit)

Explains the growing awareness of hip hop as a mind-body, dance-style aerobic movement. Includes choreographed moves with each class and building upon each other as a sequenced routine.

HHPA 154 Dancercise (1 Credit)

High-energy activity class emphasizing dance movements including jazz, contemporary and salsa styles.

HHPA 156 Pilates-Beginning (1 Credit)

Through Pilates exercises, this class familiarizes students with the awareness of core flexibility and strength, relative muscle groups and joint actions of the core. Students will learn Pilates vocabulary and training techniques, including specific stretching, as well as stretching for general health. Also provides proper sequence form for stretching, the slide, rings, exercise balls and weights for cardio and overall balance.

HHPA 157 Pilates-All Levels (1 Credit)

Includes a brief review of Pilates fundamentals (proper spine alignment, elongation, thoracic breath and core control, including the use of appropriate Pilates equipment). Students will learn several sequences of Pilates exercises with appropriate modifications for all fitness levels.

HHPA 158 Stretch and Relaxation (1 Credit)

Introduces students to progressive stretching activities and emphasizes the value of stretching to the overall relaxation process.

HHPA 159 Barre Body (1 Credit)

Combines ballet & Pilates fundamentals with motivating music to improve fitness through use of ballet or body barres. This low-impact class is ideal for all fitness levels without traditional gym equipment. Muscles are engaged in strategic patterns that intermix small isometric movements with greater range of motion working toward a defined physique.

HHPA 170 Snowboarding I (1 Credit)

For beginning snowboarders. Students will learn the fundamentals of snowboarding with qualified instructors. Equipment must be provided by the student.

HHPA 171 Snowboarding II (1 Credit)

For intermediate to advanced snowboarders. Students will be provided instruction to enhance their current skill level in snowboarding. Equipment must be provided by the student.

HHPA 172 Snowboarding III-Competitive Freestyle Riding (1 Credit)

Focuses on freestyle techniques for advanced riders. Emphasis of instruction is on freestyle maneuvers, including straight airs, 180's, and straight airs with grabs, as well as etiquette when riding in the half-pipe, slope-style facilities and natural freestyle terrain. Equipment must be provided by the student.

HHPA 173 Brazilian Jujitsu (1 Credit)

Modified version of traditional Japanese Jujitsu and martial art sport that focuses on gaining a dominant position over an opponent. Students will learn proper techniques, using leverage, sparring and self-defense drills to gain self-confidence.

HHPA 174 Swimming I-Swim Fitness and Technique (1 Credit)

Swim Fitness and Technique helps student feel safe and comfortable in the water for at least ten minutes at a time, incorporating and refining swimming strokes.

HHPA 176 Masters Swimming (1 Credit)

Designed to strengthen swimming stroke skills to the advanced level. Introduces advanced concepts of fitness swimming. Prepares students for a lifetime of participation in swimming and racing if desired. Students will attend organized masters swim team practices. Previous swimming experience expected.

HHPA 177 Swimming Fundamentals (1 Credit)

Basic swim instruction for individuals with limited to no swim experience. Learn basic swim skills (floating, breathing techniques, and flutter kicking), swimming theory concepts and strokes (front and back crawl and breaststroke) at your own pace.

HHPA 178 Ski Alpine I (1 Credit)

Designed for beginning downhill skiers. Learn the fundamentals of skiing with qualified instructors. Equipment must be provided by the student.

HHPA 179 Ski Alpine II (1 Credit)

Designed for intermediate to advanced alpine skiers. Provides instruction to enhance current ski skill level. Equipment, including helmet, must be provided by the student.

HHPA 182 Tae Kwon Do (1 Credit)

A martial art form that if properly performed, improves cardiovascular endurance, muscular strength, and flexibility. Instruction includes techniques of self-defense, proper Tae Kwon Do etiquette, and a cultural introduction of Dojang.

HHPA 183 Water Aerobics (1 Credit)

Introduces water aerobics which improves cardiovascular endurance, muscular strength and flexibility in a low-impact environment.

HHPA 184 ZUMBA (1 Credit)

ZUMBA dance fitness fuses hypnotic rhythms and easy-to-follow moves to create a dynamic fitness program. This course is designed to include cardiovascular strengthening, muscle toning with resistance and movements to enhance flexibility and balance.

HHPA 185 Weight Training (1 Credit)

Covers the basic principles of weight training and proper use of weight room equipment and safety. The course includes a variety of weight training methods and incorporates core strength and flexibility activities. Students will develop their own weight lifting program throughout the term.

HHPA 186 Stand Up Paddle Boarding (1 Credit)

Introduction into the world of stand-up paddle boarding. Designed for all levels, teaches the fundamentals of stand-up paddle boarding with a qualified instructor. Introduces skills for proper paddling technique, safety considerations and trip planning. Participants should be comfortable in and around the water. Equipment provided.

HHPA 199 Selected Topics: Health and Human Performance (1-4 Credits)

This course is in development.

Health Information Management (HIM)

HIM 103 Introduction to Health Information Management (5 Credits)

Prerequisites: AH 111; CIS 120; and WR 121.

Provides an introductory survey of the subject matter covered throughout the health information management programs. Includes data and information governance, informatics, revenue cycle management, health law and compliance, and leadership. Students are required to pass a criminal history check prior to beginning HIM 103.

HIM 104 Health Information Standards and Governance (5 Credits)

Prerequisites: Instructor approval.

Provides an in-depth study of documentation standards in the healthcare system. Emphasis is defining quality healthcare data, data analysis, and information governance. Also explores the legislation that has impacted documentation standards, as well as the functions of healthcare documentation.

HIM 105 Health Information Compliance and Analytics (3 Credits)

Prerequisites: Instructor approval.

Provides an in-depth study of the federal and state requirements and accreditation guidelines for health data and information compliance. Emphasis is defining the role of the healthcare record as a basis for compliance and risk management in diverse healthcare settings.

HIM 171 Project Management (2 Credits)

Prerequisites: Instructor approval.

Provides a formal set of principles and procedures to use when implementing large undertakings to achieve a specific goal. Topics include project life cycle, tools, and types.

HIM 182 Introduction to Reimbursement and Classification Systems (4 Credits)

Prerequisites: Instructor approval.

Provides an introductory survey of healthcare reimbursement methodologies: prospective payment systems, fee-for-service, resource-based relative value scale, and fee schedules. Provides an introductory survey of healthcare classification systems (coding systems): Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS) Level II, International Classification of Diseases, 10th Revision, Clinical Modification/Procedure Classification (ICD-10-CM/PCS), and others (DSM-5, ICD-O, ICF, NDC).

HIM 184 Pathophysiology and Pharmacology (5 Credits)

Prerequisites: Instructor approval.

Provides an in-depth study of human disease processes which affect organs and interrelated body systems. Introduces general principles of pharmacology. Topics include etiology, physical signs and symptoms, diagnosis/treatment modalities, manifestations, prognosis of disease conditions, drugs, drug classes, and drug actions.

HIM 190 HIPAA for Practical Experience (1 Credit)

Prerequisites: Instructor approval.

Provides a medical legal foundation for professional practice experience with respect to HIPAA (Health Insurance Portability and Accountability Act), federal legislation enacted in 1996. Course focus is on the privacy and security rules of HIPAA Title II. This course is a requirement for enrollment in Professional Practice Experience (HIM 193).

HIM 193 Professional Practice Experience I (2 Credits)

Prerequisites: Instructor approval based on completion of first-year HIT curriculum.

Provides practical experience in a healthcare setting, under the supervision of a registered health information administrator or registered health information technician. Students report to an approved location and participate in activities related to HIM. Fulfills 60 hours (40 on site/20 off site) of 120 total professional practice experience hours required for program completion. P/NP grading.

HIM 201 Legal and Ethical Aspects of Health Care (3 Credits)

Prerequisites: Instructor approval.

Provides a medico-legal foundation with respect to laws and regulations affecting the health care industry. Special emphasis is placed on HIPAA (Health Insurance Portability and Accessibility Act). Topics also include: general law and ethics, bioethics, hospital and physician liability, medical staff bylaws, consents, and release of protected health information.

HIM 202 Health Information Management Applications (1 Credit)

Prerequisites: instructor approval.

Provides an opportunity to apply documentation standards, data analysis, and compliance and risk management policies and procedures through the use of simulated health records and other clinical documentation.

HIM 203 Health Information Technologies (4 Credits)

Prerequisites: Instructor approval based on completion of first-year HIM curriculum.

Provides an introduction and history of computer systems used in health care, the current status of health information systems in health care, and how they are specifically used in Health Information Management.

HIM 271 Quality Improvement in Health Care (4 Credits)

Prerequisites: Instructor approval based on completion of first-year HIM curriculum.

Provides an analysis and application of quality management, risk management, and performance improvement. Includes performance improvement data analysis, identification of improvement opportunities based on performance measurements, and communicating improvement activities. Students will have the opportunity to examine and apply known team structures and quality improvement techniques while creating a performance improvement model.

HIM 272 Management Principles and Leadership in HIM (4 Credits)

Prerequisites: Instructor approval based on completion of first-year HIM curriculum.

Provides an introductory survey to management principles and leadership development in the Health Information Management profession. The emphasis of this course management theory, planning, organizational models, financial resources, and the interpersonal aspects of leadership and management.

HIM 273 HIM Capstone (2 Credits)

Prerequisites: Instructor approval required based on completion of first-year HIM curriculum.

This capstone course is the culmination of the HIM program. The capstone project provides the student the opportunity to review and apply the knowledge, skills, and tools gained throughout the HIM course of study. Students will also review core curriculum identified by AHIMA as essential domains of learning and includes RHIT and CCA practice exams.

HIM 281 Healthcare Statistics (4 Credits)

Prerequisites: Instructor approval based on completion of first-year HIM curriculum.

Provides a study of statistical terminology and health care data collection. Focus is on specific statistical analysis of common health care data, the use of percentiles, research and descriptive data presentations.

HIM 282 Reimbursement Systems (5 Credits)

Prerequisites: Instructor approval required based on completion of first-year HIM curriculum.

Provides an understanding of third party payers in a variety of healthcare settings. Includes commercial health insurance, government payers, workman's comp, and liability. Also addresses coding compliance, coding for medical necessity and completion and submission of claims, including their electronic versions.

HIM 283 Coding Classifications I (5 Credits)

Prerequisites: Instructor approval required based on completion of first-year HIM curriculum.

Provides an intermediate understanding of healthcare classification systems (coding systems): Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS) Level II, International Classification of Diseases, 10th Revision, Clinical Modification/Procedure Classification (ICD-10-CM/PCS).

HIM 284 Coding Classifications II (3 Credits)

Prerequisites: Instructor approval based on completion of first-year HIM curriculum.

Provides an in-depth application of healthcare classification systems (coding systems): Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS) Level II, International Classification of Diseases, 10th Revision, Clinical Modification/Procedure Classification (ICD-10-CM/PCS).

HIM 285 Revenue Cycle Management (3 Credits)

Prerequisites: Instructor approval required based on completion of first-year HIM curriculum.

Provides an in-depth study of revenue cycle management from a multi-disciplinary approach. Includes the components of the revenue cycle across health care settings and from the facility/provider prospective versus the patient perspective. Applies knowledge, skills, and abilities accumulated in prior terms related to classification and reimbursement systems.

HIM 293 Professional Practice Experience II (2 Credits)

Prerequisites: Instructor approval based on completion of first and second-year HIM curriculum.

Provides practical experience in a healthcare setting, under the supervision of a registered health information administrator or registered health information technician. Students report to an approved location and participate in activities related to HIM. Fulfills 60 hours (40 on site/20 off site) of 120 total professional practice experience hours required for program completion. P/NP grading.

History (HST)

HST 101 History of Western Civilization (4 Credits)

Recommended preparation: or to be taken with WR 121.

Provides a framework for understanding the notion of "Western Civilization". Surveys political, social, intellectual and cultural developments in Europe from prehistoric times to the early Medieval period. Covers the ancient civilizations, the establishment of early European civilizations, and the world of the Greeks and Romans. HST 101, HST 102, and HST 103 need not be taken in sequence.

HST 102 Europe: From the Middle Ages to Enlightenment (700-1700 C.E.) (4 Credits)

Provides a framework for understanding the notion of "Western Civilization." Surveys the development of European civilizations from the fall of the Roman Empire, continuing through the Medieval period into the early 1700s. Focuses on the cultural, religious, political, and intellectual changes brought about by the Renaissance, Reformation, Enlightenment and Scientific Revolution, as well as the tensions in European society, which culminated in the French Revolution. The focus will extend from religion and politics to social class, gender, and stereotypes. Need not be taken in sequence.

HST 103 Europe: Revolution and War (1789 - Present) (4 Credits)

Provides a framework for understanding the notion of "Western Civilization." Explores European civilizations from the French Revolution in 1789 to the present day. Focuses on the establishment of nations, the impact of the Industrial Revolution, nationalism and racism, colonization, and the two World Wars. Concludes by questioning the differences between civilization and barbarism. Focuses on the cultural, religious, political, and intellectual changes that happened between the late 18th century and the present, extending from religion and politics to social class, gender, and stereotypes based on nationality or ethnicity. Need not be taken in sequence.

HST 104 Ancient Societies (Pre-history - 500 C.E.) (4 Credits)

Provides a survey of the development of world civilizations and nomadic/pastoral lifestyles. Investigates cultures, politics, belief systems, and lifestyles from prehistoric times through 500 C.E. Covers origins of civilizations in the Middle East, the Mediterranean, Africa, China, and the Indian subcontinent. Also covers the establishment of early European civilizations, the world of the Greeks and Romans, and the Fall of Rome. Uses a comparative perspective in order to understand larger changes provoked by climate change, nomadic incursions, and interactions on the Silk Road.

HST 105 The Expansion of World Religions (500 - 1700) (4 Credits)

Covers the world from 500 C.E. through early 1700s, focusing on the expansion of world religions, including Christianity, Buddhism, Hinduism, and Islam. Focuses on the regions of Asia, Africa, and India, and tells the story of Europe's first worldwide expansion. Looks at history from political, cultural, social, and intellectual angles using primary sources. Need not be taken in sequence.

HST 106 Modern World History: Industrialization, Nations and War (1800-Present) (4 Credits)

Traces the impact of industrialization upon the world. Industrialization propelled colonial expansion by European powers; traces the colonizers and the colonized. The twentieth century endured two world wars, several genocides, and several wars of decolonization; focuses on the cultural and intellectual trends that went along with political turmoil, industrialization, and modern warfare. Need not be taken in sequence.

HST 188 Special Studies: History (1-4 Credits)

Explores topics of current interest in the discipline.

HST 199 Selected Topics: History (1-4 Credits)

This course is in development.

HST 201 Early America - History of the United States (pre-history to 1820) (4 Credits)

Provides an overview of the civilizations of North America and the United States from pre-history to the early 19th century, covering the colonial, revolutionary, and early national periods. Topics include Native American societies, the migration of Europeans and Africans and the impact on native populations, regional Protestant cultures, the emergence of racial slavery, the political origins and constitutional consequences of the American Revolution, politics, culture and war in the first few decades of existence for the United States. Need not be taken in sequence.

HST 202 19th and early 20th Century United States History (1820-1920) (4 Credits)

Provides an overview of United States history from approximately 1820 to 1920, covering the antebellum, civil war, reconstruction, gilded age, and progressive periods. Topics include the Jacksonian era, territorial expansion, slavery and the Old South, the causes and consequences of the Civil War, successes and failures of Reconstruction, 19th-century society and culture, economic transformations, U.S. imperialism, progressivism and the United States entrance into World War I. Need not be taken in sequence.

HST 203 20th and Early 21st Century United States History (1920-present) (4 Credits)

Provides an overview of United States history from approximately 1920 to the present, covering the modern period. Topics include the end of World War I and its consequences, modernity, the Great Depression, World War II, the Cold War, foreign policy determinants & conflicts since WWII, Civil Rights, 1960s-70s social and cultural changes, shifting economic and social role of government, feminism and changing status of women since WWII, immigration, 20th century society and culture, late 20th century politics, terrorism and other recent developments. Need not be taken in sequence.

HST 204 History of the Civil War (4 Credits)

Recommended preparation: or to be taken with WR 121.

Examines problems of the Civil War period including politics, military leadership, troop life and activity, civilians, Native Americans, African-Americans, technology, and unique geographic challenges in order to better understand the impact of the war on the entire nation of this "brothers' war".

HST 206 War and Society in the 20th century, 1914-1945 (4 Credits)

Surveys the cultural, social, political, and military history of the world in the era of the major world wars, 1914 to 1945. Offers a wide-ranging description and analysis of the First World War, interwar period, and Second World War, their global impacts and legacies. Combines military history with political, social, and cultural approaches.

HST 207 History of the American West (4 Credits)

Recommended preparation: or to be taken with WR 121.

Examines Native American tribal life, the emergence of a multicultural frontier, the problems, failures, and success of new settlement patterns in the growing commercial development of the West's unique assets.

HST 218 Native American History (4 Credits)

Recommended preparation: or to be taken with WR 121.

Examines Native American (or First Peoples) lifestyles before and after contact with European settlers. With increasing demands by whites and new immigrants for land, Native Americans struggled for survival implementing various tactics to retain control of their homelands and retain their unique cultures.

HST 225 US Women's History (4 Credits)

Recommended preparation: or to be taken with WR 121.

Survey of the problems and achievements of U.S. women from the 16th to the 20th century, including issues of race, ethnicity and class.

HST 235 Sexuality in 20th Century Europe (4 Credits)

A survey of sexual cultures, politics, and practices in Europe, from the waning of Victorianism to the collapse of Communism and the rise of Islam. This course provides an understanding of how gender and sexuality have changed over the course of the tumultuous twentieth century.

HST 242 History of the Pacific NW (4 Credits)

Recommended preparation: or to be taken with WR 121.

Overview of Native American societies of the Pacific Northwest, patterns of white movement into the area, acquisition of the region by the United States, the long road to statehood, and the impact of national politics on this unique region.

HST 258 Colonial Latin American History (4 Credits)

Recommended preparation: or to be taken with WR 121.

Surveys the history of economic, political and social development in Mexico, Central America and South America from the 15th century through the Wars of Independence. Recommended that HST 258 and HST 259 be taken in sequence, but not required.

HST 259 Modern Latin American History (4 Credits)

Recommended preparation: or to be taken with WR 121.

Surveys Latin American history in Mexico, Central and South America from the Wars of Independence through modern times. Recommended that HST 258 and HST 259 be taken in sequence, but not required.

HST 260 History of Islamic Civilizations (4 Credits)

This course covers political, social, and religious developments in the Islamic world from 600 C.E. to the 1960s. It traces the formation of Islam and the establishment of the Caliphate; the impact of the Mongol Invasions; the Ottoman, Mughal, and Safavid Empires; and the impact of European colonization and 20th Century movements of decolonization.

HST 270 20th Century European History (4 Credits)

Covers the intellectual, political and cultural history of 20th-century European history. Investigates events in a European context, analyzing the historical setting and significance of major occurrences in Europe, such as fascism, world wars, the Holocaust, Soviet communism, and decolonization. Does not need to be taken in sequence.

HST 280 Co-op Work Experience History (1-3 Credits)

Prerequisites: instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

HST 290 East Asian History (4 Credits)

Recommended preparation: or to be taken with WR 121.

Traditional China as the foundation of East Asian civilization. Recommended that HST 290, HST 291 and HST 292 be taken in sequence, but not required.

HST 291 East Asian History (4 Credits)

Recommended preparation: WR 121.

Development of Chinese, Japanese and Korean societies through the late 19th century. Recommended that HST 290, HST 291 and HST 292 be taken in sequence, but not required.

HST 292 East Asian History (4 Credits)

Recommended preparation: WR 121.

Late Imperial China, Japan and Korea and their evolution/revolution into modern nation-states. Recommended that HST 290, HST 291 and HST 292 be taken in sequence, but not required.

HST 298 Independent Study: History (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

HST 299 Selected Topics: History (1-4 Credits)

This course is in development.

Hospitality Management (HM)

HM 101 Introduction to Hospitality (4 Credits)

Provides an overview of the hospitality and tourism industry, its growth and development, industry segments and their distinguishing characteristics, trends and current concerns. Introduction to career opportunities and the employability skills needed to succeed in specific hospitality fields.

HM 130 Hospitality Industry Supervision and Principles of Leadership (4 Credits)

Learn the management/supervision/leadership responsibilities in the typical lodging and/or food service establishment. Stresses leadership, communication, morale, motivation, training, team building, and employee development and retention unique to lodging and food service operations.

HM 150 Procurement, Ingredient Identification and Food Cost Control (3 Credits)

Prerequisites: CUL 090.

Learn the principles of cost control, product yield tests, vendor relations and procurement, and an introduction to ingredient identification and tasting. Exposure to profit and loss statements, and how to track cost as it relates to the flow of food. Place, receive and store food orders, conduct quality assurance on all food items, and execute an electronic end-of-month inventory. Issue course ingredients utilizing supply requisitions. It is also an opportunity for industry vendors to speak with students, conduct ingredient tastings, and provide updates regarding industry practices.

HM 160 Wine and Specialty Beverage Management and Service (3 Credits)

Learn the theoretical and practical information about the organization of a beverage program within the operation of a hospitality business. Included are the legal and moral responsibilities that come with the sale of alcoholic beverages, purchasing and marketing, distillation, brewing, mixology and non-alcoholic beverage service. Emphasis placed on wine and beverage knowledge, pair principles, cost control measures, inventory, and sanitation laws and practices.

HM 188 Special Studies: Hospitality Management (1-4 Credits)

Explores topics of current interest in the discipline.

HM 190 Dining Room Operations (5 Credits)

Exposure to the importance of service, sanitation and appearance in a real-life dining room setting. Learn and practice styles of service including à la carte, reception, banquet, and buffet. Additionally, learn the primary guidelines for service, guest relations, etiquette phone use, and Point Of Sale systems. Learn about different dining room staff positions, proper use of tabletop flatware, china, and glassware, and table set-up. Students will receive the following industry certifications in this course: OLCC Alcohol Service Permit, FDRP Dining Room Associate and Wine Steward Associate Certificates and Allergy Safe certificate.

HM 199 Selected Topics: Hospitality Management (1-4 Credits)

This course is in development.

HM 210 Menu Composition and Analysis (3 Credits)

Prerequisites: CUL 090.

Analyze menu design and effectiveness for a diversity of local restaurant establishments. Learn about standardized recipes and cost cards, understanding income and profit and loss statements, nutritional aspects of menu planning and design, and menu configuration. Analyze and critique industry menus and create menus from the perspective of concept, clarity, cost, price, and efficiency. Conduct an analysis of the sales mix for the Elevation Restaurant as part of a group assignment, evaluate the sales distribution of food and beverage items and give presentations to the Elevation staff as to how to make perspective design and offering improvements.

HM 230 Lodging Management (4 Credits)

Explore current operational practices of lodging operations throughout the world. Study management functions related to front office, housekeeping, marketing, reservations, maintaining customer accounts, laws affecting lodging operations and typical service problems. Go on field trips to learn about different kinds of lodging operations throughout the state.

HM 240 Hospitality Law (4 Credits)

Recommended preparation: WR 121 and HM 101.

Learn about the hotel/guest relationship, innkeeper's lien, crimes against innkeepers, overview of employment rights, policy formulation, duty to protect guests and their belongings, ejection of guests and non-guests, and an introduction to general business law dealing with torts and contracts. Issues concerning travel law will be included.

HM 275 Mixology and Beverage Operations (4 Credits)

Prerequisites: Instructor approval and Oregon Liquor Control Commission (OLCC) Server Permit.

Create a wide variety of classic and everyday mixed drinks in a standard bar setting. Learn about bar glassware and equipment identification, pouring techniques, common cocktail mixing methods, history of distilled spirits, origin and characteristics of various distilled spirit brands, distillation process, bartenders job description and responsibilities, cost control, beverage pricing and responsible alcohol service.

HM 280 Hospitality Management Industry Internship (1-6 Credits)

Prerequisites: instructor approval.

Serves as a supervised work experience within the restaurant management / hospitality industry designed to expand career knowledge and experiential confidence while increasing knowledge, speed, timing, organization and ability to execute industry skills on a repetitive basis. Students will receive a diverse work experience that is designed on a systematic rotation of different stations that related to management functions within a restaurant or hospitality industry venue. Students can complete 100% of the experience in competencies that are relevant to the program curriculum, as it is outlined in the course syllabus and internship agreement. The internship is concluded by a final supervisor evaluation. P/NP grading.

HM 290 Career Success and E-Folio Presentation (2 Credits)

Finalize your Cascade Culinary Institute eFolio including updated, effective résumés, cover letters, reference letters, and photos of prepared dishes, class projects, and certificates earned during study at CCI. Learn about career opportunities, networking, volunteerism, and interview techniques. P/NP grading. Prerequisite: CUL 170 or BAK 170 or instructor approval.

HM 298 Independent Study: Hospitality Management (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Human Development (HD)

HD 100CS College Success (3 Credits)

College Success is designed to give new students a broad overview of college and life success strategies. The course introduces students to college resources, students services and personal behaviors that support successful academic transition, growth and planning. Topics include personal responsibility, self-motivation, time management, academic planning, financial planning, decision making, health and learning styles.

HD 100PM Procrastination & Motivation (1 Credit)

Introduces students to the characteristics of procrastinating behaviors. The class explores reasons for procrastination and how to self-negotiate to eliminate non-productive behaviors. Specific tools to address individual styles of procrastination will be introduced with an emphasis on identifying personal values to motivate one to action and achieve defined goals.

HD 100TT Test Taking (1 Credit)

Designed for students challenged by tests or assessment materials. The class introduces students to the process of effective test taking including preparation for all types of tests and classroom assessment tools, study and relaxation techniques and actual test taking. Students will be introduced to pro-active strategies to address test anxiety, utilize test results for improved performance, and access instructors for guidance and performance.

HD 100VC Values Clarification (1 Credit)

Designed to assist students in defining the motivation behind their college investment and develop a compelling academic plan integrated with their personal life plan. Students will identify their key motivators (values), assess current life choices and roles in the framework of the defined values, develop a plan of action that realistically supports success, choose action steps resulting in the achievement of defined outcomes, and develop strategies to continually reassess and measure academic/personal success.

HD 101 Study Strategies (2 Credits)

Recommended preparation: HD 100CS.

Introduces students to academic success skills essential for effective learning. Topics include: applied learning theory, growth mindset, academic reading, note taking, active learning, organizing study materials, rehearsal and memorization, time management, and test taking. Upon completion, students will be able to apply appropriate, researched-based strategies and techniques to develop an effective study plan for academic success.

HD 102 Leadership Development (2 Credits)

Prerequisites: department approval.

Teaches basic principles of leadership development and staff management in order to prepare student/staff leaders to effectively work in their assigned roles within Student Life and together as a team. Includes topics designed to increase knowledge and skills in the areas of diversity awareness, communication, conflict management, teambuilding, group development, personal awareness, time management and values clarification. As a result of this class, students will become familiar with the roles and expectations of the Student Life staff and be able to professionally represent COCC in their leadership roles on campus.

HD 103 Strategies for Life Management (3 Credits)

Helps college students identify and manage internal factors that contribute to positive mental, physical and emotional health during their college journey. Through exploring proven strategies for self-management, students will be able to analyze, create and implement a personalized set of habits and routines that will support their journey through college and beyond.

HD 109 Effective Job Search Strategies (2 Credits)

Introduces students to an effective, comprehensive approach to the job search process. Students will learn how to develop a job search plan, accurately and effectively complete job applications, write resumes and cover letters accordingly, identify marketable skills, and prepare for job interviews.

HD 110 Career Planning (3 Credits)

Provides tools and resources for making informed career decisions. Covers assessing skills, values, interests, personality, barriers, lifestyle, education and approaches to decision making. Covers how to research career information. Includes educational decision-making in determining a field or program of study, and college or training program.

HD 188 Special Studies: Human Development (1-4 Credits)

Explores topics of current interest in the discipline. P/NP grading.

HD 190 OLI Leadership Skills I (1 Credit)

Prerequisites: instructor approval.

HD 190 is the first in a 3-quarter series. This first quarter lays the foundation for the series by providing high school students with activities that encourage them to: establish personal and team goals; develop effective teamwork skills; explore and articulate their cultural identity; explore aspects of leadership including varying styles, qualities, and cultural implications. Interaction with college mentors prepares students of varying races and ethnicities to embrace post-secondary education as both desirable and attainable. P/NP grading.

HD 191 OLI Leadership Skills II (1 Credit)

Prerequisites: instructor approval.

HD 191 is the second in a three-quarter series. Building upon the foundation of leadership and teamwork considered in a cultural context, high school students explore issues of personal responsibility; strategies for advocacy and organizing; and opportunities for developing intercultural awareness. Interaction with college mentors expands to focus on the college challenges, requirements, tools for success, and the application process. P/NP grading.

HD 192 OLI Leadership Skills III (1 Credit)

Prerequisites: instructor approval.

HD 192 is the third in a 3-quarter series. It provides high school students with opportunities to explore and attain skills in leadership, teamwork, communication and conflict resolution. Interaction with college mentors prepares students of varying races and ethnicities to embrace post-secondary education as a viable option. P/NP grading.

HD 199 Selected Topics: Human Development (1-4 Credits)

This course is in development.

HD 298 Independent Study: Human Development (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study in human development to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Human Services/Addictions Stds (HS)

HS 101 Orientation to Human Services (3 Credits)

Introduces the human services profession. Helps students evaluate their fit within the human services field. Highlights self-understanding and individual compatibility with human services occupations. Emphasizes prevention, early intervention concepts and programs, significance of social justice and multicultural equity.

HS 161 Ethics for Human Services (4 Credits)

Prerequisites: HS 101; Math 31 or higher; and choose one of WR 121, WR 122, or WR 227.

Examines the legal and ethical issues facing human service practitioners. Explores how to set and maintain professional boundaries. Evaluates the roles, functions, and legal/ethical responsibilities of human services workers, including the process of ethical decision making and awareness of the moral and legal complexities in the field of human services.

HS 162 Effective Helping Skills I (4 Credits)

Prerequisites: HS 101; Math 31 or higher; and choose one of WR 121, WR 122, or WR 227.

Focus is on skills of interacting with people both verbally and non-verbally, as well as the ethical and cultural underpinnings to helping and interviewing. Emphasis placed on understanding and application of the principles of interviewing. Significant concentration on practicing skills with peers.

HS 180 Addictions, HIV and other Infectious Diseases (2 Credits)

Reviews the theory and technique for effectively addressing issues of substance use and addictive behaviors for the at-risk person. Considers issues of risk of exposure for the substance abusing or other at risk individual. Physiology, epidemiology, risk assessment, legal/ethical issues and societal implications of HIV and other pathogens will be presented.

HS 188 Special Studies: Human Services (1-4 Credits)

Explores topics of current interest in the discipline.

HS 199 Selected Topics: Human Development (1-4 Credits)

This course is in development.

HS 200 Introduction to Addictions (3 Credits)

Recommended preparation: or to be taken with WR 121.

Provides a broad overview of the field of addictions. Describes the etiology of addiction, the signs and symptoms of addiction, the continuum of addictive behaviors, treatment, prevention, recovery and relapse.

HS 201 Families and Addictions (3 Credits)

Recommended preparation: WR 121.

Examines how substance use disorders impact family systems. Topics will include etiology of substance use disorders within the family, impact upon members of the system and its dynamics, intervention and treatment approaches, and long-term recovery issues. Strategies and behaviors that family members, couples, and significant others must adopt in order to assist in sustaining recovery and healthy relationships will be outlined.

HS 205 Youth and Addictions (3 Credits)

Recommended preparation: WR 121.

Introduces child/adolescent biopsychosocial development and evaluates the effects of substance abuse on that development. Covers the signs of substance abuse and addiction; describes assessment, treatment, and prevention philosophies, protocols and models; describes recovery and covers relapse prevention and the signs of relapse in young people.

HS 206 Group Counseling Skills for Human Services (4 Credits)

Recommended preparation: WR 121.

Provides an introduction to social and interpersonal influences on behavior, group dynamics, developmental stages of a group, and an overview of theoretical approaches to group counseling. Emphasis is on developing group leadership skills.

HS 208 Multicultural Issues in Human Services (4 Credits)

Prerequisites: HS 101; MTH 31 or higher; and choose one of WR 121, WR 122, or WR 227.

Presents the foundations for developing the skills and sensitivities needed to practice as culturally alert counselors. Explore issues and trends related to culture, ethnicity, race, nationality, age, gender, sexual orientation, mental and physical abilities/disabilities, education, religious and spiritual values, immigrant dynamics, and socioeconomic factors which influence counseling relationships, process, and treatment outcomes. Encourages students to engage in self-exploration around their own cultural identities and their responses to issues of diversity including bias, oppression, discrimination and the role of privilege.

HS 209 Introduction to Psychological Trauma: Theory and Practice (4 Credits)

Recommended preparation: WR 121.

Introduction to types, history, and impact of trauma on individuals, family, and community. Explores the impact on those working with trauma survivors and inadvertent re-traumatization of victims that occurs by the social service system. It introduces crisis management strategies in the context of a trauma informed practice. It provides a framework for crisis recognition/response and intervention for people experiencing trauma symptoms. Students will analyze as well as practice using a trauma informed framework designed for multiple settings. Utilizes trauma informed and wellness informed approaches.

HS 210 Co-Occurring Disorders (4 Credits)

Recommended preparation: WR 121.

Recognize and differentiate symptoms and treatment of substance related and addictive disorders and mental health issues. Develop knowledge, skills, and theoretical frameworks applicable to co-occurring disorders. Understand best practice models and integrated treatment for co-occurring disorders.

HS 224 Psychopharmacology (4 Credits)

This course covers the knowledge required to pass the pharmacology section of the Certified Alcohol and Drug Counselor (CADC) 1 exam. It includes the ways drugs are used, controlled and valued culturally; how the human body functions normally, including knowledge of cells, nerve cells, and basic bodily systems (i.e., respiratory, circulatory, endocrine and digestive; how drugs are absorbed, distributed, metabolized and excreted and how drugs affect these systems).

HS 250 Process Addictions (4 Credits)

Recommended preparation: or to be taken with WR 121.

Provides an overview of the history, theory, and current research perspectives in the etiology, assessment, diagnosis and treatment of behavioral/process addictions. Specific attention paid to examining similarities and differences between chemical/substance addictions and behavioral/process addictions.

HS 260 Counseling Theories (4 Credits)

Recommended preparation: WR 121.

Provides an overview of theoretical approaches to counseling and psychotherapy, including fundamental concepts, assessment, client and counselor roles, cultural relevance, and intervention strategies/techniques.

HS 262 Effective Helping Skills II (4 Credits)

Recommended preparation: HS 162 or instructor approval.

Provides central theoretical and empirical tenets of Motivational Interviewing (MI), as well as practice of skills to deliver the intervention to a wide range of clients in diverse settings. Students will learn and practice both the spirit and techniques of motivational interviewing.

HS 263 Counseling the Chemically Dependent Client (3 Credits)**Recommended preparation:** WR 121.

Provides an integrated approach to screening, assessing and treatment planning for individuals with substance use disorders. Culturally and ethically appropriate relationship building, assessment and relapse prevention approaches presented.

HS 266 Case Management for the Chemically Dependent Client (4 Credits)**Recommended preparation:** WR 121.

Explores ASAM Criteria (ASAM: Treatment Criteria for Addictive, Substance-Related, and Co-Occurring Conditions). Develops skills associated with effective case management in an addictions treatment / social services setting. Practices professional writing and case documentation skills.

HS 280 Co-op Work Experience Human Services (1-4 Credits)**Prerequisites:** Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

HS 290 Introduction to Practicum in Human Services (1 Credit)

Preparation for practicum. Should be taken at least one term before beginning practicum experience. Focus on researching internship sites; developing a résumé; practicing job search & job interviewing techniques.

HS 291 Practicum in Human Services I (4 Credits)

Practicum is closely supervised opportunity to implement professional skills, knowledge and attitudes presented in prior Human Services coursework. Provides experience working on site in a human service agency to integrate field and classroom experience. Students also attend a weekly seminar and meet individually with both the practicum instructor and the site supervisor throughout the quarter. Students are required to have a placement confirmed prior to the term they decide to begin. Addiction Studies students must have completed HS 161, HS 162, HS 206 and HS 290 prior to enrolling in this class. NOTE: 1,000 hours supervised experience are required before taking the Oregon Certified Alcohol and Drug Counselor I exam.

HS 292 Practicum in Human Services II (4 Credits)

This second-term practicum is more comprehensive and provides an opportunity to develop more advanced skills. Addiction Studies students must have completed HS 161, HS 162, HS 206, and HS 291 prior to enrolling in this class. With instructor approval only students may co-enroll in HS 291. NOTE: 1,000 hours supervised experience are required before taking the Oregon Certified Alcohol and Drug Counselor I exam.

HS 293 Practicum in Human Service III (4 Credits)

This third-term practicum is more comprehensive and provides an opportunity to develop more advanced skills. Addiction Studies students must have completed HS 161, HS 162, HS 206, HS 291 and HS 292 prior to enrolling in this class. With instructor approval only students may co-enroll in HS 292. NOTE: 1,000 hours supervised experience are required before taking the Oregon Certified Alcohol and Drug Counselor I exam. Course may be repeated for credit.

HS 298 Independent Study: Human Services (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

HS 299 Selected Topics: Human Services (1-4 Credits)

This course is in development.

Humanities (HUM)

HUM 105 Italian Life and Culture (2 Credits)

Offered as a required course in the Florence Quarter study abroad program. The student will gain a broad overview of contemporary Italian society by examining cultural traditions and values. Besides topical lectures by native guest lecturers, the course engages students in experiential learning through field trips to such historic and cultural sites as Etruscan Fiesole, the Uffizi Gallery, the Accademia Museum and the Medici Pitti Palace. (Elective only: Does not satisfy general education requirement)

HUM 106 British Life and Culture (3 Credits)

Offered as a required course in the London Quarter study abroad program. The student will gain a broad overview of contemporary British culture and society by examining traditions and institutions that impact the British way of life in the twenty-first century. Besides topical presentations by native guest lecturers, the course engages students in experiential learning through field trips to such historic and cultural sites as the Museum of London, the National Gallery, Shakespeare's Globe Theatre and the Houses of Parliament.

HUM 107 Spanish Life and Culture (3 Credits)

Offered as a required course in the Barcelona Quarter study abroad program. The student will gain a broad overview of contemporary Spanish society by examining cultural traditions and values. Besides topical lectures by native guest lecturers, the course engages students in experiential learning through field trips to such historic and cultural sites as Gaudi's Barcelona, the Gothic quarter, and the Dali museum. (Elective credit only: Does not satisfy general education requirements)

HUM 188 Special Studies: Humanities (1-4 Credits)

Explores topics of current interest in the discipline.

HUM 199 Selected Topics: Humanities (1-4 Credits)

This course is in development.

HUM 210 Culture And Literature Of Asia (4 Credits)**Recommended preparation:** WR 121.

Introductory study of representative literary texts, films and related language arts, in English or in translation, of Asian regions and countries, such as China, India and Japan, examined in the context of their histories and cultural traditions.

HUM 211 Culture and Literature of Africa (4 Credits)**Recommended preparation:** WR 121.

Introductory study of representative oral arts, literature, film and related creative arts, in English or in translation, of sub-Saharan African peoples, examined in context of their histories and cultural traditions.

HUM 212 Culture and Literature of the Americas (4 Credits)**Recommended preparation:** WR 121.

Interdisciplinary study of representative literary and historical texts (and other media) from Hispanic and Afro-Caribbean cultures of traditional, colonial and post-colonial origin.

HUM 213 Culture and Literature of Middle East (4 Credits)**Recommended preparation:** WR 121.

Introductory study of representative Arabic, Persian and Hebrew literary texts in translation, placed in the context of films and other cultural media of the Middle East and Northern Africa.

HUM 230 Immigrant Experience American Literature (4 Credits)**Recommended preparation:** WR 121.

Introductory survey of the immigrant experience in the United States as reflected in literature, autobiography and film.

HUM 240 Native American Literature and Culture (4 Credits)**Recommended preparation:** WR 121.

Introduction to traditional oral and contemporary Native American texts with an emphasis on cultural contexts and continuity.

HUM 255 Cultural Diversity in Contemporary American Literature (4 Credits)**Recommended preparation:** WR 121.

This course examines cultural diversity as recorded in American literature since 1965, emphasizing literary and cultural values in poetry, fiction, and drama. Readings focus on writers' views of life within historically marginalized groups based on ethnicity, gender, and sexual identity.

HUM 256 Introduction to African-American Literature (4 Credits)**Recommended preparation:** WR 121.

Survey of African-American literature (selected fiction, autobiography, poetry and drama of the 19th and 20th centuries), placed in the context of major African-American achievements in the visual arts, music and film.

HUM 261 Popular Culture: Science Fiction (4 Credits)**Recommended preparation:** WR 121.

Focuses on the significance of science, technology and on such topics as the idea of the future and the "limits of the human" as revealed in popular culture through genres such as fiction, film, music, comics, anime and manga and advertising.

HUM 262 Popular Culture: The American Western (4 Credits)**Recommended preparation:** WR 121.

Historical study of the Western story and the cowboy hero in American culture through genres such as fiction, film, song, art and advertising.

HUM 263 Popular Culture: Detective Stories (4 Credits)**Recommended preparation:** WR 121.

Historical study of crime stories and the detective figure as revealed in popular culture through genres such as fiction, film, television, comics and journalism.

HUM 264 Popular Culture: Spy Thriller (4 Credits)**Recommended preparation:** WR 121.

Thematic study of espionage stories and the spy figure, as revealed in popular culture through genres such as fiction, film, advertising and journalism.

HUM 265 Popular Culture: Noir Film and Fiction (4 Credits)**Recommended preparation:** WR 121.

Historical, thematic and technical study of film noir and related fiction as a subversive force in popular culture.

HUM 266 Popular Culture: Travel Literature (4 Credits)**Recommended preparation:** WR 121.

Cross-cultural study of travel as exploration, personal narrative, anthropological inquiry and social criticism of places and peoples represented as "other" or "exotic." Examines popular culture as depicted in genres such as travel memoirs, journalism, advertising, educational videos and feature films that critique touristic assumptions.

HUM 268 Digital Games Culture (4 Credits)**Recommended preparation:** WR 121.

This course will approach digital games through an academic socio-cultural lens, identifying key elements of evolving game studies theory, which considers digital game design, digital games play and digital games as a cultural practice that, in addition to play/entertainment, offers a new and developing medium for story-telling and learning.

HUM 269 Popular Culture Graphic Novels (4 Credits)**Recommended preparation:** WR 121.

Examines the role of comic books and graphic novels as cultural and artistic creations in popular culture and literature. Identifies a vocabulary for discussing, explaining, writing, and analyzing comics. Explores relevant social and historical events in the development of comics. May include comics to film comparisons or principal author studies.

HUM 280 Co-op Work Experience Humanities (1-4 Credits)**Prerequisites:** Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

HUM 298 Independent Study: Humanities (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

HUM 299 Selected Topics: Humanities (1-4 Credits)

This course is in development.

Italian (IT)

IT 101 First Year Italian I (4 Credits)

Designed for beginners. Emphasizes active communication in Italian. Develops students' basic skills in listening, reading, writing, and speaking in Italian. Successful completion of this sequence prepares students for entry into second-year level at COCC or any other university. Should be taken in sequence. Students who have previously learned Italian should contact the instructor for advice on which class to take. This class is intended for students who have no knowledge of Italian.

IT 102 First Year Italian II (4 Credits)**Recommended preparation:** IT 101 or one year of high school Italian; students who have previously learned Italian should contact the instructor for advice on which class to take.

Continues the development of reading, writing, listening and speaking skills. Students are expected to have completed IT 101 material, and are encouraged to review Italian 101 concepts and vocabulary prior to class. Course should be taken in sequence.

IT 103 First Year Italian III (4 Credits)**Recommended preparation:** IT 102 or two years of high school Italian; students who have previously learned Italian should contact the instructor for advice on which class to take.

Continues the development of reading, writing, listening and speaking skills. Course should be taken in sequence.

IT 199 Selected Topics: Italian (1-4 Credits)

This course is in development.

IT 201 Second Year Italian I (4 Credits)**Recommended preparation:** IT 103; students who have previously learned Italian should contact the instructor for advice on which class to take.

Continues the work of First Year Italian, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Culture, regionalisms and history incorporated; course taught mostly in Italian.

IT 202 Second Year Italian II (4 Credits)

Recommended preparation: IT 201; students who have previously learned Italian should contact the instructor for advice on which class to take. Continues the work of Italian 201, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Culture, regionalisms and history incorporated; course taught mostly in Italian.

IT 203 Second Year Italian III (4 Credits)

Recommended preparation: IT 202; students who have previously learned Italian should contact the instructor for advice on which class to take. Continues the work of Italian 202, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Culture, regionalisms and history incorporated; course taught mostly in Italian.

IT 298 Independent Study: Italian (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

IT 299 Selected Topics: Italian (1-4 Credits)

This course is in development.

Journalism (J)

J 188 Special Studies: Journalism (1-4 Credits)

Explores topics of current interest in the discipline.

J 199 Selected Topics: Journalism (1-4 Credits)

This course is in development.

J 215 Publications Lab (1 Credit)

Practical application of communications instruction through work on the student newspaper. Students are involved in all areas of production including reporting, photojournalism, advertising, production and distribution. P/NP grading. Recommended preparation or recommended to be taken with: J 216.

J 216 News Reporting and Writing I (3 Credits)

Recommended preparation: WR 121.

Introduces the basic process of journalistic reporting and writing used in all forms of news media. Emphasis is placed on organizing facts, observations, research, and background, in an effective narrative built on ethical, responsible journalistic practices. Students will develop a news judgment and distinguish among news, analysis and opinion.

J 217 News Reporting and Writing II (3 Credits)

Recommended preparation: J 216.

A continuation of J 216 with emphasis placed on building on basic skills to report and write more complex stories, develop investigative stories, write editorials, and achieve a broader grasp of communication law.

J 280 Journalism Practicum (1-3 Credits)

Community work experience in journalism (may include internships in local media). P/NP grading.

J 298 Independent Study: Journalism (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

J 299 Selected Topics: Journalism (1-4 Credits)

This course is in development.

Kiksht (KIK)

KIK 101 First Year Kiksht Native Language I (4 Credits)

Beginning Kiksht introduces students to the Kiksht language of the Wasco people. The first term will introduce students to alphabet characters, sounds, and simple phrases. One of the techniques used to learn the language will be Total Physical Response © (TPR) which is an adopted method used by indigenous language teachers to hear and respond to verbal commands in the target language.

KIK 102 First Year Kiksht Native Language II (4 Credits)

Beginning Kiksht introduces students to the Kiksht language of the Wasco people. The second term will build on student knowledge of alphabet characters, sounds, and phrases. One of the techniques used to learn the language will be Total Physical Response © (TPR) which is an adopted method used by indigenous language teachers to hear and respond to verbal commands in the target language.

KIK 103 First Year Kiksht Native Language III (4 Credits)

Beginning Kiksht introduces students to the Kiksht language of the Wasco people. The third term will focus on developing student ability to communicate meaningful phrases in predictable and culturally appropriate settings with particular attention to introducing students to verb affixes indicating aspect and tense. One of the techniques used to learn the language will be Total Physical Response © (TPR) which is an adopted method used by indigenous language teachers to hear and respond to verbal commands in the target language.

KIK 201 Second Year Kiksht Native Language I (4 Credits)

Develops communication skills in Kiksht, the language of the Wasco people. First course of a three-term sequence of study of the American Indian language, Kiksht, at the second-year college level. Focuses on improving pronunciation and developing conversational skills.

KIK 202 Second Year Kiksht Native Language II (4 Credits)

Develops communication skills in Kiksht, the language of the Wasco people. Second course of a three-term sequence of study of the American Indian language, Kiksht, at the second-year college level. Focuses on developing sentence skills to engage in short conversations.

KIK 203 Second Year Kiksht Native Language III (4 Credits)

Develops communication skills in Kiksht, the language of the Wasco people. Third course of a three-term sequence of study of the American Indian language, Kiksht, at the second-year college level. Focuses on conversational skills.

KIK 298 Independent Study: Kiksht (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Library & Information Skills (LIB)

LIB 100 Intro to Finding Information (1 Credit)

Students will learn how to find, evaluate and responsibly use Web-based and other information resources for college level research. This course is for those who want an introduction to information resources and research skills.

LIB 199 Selected Topics: Library and Information Skills (1-4 Credits)

This course is in development.

Manufacturing (MFG)

MFG 100 MFG Orientation (1 Credit)

Provides new MATC students with the required information before participating in self-directed learning at MATC. Includes understanding MATC procedures, safety, manufacturing careers, introduction to lean manufacturing and computer login procedures. P/NP grading.

MFG 101 Blueprint Reading (3 Credits)

Prerequisites with concurrency: MTH 020 or higher or minimum placement into MTH 060/085.

Provides student with training to read and interpret various types of industrial blueprints used in manufacturing/fabrication. Includes interpretation of line types, geometric tolerancing and dimensioning, surface finish callouts, auxiliary views and orthographic projection.

MFG 102 Blueprint Reading Sheet Metal (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Provides student with training to read and interpret various types of sheet metal blueprints. Covers line and print development, sheet metal layout, pattern drafting and bend allowances, maximum utilization of material, identification of sheet metal types and grades, correct use of sheet metal for the application and sheet metal bend and shear strengths.

MFG 103 Welding Technology I (4 Credits)

Recommended preparation: MFG 100.

First course in a three-course sequence focused on introductory level skills used in structural plate welding in accordance to AWS D1.1 Structural Steel Welding code. Introduces basic welding processes, safety, nomenclature, and equipment operation for introduction to perform 1F and 2F weldments using shielded metal arc welding (SMAW) welding and gas metal arc welding (GMAW) on mild steel.

MFG 105 Welding Technology II (4 Credits)

Prerequisites: MFG 103.

Recommended preparation: MFG 100.

Second course in a three-course sequence focused on introductory level skills used in structural plate welding in accordance to AWS D1.1 Structural Steel Welding code. Introduces intermediate welding processes, safety, nomenclature, and equipment operation for the advancement of more difficult weldments in the 3F and 4F position using shielded metal arc welding (SMAW) and gas metal arc welding (GMAW) on mild steel.

MFG 107 Welding Technology III (4 Credits)

Prerequisites: instructor approval.

Prerequisites with concurrency: MFG 105.

Final course in a three-course sequence focused on introductory level skills used in structural plate welding in accordance to AWS D1.1 Structural Steel Welding code. Advancing to more difficult weld joints such as 1G and 2G V-groove butt joint on plate using the SMAW and GMAW process and destructive bend test. Perform outside corner joints in all positions. Introduces the GTAW process in 1F and 2F positions on mild steel and aluminum.

MFG 109 Lean Practices (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Lean practices are methods used to eliminate waste in any process to which they are applied. This course provides students with an understanding of lean practices commonly used in industry including: value stream mapping, standardized work, 5S, structured problem solving, visual factory, Kanban/pull systems other lean tools.

MFG 110 Manufacturing Processes I (4 Credits)

Recommended preparation: MFG 100.

Introduces material removal operations emphasizing safe operational practices. Includes basic part layout, hand tools, drill press, bandsaw, manual milling, and manual lathe processes with an emphasis on production speeds and feeds.

MFG 112 Manufacturing Processes II (3 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Continued student proficiency development in machining operation including speed and feed calculations, milling machine and lathe practice.

MFG 114 Manufacturing Processes III (3 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Final course in the basic manufacturing processes series. Continued student proficiency development in the operation of basic machine tools, introduction to computer numerical control programming and operations, and a capstone project to demonstrate machining proficiency.

MFG 115 Design Processes I (4 Credits)

Recommended preparation: CIS 070 or CIS 120.

Introduces solid modeling software (CAD) used in design and manufacturing. Includes practical applications using the software to capture design intent through part development and to create assemblies using these parts. Adheres to engineering and manufacturing standards and formats.

MFG 116 Manufacturing Electrical Systems (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Studies electrical circuitry and components used in manufacturing applications. Includes introductory AC/DC electrical circuit construction and Ohm's Law.

MFG 118 Fluid Power Systems I (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Introductory fluid power class. Includes single/double-acting cylinder operations, directional control valve operations, fluid power symbols and the creating of operational hydraulic and pneumatic circuits.

MFG 119 Manufacturing Design and Drafting Techniques (4 Credits)

Recommended preparation: CIS 070 or CIS 120.

Introduces solid modeling software (CAD) used in design and manufacturing. Includes practical applications using the software to capture design intent through part development and to create assemblies using these parts. Adheres to engineering and manufacturing standards and formats.

MFG 119M Mechanical Drawing Techniques (4 Credits)

Introduces Mechanical Drawing Techniques used in design and manufacturing. Includes practical applications using drafting techniques to capture design intent through part development and to create assemblies using these parts. Adheres to engineering and manufacturing standards and formats.

MFG 133 Quality Assurance (3 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

An introductory quality control course that includes precision and semi-precision measuring, digital measuring tool operations, measuring practice using digital gauges, micrometers, depth gauge and height gauge measuring tools. The course also includes an introduction to statistical process control and pneumatic gauging topics.

MFG 160 Materials Engineering (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

A continuation of Quality Assurance topics focused on materials. Includes shear, hardness, tensile and compression testing and other material analyzing techniques.

MFG 188 Special Studies: Manufacturing Technology (1-4 Credits)

Explores topics of current interest in the discipline.

MFG 199 Selected Topics: Manufacturing (1-3 Credits)**Prerequisites:** instructor approval.

This course is in development.

MFG 201 Bench Work (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Using hand tools, files, hacksaw, chisels and coated abrasives. Includes shop safety, hand tapping, thread measurement, arbor press operations, micrometer and vernier caliper reading.

MFG 202 Metals Preparation (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Bandsaw, cold saw auto stop operations, ironworker hole punching and abrasive power tool operations. Includes safety, profile cutting, shearing, material identification, blade welding, blade selection and offhand grinding operations.

MFG 203 Layout (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Semi-precision and precision layout practices. Includes height gauge operations, surface plate set-ups, bolt circle layout, and the use of hand and power tools to produce accurate workpiece profiles.

MFG 205 Drill Press (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Drill press operations training. Includes safety, machine nomenclature, measuring and sharpening drills, machine set-up, cutting tool selection, magnetic based drill, electric drill motor and radial arm drill operations.

MFG 206 Surface Grinding I (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Horizontal grinding machine operations. Includes machine nomenclature, chucking methods, wheel dressing, workpiece setups and cutting operations.

MFG 210 Vertical Milling (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Vertical milling machine operations. Includes safety, work holding, table set-ups, power feeds, digital read-out operation, cutter selections, climb and conventional cutting and spindle speed changes.

MFG 211 CNC Mill Operator (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Computer numerical control machining center operator training. Includes safety, machine maintenance, tool offsets, controller editing and operations, cutting tool set-ups, carbide insert and holders and part running.

MFG 213 CNC Turning Operator (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Computer numerical control turning center operator training. Includes safety, machine maintenance, coordinate systems, tool length offsets, controller editing and operations, overrides, tool set-ups and loading, carbide insert and holder selections, tool vectors and part running.

MFG 214 Lathe Operator I (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Introductory manual lathe operations training. Includes safety, machine maintenance, quick-change tooling, chuck set-ups, compound taper cutting, general turning and drilling operations.

MFG 216 Lathe Operator II (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Advanced lathe operations training. Four-jaw chucking, taper turning, carbide cutting tool selections, boring, single point threading, thread measurement and other precision turning operations.

MFG 230 CNC Programming Mill (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Programming computer numerical control mills and machining centers. Includes G & M programming, canned cycles, subroutines, profile milling, cutter diameter compensation, part proofing.

MFG 232 CNC Programming Lathe (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

Programming computer numerical control turning center. Includes G & M manual programming, canned cycles, subroutines, profile shaping, TNR, tool vectors, cutter selection and part proofing.

MFG 234 CAD/CAM Mill (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

CAD/CAM operations related to programming a computer numerical control machining center. Includes drilling 2 1/2 D and 3-D milling operations using wire frame and solids model geometry. A student considering this course should be familiar with CNC milling machine operations and G & M programming.

MFG 236 CAD/CAM Lathe (2 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** MFG 100.

CAD/CAM operations related to programming computer numerical control turning centers. Includes drilling, grooving and threading operations using wire frame and solids model geometry. A student considering this course should be familiar with CNC lathe operations and G & M programming.

MFG 238 Optical Comparator (1 Credit)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Optical comparator operations. Includes operation of H-14 metrology controller, stage set-up and fixturing, inspection of rectangular and round workpieces.

MFG 239 Coordinate Measurement Machine (1 Credit)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Coordinate measuring machine operations. Includes establishment of part coordinate systems, touch probe calibration procedures and measuring workpiece geometry.

MFG 241 Electric Motor Control (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Peripheral devices used to control motors. Includes study of components used to control industrial motors and automated systems.

MFG 242 Programmable Logic Controllers I (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Introduction to programmable logic controller programming. Includes ladder logic, sealing circuits and event sequencing.

MFG 243 Industrial Sensors (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Sensor applications. Includes study of mechanical, electronic and proximity sensor applications found in a typical manufacturing environment.

MFG 244 Programmable Logic Controllers II (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Continuation of Programmable Logic Controller training. Includes advanced programming problems, discrete IO interfacing, PLC timers and counters.

MFG 245 Electrical Control/Fluid Power (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Electrical control of pneumatic and hydraulic circuits. Includes pressure valves, sensors, interfacing with PLC, control sequencing, timing and circuit design.

MFG 246 Mechanical Troubleshooting (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

This course is an overview of mechanical drive systems and safety, key fasteners, power transmission systems, lubrication concepts, plain bearings, ball bearings, roller bearings, and gaskets and seals.

MFG 250 Additive Manufacturing (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100 and CIS135S1.

This course provides students with a basic understanding of Additive Manufacturing concepts including various processes used in rapid prototyping. Students will be able to design and create sample parts using a 3-D printing process.

MFG 254 Manufacturing Jigs and Fixtures (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Jig and fixture design practices. Includes clamps, locators, degrees of freedom, radial and conical locators, templates, automated clamping and modular fixturing.

MFG 262 Welding Inspection/Quality Control (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Studies quality control issues related to weld joint inspection. Includes student exposure to visual and nondestructive inspection techniques that are utilized by welders and inspectors to interpret and monitor AWS quality standards.

MFG 263A Welding Inspection I (3 Credits)

Prerequisites: MFG 271; MFG 272; MFG 281; and MFG 282.

First of two courses based on gaining the knowledge to be prepared for the Certified Welding Inspector (CWI) Exam, which is administered by the American Welding Society once the qualification criteria has been achieved. This course focuses on the CWI part A (Body of Knowledge) exam; it is a comprehensive overview of the fundamental concepts and principles every CWI should know.

MFG 263B Welding Inspection II (3 Credits)

Prerequisites: MFG 263A.

Second and final of two courses based on gaining the knowledge to be prepared for the Certified Welding Inspector (CWI) Exam, which is administered by the American Welding Society once the qualification criteria has been achieved. This course is focused on the CWI part B (Practical: hands-on examination), and PART C (Code Book Applications) exam. This course develops student skill with weld inspection procedures, welding codes and standards, destructive and non-destructive inspection techniques.

MFG 264 Automated Cutting (3 Credits)

Prerequisites: MFG 119 or MFG 119M.

Utilize CAD tools to lay out and generate code for efficiently cutting material using a CNC plasma table or other 2D CNC tool. Includes design, tool set-up, tool maintenance, code editing, and safe operation of tools to create a final product.

MFG 266 Manufacturing Cost Estimation (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Cost estimation techniques used in the analysis and planning of manufacturing projects. Includes software estimates, manufacturing costs, standard vs. actual costs, fixturing and welding-related topics.

MFG 267 Oxygen-Fuel and Plasma Cutting (3 Credits)

Prerequisites: MFG 100 and (MTH 020 or higher or minimum placement into MTH 060/MTH 085).

Gas torch, air carbon arc and plasma gas cutting. Includes torch set-up and maintenance, flame setting, diagnostics, track torch operations, circle cutting and carbon arc scarfing practice.

MFG 271 SMAW I (3 Credits)

Prerequisites: MFG 107.

Includes SMAW butt welding of mild steel plate in all positions with and without backing as well as various configurations and progressions.

MFG 272 GMAW I (3 Credits)

Prerequisites: MFG 107.

Includes GMAW butt welding of mild steel plate in all positions with and without backing as well as various configurations and progressions.

MFG 273 SMAW II (3 Credits)

Prerequisites: MFG 271.

Includes SMAW welding complete joint penetration welds on 2" and 6" pipe in 2G and 5G positions.

MFG 274 GMAW II (3 Credits)

Prerequisites: MFG 272.

Includes GMAW welding complete joint penetration welds on 2" and 6" pipe in 2G and 5G positions.

MFG 275 SMAW III (3 Credits)

Prerequisites: MFG 273.

Includes SMAW welding complete joint penetration welds of 2" and 6" pipe in 6G, qualification test practice, and construction of saddle tees.

MFG 276 GMAW III (3 Credits)

Prerequisites: MFG 274.

Includes GMAW welding complete joint penetration welds of 2" and 6" pipe in 6G, qualification test practice, and construction of saddle tees.

MFG 280 Co-op Work Experience Manufacturing (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: MFG 100.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

MFG 281 GTAW I (3 Credits)

Prerequisites: MFG 107.

Includes GTAW butt joint weldments with mild steel and stainless steel sheet along with mild steel and aluminum plate in various positions.

MFG 282 FCAW I (3 Credits)

Prerequisites: MFG 107.

Includes FCAW butt welding of mild steel plate in all positions with and without backing as well as various configurations and progressions.

MFG 283 GTAW II (3 Credits)

Prerequisites: MFG 281.

GTAW welding complete joint penetration welds on 2" and 6" pipe in 2G and 5G positions.

MFG 284 FCAW II (3 Credits)

Prerequisites: MFG 282.

Includes FCAW welding complete joint penetration welds on 2" and 6" pipe in 2G and 5G positions.

MFG 285 GTAW III (3 Credits)

Prerequisites: MFG 283.

Recommended preparation: MFG 100.

GTAW welding complete joint penetration welds of 2" and 6" pipe in 6G position.

MFG 286 FCAW III (3 Credits)

Prerequisites: MFG 284.

Includes FCAW welding complete joint penetration welds of 2" and 6" pipe in 6G, qualification test practice, and construction of saddle tees.

MFG 287 CNC Press Brake and Shearing (3 Credits)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Covers safety and operation of equipment utilized in parting, forming and fabricating sheet metal.

MFG 288 Industrial Fabrication (3 Credits)

Prerequisites with concurrency: MFG 273; MFG 274; MFG 283; and MFG 284.

Includes metal fabrication focusing on blueprint interpretation, proper fit techniques, length and width allowances, welding processes, utilization of jigs and fixtures, and performance evaluation.

MFG 289 Material Handling-Fork Lift Safety (1 Credit)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Focuses on identifying and ordering sheet metal materials plus the safe storage and handling of those materials. Includes OSHA safety regulations and fork lift operation and safety.

MFG 290 Certification Test Preparation AWS I (1 Credit)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Testing materials preparation for Level One Weld Certification Testing. Includes materials test sample preparation, set-up, testing, grinding samples and evaluation. P/NP grading.

MFG 291 Certification Test Preparation NIMS I (1 Credit)

Prerequisites: instructor approval.

Recommended preparation: MFG 100.

Testing materials preparation for Level One NIMS Certification Testing. Includes materials test workpiece preparation, set-up, testing and evaluation activities. P/NP grading.

MFG 298 Independent Study: Manufacturing (1-4 Credits)

Prerequisites: Instructor approval.

Recommended Preparation: Prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Massage Therapy (LMT)

LMT 101 Intro Massage Therapy Career (1 Credit)

Explore the education and academic requirements of the LMT program and the requirements for massage therapy licensure in Oregon.

LMT 113 Kinesiology for Massage Therapy I (4 Credits)

Prerequisites: WR 065 or higher or minimum placement into WR 121; MTH 010 or higher or minimum placement into MTH 020.

Corequisites: LMT 130, LMT 155, LMT 170.

Recommended preparation: BI 121 or BI 122 or BI 231.

Provides an introduction and overview of the basic principles of kinesiology. Emphasizes anatomical terminology, skeletal anatomy and function, the study of joints and their functions, and palpation skills. This is the first in a three-part series of kinesiology for massage therapists.

LMT 118 Kinesiology for Massage Therapy II (4 Credits)

Prerequisites: LMT 113.

Continues study of the muscles that will include attachments, actions, nerves, joints and the boney landmarks. Second course in a three-part series of kinesiology for massage therapist.

LMT 124 Kinesiology for Massage Therapy III (4 Credits)

Prerequisites: LMT 118.

Continues a study of muscles that will include attachments, actions, nerves, joints, and the boney landmarks; emphasizes palpation skills. Third course in a three-part series of kinesiology for massage therapists.

LMT 130 Massage Fundamentals (2 Credits)

Prerequisites: WR 065 or higher or minimum placement into WR 121; MTH 010 or higher or minimum placement into MTH 020.

Corequisites: LMT 113, LMT 155, LMT 170.

Recommended preparation: BI 121 or BI 122 or BI 231.

Introduction to the history of massage, self-care, proper body mechanics, basic medical terminology, universal sanitation precautions, draping, communication, and the effects of Swedish massage strokes.

LMT 135 Managing a Massage Practice (3 Credits)

Managing a Massage Practice will explore business structures, legal, and tax documentation requirements for a massage therapy practice. Students will formulate a marketing plan including advertising, market analysis, and professional goals.

LMT 140 Pathology for Massage Therapy (4 Credits)

Prerequisites: BI 121 or BI 231.

The effects of massage therapy on the body systems will be discussed including the indications and contraindications to massage. The basic mechanisms of the disease process and medical terminology will be reviewed.

LMT 145 Massage I (5 Credits)

Prerequisites: LMT 130 and LMT 170.

The theory of Swedish massage, physiological effects, and the practical application will be incorporated into the development of a massage therapy routine. Basic Subjective Objective Action Plan (SOAP) charting skills and prenatal massage techniques are introduced.

LMT 150 Massage II (5 Credits)

Prerequisites: LMT 118 and LMT 145.

The theory and practice of various modalities including deep tissue, trigger point therapy, muscle energy technique, and stretching are introduced. Incorporates client assessment and treatment planning for a massage session.

LMT 155 Eastern Theory & Practice (2 Credits)

Prerequisites: WR 065 or higher or minimum placement into WR 121; MTH 010 or higher or minimum placement into MTH 020.

Corequisites: LMT 113, LMT 130, LMT 170.

Recommended preparation: BI 121 or BI 122 or BI 231.

This course is philosophically neutral and will focus on Chinese Medicine as the primary model which includes an introduction to eastern philosophy and its complimentary healing techniques.

LMT 160 Hydrotherapy (1 Credit)

Prerequisites: LMT 145.

The principles and techniques of water as it relates to a massage therapy session in its three forms; solid, liquid and vapor.

LMT 170 Professional Ethics and Rules (2 Credits)

Prerequisites: WR 065 or higher or minimum placement into WR 121; MTH 010 or higher or minimum placement into MTH 020.

Corequisites: LMT 113, LMT 130, LMT 155.

Recommended preparation: BI 121 or BI 122 or BI 231.

The professional and ethical boundaries that govern the practice of massage therapy will be explored. The Oregon Administrative Rules and Statutes that apply to licensed massage therapists will be examined and discussed.

LMT 175 Swedish Relaxation Clinic (2 Credits)

Prerequisites: LMT 145.

Swedish Relaxation Clinic will perform basic Swedish relaxation massage therapy techniques on the general public while demonstrating professionalism, client communication, and client consent during supervised public clinics.

LMT 180 Therapeutic Clinic (3 Credits)

Prerequisites: LMT 150.

Therapeutic Clinic offers relaxation and treatment massage therapy techniques to the general public. Subjective Objective Action Plan (SOAP) charting, professionalism, client communication, and client consent will be performed during supervised public clinics. P/NP grading.

LMT 188 Special Studies: LMT (1-4 Credits)

Specific modules that relate to first year courses.

LMT 199 Selected Topics: Licensed Massage Therapy (1-4 Credits)

Selected Topics related to Massage Therapy.

LMT 205 Movement for Massage (1 Credit)

The student will explore their body mechanics and body awareness through the practice of Qigong to meet the physical demands of a massage therapy career.

LMT 206 The Spirit of Massage (1 Credit)

The Spirit of Massage will explore a holistic view of massage and facilitate a self-awareness of one's personal connection to the massage therapy session and client goals. P/NP grading.

LMT 210 Community Outreach (2 Credits)

Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

Massage therapy research and case studies topics will be explored using methods of assessment of the benefits of massage. Internships and externships may be included.

LMT 216 Aromatherapy I (2 Credits)

An introduction to the properties and benefits of essential oils and their effects on the body when used in clinical and holistic settings.

LMT 217 Aromatherapy II (2 Credits)

Prerequisites: LMT 216.

Advanced exploration of the essential oils examined in Aromatherapy I and utilization in a massage therapy session.

LMT 226 Thai Massage I (2 Credits)

Prerequisites: LMT 130 and LMT 155.

Traditional fundamentals of Thai bodywork techniques will be explored. A basic Thai floor massage routine will be practiced using traditional Thai equipment. Students should have the ability to kneel and move around on their feet and knees. P/NP grading.

LMT 227 Thai Massage II (2 Credits)

Prerequisites: LMT 226.

Students will explore the deeper roots of Thai bodywork and the "Sen". Advanced techniques and stretches will be practiced in a Thai bodywork routine using traditional Thai equipment. Students should have the ability to kneel and move around on their feet and knees. P/NP grading.

LMT 228 Foot Reflexology (1 Credit)

Students will practice reflexology routines, pressure points, and techniques that combine to make a unique foot massage similar to those enjoyed throughout the world. P/NP grading.

LMT 229 Japanese Facial Massage (1 Credit)

Japanese Facial Massage combines massage and acupressure to reduce muscular tensions, increase blood and energy flow, while restoring elasticity to the skin. P/NP grading.

LMT 240 Neuromuscular Treatments I (5 Credits)

Prerequisites: LMT 145, LMT 150, LMT 175.

This is advanced myofascial coursework that focuses on the treatment of specific conditions and injuries using neuromuscular massage therapy treatment protocols.

LMT 245 Effective Office Decisions (2 Credits)

Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

This course will explore insurance billing, retail selling, target marketing, bookkeeping, credentialing and other issues a massage practice may encounter.

LMT 250 Cranial Sacral Level I (5 Credits)

Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

This course will offer a cranio sacral approach to massage therapy with an emphasis on relevant anatomy.

LMT 255 Zen Shiatsu (4 Credits)

Recommended preparation: LMT 155 and LMT 130.

Zen Shiatsu history, basic theory and techniques used in this massage modality will be introduced. This class will offer hands-on experience while working with a clothed client in the style of Shizuto Masunaga.

LMT 257 Chinese Medicine Theory (3 Credits)

Prerequisites: LMT 155.

Chinese Medicine Theory will provide a deeper understanding of Eastern/Asian foundational elements and the application of the elements as it relates to therapeutic massage therapy and bodywork.

LMT 258 Eastern Clinic (2 Credits)

Prerequisites: LMT 255 or LMT 226.

Students will practice Shiatsu and/or Thai bodywork techniques on the general public during the supervised clinic. P/NP grading.

LMT 259 Introductory Spa Treatments (1 Credit)

Prerequisites: LMT 145 and LMT 150 or department approval based on proof of massage therapist license.

Spa treatment commonly used in spa facilities will be explored. A variety of spa treatments will be practiced in class. Contraindications, hygiene, sanitation, and spa etiquette will be examined.

LMT 265 Sports Massage (4 Credits)

Prerequisites: LMT 150.

The principles of deep tissue massage, neuromuscular therapies, and muscle energy techniques will be applied to target athletic performance and recovery, as well integrating techniques to aide in rehabilitation of athletic related injuries.

LMT 266 Sports Massage Clinic (2 Credits)

Prerequisites: LMT 265.

Students will practice sports massage techniques targeting athletic performance, exercise recovery, and soft tissue rehabilitation of athletic related injuries. P/NP grading.

LMT 270 Clinical Assessments (4 Credits)

Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

This is a nontreatment course that will evaluate and assess ROM, posture, gait and soft tissue injury when determining massage therapy treatment options. Students taking Advanced Treatment courses are advised to enroll.

LMT 271 Pregnancy Massage (1 Credit)

Prerequisites: LMT 145.

Advanced massage training when working with pregnant clients that will include precautions, draping, positioning and how massage can support women in labor.

LMT 288 Special Studies: LMT (1-4 Credits)

Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

Specific coursework related to massage therapy.

LMT 298 Independent Study: Massage Therapy (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

LMT 299 Selected Topics: LMT (1-7 Credits)

Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

Selected topics related to massage therapy.

Mathematics (MTH)

MTH 001 Adjust My Placement (AMP) (1 Credit)

Provides a structured setting to refresh and review math skills.

Participate in problem-solving activities designed to strengthen critical thinking skills. Provides an opportunity for students to be successful in a higher-level math class than they originally placed. Math advising is also part of this course. Intended for students to strengthen previously-learned mathematical skills and problem-solving abilities. To receive the maximum benefit of this course, it is important to enroll in a math course the term immediately following. Meets twice a week for 7 weeks, beginning the second week of the term.

MTH 010 Developmental Mathematics (4 Credits)

Introduces mathematics and its application; explains language and symbols used in math; develops concepts in whole number, fraction, and decimal operations and applications; and develops analytical thinking while emphasizing study and learning skills necessary for success in math courses and overcoming anxiety toward math.

MTH 020 Pre-Algebra (4 Credits)

Recommended preparation: MTH 010.

Emphasizes applications of basic arithmetic skills. Equips students to handle everyday arithmetic problems and lays a foundation for algebra. Topics include ratio, proportion, percent, measurement, perimeter, area, volume and integers.

MTH 029 Fraction Review Workshop (2 Credits)

Provides a concentrated experience for students needing a review of fractions and associated number theory skills. This course is not a replacement for students who place into or need to take MTH 10. May be taken concurrently with another math class. P/NP grading.

MTH 031 Health Care Math (3 Credits)

Recommended preparation: MTH 010.

This is a three-credit course designed for students majoring in Addiction Studies, Massage Therapy, Health Information Technology, among others. Includes topics from pre-algebra and descriptive statistics. MTH 031 is not designed to serve as a prerequisite to MTH 060.

MTH 058 Math Literacy I (4 Credits)

Recommended preparation: MTH 010 or minimum placement into MTH 020.

Designed for non-math and non-science majors: integrating numeracy, proportional reasoning, algebraic reasoning and beginning data presentation and analysis. Develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. Introduces pattern recognition, estimation and number sense, working with units, and making accurate inferences and conclusions based upon data presented in graphical or tabular format. Explores how to clearly communicate arguments supported by quantitative evidence using words, tables, graphs, and mathematical equations.

MTH 060 Beginning Algebra I (4 Credits)

Recommended preparation: Math 020 or higher or minimum placement into MTH 060.

Introduction to algebra, integers, rational and real numbers, algebraic expressions, linear equations in one and two variables, and graphical representations with a focus on modeling and applications.

MTH 065 Beginning Algebra II (4 Credits)

Recommended preparation: MTH 060 or higher or minimum placement into MTH 065.

Continues development of manipulative algebra skills from MTH 060. Includes algebraic expressions and polynomials, factoring algebraic expressions, rational expressions, roots and radicals, and quadratic equations.

MTH 085 Technical Mathematics I (4 Credits)

Recommended preparation: MTH 020 and/or MTH 060.

First in a two-term sequence designed for majors in forest technology, fire science, CADD and GIS, among others. Includes introduction to algebra and geometry with a focus on units of measurement, formula manipulation, solving linear and literal equations, exponents, three-dimensional geometry and preparation for trigonometry. Real-world applications are emphasized.

MTH 086 Technical Mathematics II (4 Credits)

Recommended preparation: MTH 085.

Second in a two-term sequence designed for majors in forest technology, fire science, CADD and GIS, among others. Includes a review of geometry and a thorough discussion of trigonometry with an introduction to vectors and their applications. The second half of the term includes an introduction to functions and their applications including graphing equations, developing equations from graphs, analysis of linear and non-linear functions and functions as models. Students will work in teams to develop and analyze a complex, real-world application and submit a technical report detailing the results. A graphing calculator is required. TI-83 or TI-84 recommended.

MTH 095 Intermediate Algebra (4 Credits)

Recommended preparation: MTH 065.

Continues the algebra foundation necessary to study college-level mathematics and statistics. Includes systems of equations and inequalities, linear and quadratic regressions, functions and function notation, equation solving through manual and graphical means, inequalities and complex numbers. Graphing calculator required. TI-83 or TI-84 recommended.

MTH 098 Math Literacy II (4 Credits)

Recommended preparation: MTH 058.

Covers modeling, graphing and solving linear equations in context. Explores how to clearly communicate sophisticated arguments supported by quantitative evidence using words, tables, graphs, and mathematical equations as appropriate. Covers dimensional analysis as it arises contextually in applications.

MTH 099 Selected Topics: Mathematics (1-4 Credits)

Offers selected topics in mathematics for courses generally available only once. Topics and credits to be arranged. P/NP grading.

MTH 105 Math in Society (4 Credits)

Prerequisites: MTH 095 or higher or minimum placement into MTH 105.

Math in Society is a rigorous mathematics course designed for students in Liberal Arts and Humanities majors. The course provides a solid foundation in quantitative reasoning, symbolic reasoning, and problem solving techniques needed to be a productive, contributing citizen in the 21st century.

MTH 111 College Algebra (4 Credits)

Recommended preparation: MTH 095.

Introduces graphs and functions (linear, quadratic, polynomial, rational, exponential and logarithmic) using a graphing calculator. First term of a precalculus sequence for science students. Graphing calculator required. TI-83 or TI-84 recommended.

MTH 112 Trigonometry (4 Credits)

Recommended preparation: MTH 111.

Examines the applied, real-world and theoretical mathematical implications of the trigonometric functions. The symbolic, numerical, and graphical representations of these functions and their applications form the core of the course. Emphasizes solving problems symbolically, numerically and graphically and understanding the connections among these methods in interpreting and analyzing results. Graphing calculator required. TI-83 or TI-84 recommended.

MTH 113 Topics in Precalculus (4 Credits)

Recommended preparation: MTH 112.

Examines topics chosen from the applied, real-world and theoretical mathematical implications of analytic geometry, nonrectangular coordinate systems, vectors, matrices and sequences. The symbolic, numerical, and graphical representations of these functions and their applications form the core of the course. Emphasizes solving problems symbolically, numerically and graphically and understanding the connections among these methods in interpreting and analyzing results. The primary focus is preparation for Calculus. Graphing calculator required. TI-83 or TI-84 recommended.

MTH 188 Special Studies: Mathematics (1-4 Credits)

Explores topics of current interest in the discipline.

MTH 198 Practicum in Mathematics (2 Credits)

Allows students to gain exposure to an elementary classroom setting, gain experience in teaching/tutoring math to elementary-school-age children and gain an understanding of learning theory and processes as they apply to mathematics education.

MTH 199 Selected Topics: Mathematics (1-4 Credits)

This course is in development.

MTH 211 Fundamentals of Elementary Mathematics I (4 Credits)

Recommended preparation: MTH 095.

Introduces problem-solving, sets, natural and whole numbers, number theory and fractions. First term of a sequence for students planning to become elementary teachers but open to any students wanting to study the foundations of mathematics.

MTH 212 Fundamentals of Elementary Mathematics II (4 Credits)

Recommended preparation: MTH 211.

Covers decimals, percents, ratio and proportion, integers, rational and real numbers, and statistics and probability. Second term of a sequence for students planning to become elementary teachers but open to any student wanting to study the foundations of mathematics.

MTH 213 Fundamentals of Elementary Mathematics III (4 Credits)

Recommended preparation: MTH 211.

Covers geometric shapes, measurement, congruence and similarity, and coordinate and transformational geometry. Third term of a sequence for students planning to become elementary teachers but open to any student wanting to study the foundations of mathematics.

MTH 231 Discrete Mathematics (4 Credits)**Recommended preparation:** MTH 112.

Topics in the course will examine in detail the applied, real-world and theoretical mathematical implications of the mathematical concepts elementary logic and set theory, functions, direct proof techniques, contradiction and contraposition, mathematical induction and recursion, elementary combinatorics, basic graph theory, minimal spanning trees. The symbolic, numerical and graphical representations of the mathematical concepts will be expanded and explored. Emphasis will be on solving problems symbolically, numerically and graphically and understanding the connections among these methods in interpreting and analyzing results.

MTH 241 Calculus for Management/Social Science (4 Credits)**Recommended preparation:** MTH 111.

Introduces basic concepts of differential and integral calculus for students majoring in management and social science. Includes elementary differential and integral calculus of polynomial, logarithmic and exponential functions, and their applications to business, management and social sciences. A graphing calculator is required. TI-83 or TI-84 recommended.

MTH 243 Introduction to Probability and Statistics I (4 Credits)**Recommended preparation:** MTH 111 (for those needing MTH 241 or MTH 251), MTH 105.

Introduces probability and descriptive statistics. Includes critical readings of graphs and data, basic probability theory, random variables, and binomial and normal probability distributions. Culminates with the Central Limit Theorem. A graphing calculator is required. TI-83 or TI-84 recommended.

MTH 244 Introduction to Probability and Statistics 2 (4 Credits)**Prerequisites:** MTH 243.

Introduces methods of inferential statistical analysis. Includes sampling techniques, confidence intervals, hypothesis testing, tests of association, linear regression and categorical analysis. Basic computer skills (especially spreadsheet knowledge) are desirable. A graphing calculator is required. TI-83 or TI-84 recommended.

MTH 245 Mathematics for Management, Life, and Social Sciences (4 Credits)**Recommended preparation:** MTH 111.

This is a Finite Math course that covers techniques of counting, probability and elements of statistics including binomial and normal distributions, introductory matrix algebra, and elements of linear programming.

MTH 251 Calculus I (4 Credits)**Recommended preparation:** MTH 112 or MTH 113.

Introduces concepts of differential calculus for science, mathematics and engineering students. Includes limits and continuity; the derivative; rates of change; derivatives of polynomial, rational and trigonometric, log, and exponential functions; applications including related rates and optimization; and antiderivatives. Graphing calculator required.

MTH 252 Calculus II (4 Credits)**Recommended preparation:** MTH 251.

Introduces concepts of integral calculus to science, mathematics and engineering students. Includes antidifferentiation, the Fundamental Theorem of Calculus, integration techniques, numerical methods, improper integrals and mathematical modeling with applications to geometry, physics, economics and population dynamics. Graphing calculator required.

MTH 253 Calculus III (4 Credits)**Recommended preparation:** MTH 252.

Introduces additional calculus concepts to science, mathematics, and engineering students. Includes selected topics in linear algebra, parametric and polar functions, applications of calculus to parametric and polar functions, infinite series, and Taylor series and polynomials.

MTH 254 Vector Calculus I (4 Credits)**Recommended preparation:** MTH 253.

Introduces concepts of vector calculus to science and engineering students. Includes vectors and vector functions, parametric curves, functions of several variables, partial derivatives, gradients, directional derivatives and optimization problems. A graphing calculator is required. TI-83 or TI-84 is recommended. Computer skills required.

MTH 255 Vector Calculus II (4 Credits)**Recommended preparation:** MTH 254.

Continuation of the study of vector analysis for science and engineering students. Includes double and triple integrals with applications to area, volume and center of mass; introduction to vector analysis including divergence, curl, line integrals and work, surface integrals; conservative fields and the theorems of Green and Stokes. A graphing calculator is required. TI-83 or TI-84 recommended. Basic computer skills required.

MTH 256 Applied Differential Equations (4 Credits)**Recommended preparation:** MTH 253.

Introduction to the application of differential equations for science and engineering students. Includes first- and second-order linear and nonlinear equations, systems of linear first-order differential equations and applications appropriate for science and engineering; numerical, graphical, series and analytical solutions are covered. Computer skills are recommended and a graphing calculator is required. TI-83 or TI-84 is recommended.

MTH 261A Introduction to Linear Algebra (2 Credits)**Recommended preparation:** MTH 252.

Provides an introduction to linear algebra concepts for science, math, and engineering majors. Topics include vectors, matrices, systematic solution to linear systems, determinants, linear dependence and independence, linear transformations, and eigenvalues and eigenvectors.

MTH 280 Co-op Work Experience Mathematics (1-4 Credits)**Prerequisites:** Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

MTH 298 Independent Study: Mathematics (1-4 Credits)**Prerequisites:** Instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Medical Assistant (MA)

MA 110 Introduction to Clinical Medical Assisting (7 Credits)

Prerequisites: AH 114; BI 105; CIS 120 (or computer competency test); choose either (BA 214 or WR 121); and choose either (AH 105 or MTH 105 or a higher math course).

Corequisites: MA 111.

First of two classes that introduce key cognitive, psychomotor and affective competencies related to the clinical responsibilities of the medical assistant as identified by the CAAHEP and the MAERB. Covered concepts include application of standard precautions and infection control, patient preparation and education, performance of vital signs, delivery of oral and parenteral medications, vision screening and application of skills to begin assisting with medical exams and procedures. Math component includes basic skills in preparation for understanding and calculating medication dosage. Body structure, function, pathology, and medical terminology are reviewed in relationship to their impact on various body systems.

MA 111 Introduction to Professional Medical Assisting (5 Credits)

Corequisites: MA 110.

First of two classes that introduce key competencies related to office practices and administrative responsibilities of the medical assistant as defined by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Medical Assisting Educational Review Board (MAERB). Includes concepts related to professionalism, diversity, confidentiality, written and oral communication, application of telephone techniques, legal concepts, introductory scheduling and triage skills, and office safety. See MA 110 for Medical Assisting program prerequisites.

MA 120 Clinical Medical Assisting II (7 Credits)

Prerequisites: MA 110 and MA 111.

Corequisites: MA 121.

Second of two classes covering key cognitive, psychomotor and affective competencies related to clinical responsibilities of the medical assistant as identified by the CAAHEP and the MAERB. Students will expand skills required to assist with diagnostic testing, outpatient procedures, and office-based lab testing. Students will demonstrate greater mastery of concepts such as standard precautions, infection control, medical and surgical asepsis, patient preparation, and delivery of oral and parenteral medications. Math components include basic skill review in preparation for understanding, calculating, and delivering oral and parenteral medications. Body structure, function, pathology, and medical terminology are reviewed in relationship to their impact on various body systems.

MA 121 Administrative Medical Assisting (5 Credits)

Prerequisites: MA 110 and MA 111.

Corequisites: MA 120.

Second of two courses that cover key competencies related to office practices and administrative responsibilities of the medical assistant as identified by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Medical Assisting Educational Review Board (MAERB). Includes concepts related to coding, billing, accounting, insurance, electronic medical records, practice management systems, office management and administrative communication.

MA 137 Application of Professional Medical Assisting (4 Credits)

Prerequisites: MA 110; MA 111; MA 120; MA 121; MA 140; and MA 150.

Corequisites: MA 147.

Final medical assisting lecture and lab class focusing on skills related to specialty practice, office management, national exam passage and job acquisition. Topics include assisting with specialty exams, management tools, and specialty-specific diagnostic procedures and treatments. Students will prepare resumes and practice job interview skills. National exam material is reviewed.

MA 140 Nutrition, CPR and First Aid for Medical Assistants (3 Credits)

Prerequisites with concurrency: MA 110.

This class is designed to cover key competencies for medical assistants related to nutritional interventions and office-based emergencies as identified by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Medical Education Review Board (MAERB). Students have the opportunity to obtain provider level CPR and first aid cards that meet MA program requirements during the course of this class.

MA 147 Medical Assistant Practicum I (5 Credits)

Prerequisites: instructor approval; see MA 137 for prerequisites.

Corequisites: MA 137.

The clinical practicum is a required, supervised, unpaid learning experience, which takes place on site at a prearranged clinical facility. It provides students with the opportunity to perform clearly identified competencies within the clinical setting. Students must have a total of five clinical credits. A minimum of 160 hours in the clinical setting is required. Students must be available during all potential weekday hours indicated in the class schedule to attend practicum as placements become available. Students must be able to provide transportation to sites in Central Oregon. Students must have updated adult/infant/child CPR and First Aid cards as well as updated background checks and immunization required by practicum sites. P/NP grading.

MA 150 Pharmacology for Medical Assistants (3 Credits)

Prerequisites with concurrency: MA 110.

This course introduces medical assistant students to the general principles of pharmacology as required by the standards adopted by the American Association of Medical Assistants (AAMA) and the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Drugs are discussed in the context of drug classes, mechanics of action, disease types and body systems. The goal is to provide medical assistants with sufficient background information so that they will be able to play a key role avoiding dispensing errors, as well as a basic understanding of pharmacologic categories and factors affecting drug kinetics.

MA 188 Special Studies: Medical Assisting (1-4 Credits)

Explores topics of current interest in the discipline.

MA 199 Selected Topics: Medical Assistant (1-4 Credits)

This course is in development.

MA 280 Co-op Work Experience Medical Assisting (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

MA 298 Independent Study: Medical Assisting (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Military Science (MS)

MS 111 Leadership and Personal Development (1 Credit)

This course introduces students to the personal challenges and competencies that are critical for effective leadership. Students will learn the basic skills related to leadership and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions while gaining a comprehensive understanding of the ROTC program, its purpose in the Army, and its advantages for the student. This course is open to any student in any course of study.

MS 112 Introduction to Tactical Leadership (1 Credit)

Recommended preparation: MS 111.

This course introduces students to the personal challenges and competencies that are critical for effective leadership. Topics include developing life skills such as goal setting, time management, physical fitness and stress management relative to leadership, officership, and the Army profession. Students will further explore Army leadership dimensions in depth, as they relate to tactical leadership. This class is open to any student in any course of study.

MS 113 Orienteering and Land Navigation (1 Credit)

Recommended preparation: MS 112.

This course introduces students to basic orienteering and map reading. Students will gain confidence in their ability to read different types of maps, plan routes and find their location on the ground using a military map and compass. Students will learn to identify terrain features on a map and on the ground. Students will use these skills to move from one point to another by orienteering and terrain association. This class is open to any student in any course of study.

MS 180 Army Physical Fitness (1 Credit)

The course familiarizes the students with the Army Physical Fitness Program and FM 21-20 through an individually-regimented physical fitness training program. Students will receive guidance on proper nutrition and fitness to excel in a physically demanding environment as well as being given the opportunity to plan and implement their own total fitness program. Class is open to any student in any course of study.

MS 211 Foundations in Leadership (2 Credits)

Recommended preparation: MS 113.

This course explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and effective communication techniques. Aspects of personal motivation and team building are practiced during the conduct of leadership coursework. The focus continues to build on developing knowledge of the skills that Army leaders need to excel, as well as broadening knowledge of operations of the current military. No military obligation is incurred through participation in the course. This class is open to any student in any course of study.

MS 212 Effective Team Building (2 Credits)

Recommended preparation: MS 211.

This course examines the challenges of leading tactical teams in the complex contemporary operating environment (COE). This course explores dimensions of terrain analysis and land navigation, small unit tactics and the fundamentals of patrolling. It continues to explore the dimension of creative and innovative tactical leadership strategies and styles by examining team dynamics and effective time management techniques. Aspects of personal motivation and team building are practiced during the conduct of Leadership Labs. No military obligation is incurred through participation in the course. This course is open to any student in any course of study.

MS 213 Fundamentals of Military Operations (2 Credits)

Recommended preparation: MS 212.

This course introduces the fundamentals of military operations by exploring the military approach to conducting various operations, and the planning and procedures required to be successful in these operations. It continues to explore the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and effective time-management techniques. An introduction to squad-level tactics will focus on applying military decision-making processes and delivering military orders. No military obligation is incurred through participation in the course. Leadership coursework will be used to reinforce the tactical and operational concepts covered in the course.

MS 299 Selected Topics: Military Science (1-4 Credits)

This course is in development.

Music (MUS)

MUS 101 Music Fundamentals (3 Credits)

Presents the fundamentals of music making, including notation of pitch, rhythm, music terminology, scales, key signatures, intervals and chord spelling. Requires no previous musical experience. This course is an ideal preparation for students who intend to enroll in MUS 111, Music Theory. Students interested in learning about music history, styles and composers (Baroque, Classical, Romantic, etc.) should consider MUS 201, MUS 202 or MUS 203.

MUS 111 Music Theory IA (3 Credits)

Recommended preparation: MUS 101; recommended to be taken with MUS 114.

Harmony of the common-practice period with attention to part writing, and analysis. An entrance placement exam will be given during the first class session. This sequence of courses should be taken by all students who intend to major or minor in music.

MUS 112 Music Theory IB (3 Credits)

Recommended preparation: MUS 111; recommended to be taken with: MUS 115.

Harmony of the common-practice period with attention to part writing and analysis.

MUS 113 Music Theory IC (3 Credits)

Recommended preparation: MUS 112; recommended to be taken with: MUS 116.

Harmony of the common-practice period with attention to part writing and analysis.

MUS 114 Musicianship IA (2 Credits)

Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work. Recommended to be taken with: MUS 111.

MUS 115 Musicianship IB (2 Credits)

Recommended preparation: MUS 114; recommended to be taken with MUS 112.

Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work.

MUS 116 Musicianship IC (2 Credits)

Recommended preparation: MUS 115; recommended to be taken with MUS 113.

Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work.

MUS 123 Opera Performance (1 Credit)

Study, rehearsal and performance of operas for vocalists, instrumentalists and production technicians. An audition is required before enrollment. May be repeated, no limit.

MUS 131 Piano Class I (2 Credits)

Teaches fundamentals of piano performance in a class format.

MUS 132 Piano Class II (2 Credits)

Teaches fundamental piano skills in a class format.

MUS 133 Piano Class III (2 Credits)

Teaches fundamental piano skills in a class format.

MUS 134 Voice Class I (2 Credits)

Teaches fundamentals of vocal performance in a class format.

MUS 135 Voice Class II (2 Credits)

Teaches fundamental vocal skills in a class format.

MUS 136 Voice Class III (2 Credits)

Teaches fundamental vocal skills in a class format.

MUS 137 Class Guitar I (2 Credits)

Teaches fundamentals of guitar performance in a class format.

MUS 138 Class Guitar II (2 Credits)

Teaches fundamental guitar skills in a class format.

MUS 139 Class Guitar III (2 Credits)

Teaches fundamental guitar skills in a class format.

MUS 161 Jazz Improvisation (2 Credits)

Introduces students to jazz improvisation in a laboratory (performance) setting. No previous experience or knowledge about jazz or improvisation necessary. Students should have some previously developed proficiency on an instrument or voice. May be repeated, no limit.

MUS 188 Special Studies: Music (1-4 Credits)**MUS 194 Big Band Jazz (1 Credit)**

Study and performance of music for large jazz band. One major concert is presented each term. May be repeated, no limit. Contact ensemble conductor for information about required audition.

MUS 195 Concert Band (1 Credit)

Study and performance of music for the concert band. One major concert is presented each term. May be repeated; no limit. Contact ensemble conductor for information about required audition.

MUS 196 Symphony (1 Credit)

The study and performance of music for symphony orchestra. One major concert is presented each term. May be repeated, no limit. Contact ensemble conductor for information about required audition.

MUS 197 Cascade Chorale (1 Credit)

Study, rehearsal and performance of choral literature. Meets Tuesday evenings and welcomes both college students and community members. Performs a major concert each term. May be repeated; no limit. Please note: purchase of concert dress outfit required. Contact choral program director for information about required audition.

MUS 197A College Choir (2 Credits)

Focuses on preparation and performance of choral literature from a wide variety of styles and periods. Performs one major concert each term and occasionally other concerts off campus. May be repeated, no limit.

MUS 199 Selected Topics: Music (1-3 Credits)

This course is in development.

MUS 201 Understanding Music (3 Credits)

Introduces the history of Western fine-art music and its literature. Encompasses the study of musical vocabulary, style, form, principal composers and the historical development of music in various style periods. The content of each course varies somewhat from term to term, but typically MUS 201 covers Medieval, Renaissance, Baroque and Classical era music while MUS 202 discusses music and composers from the Romantic, 20th century and Contemporary periods. MUS 203 typically diverges from Western fine-art music and focuses on various musical styles from around the world. The classes need not be taken in sequence and do not require any previous musical experience. Students interested in learning how to read musical notation (rhythm, notes) should enroll in MUS 101.

MUS 202 Understanding Music (3 Credits)

Introduces the history of Western fine-art music and its literature. Encompasses the study of musical vocabulary, style, form, principal composers and the historical development of music in various style periods. The content of each course varies somewhat from term to term, but typically MUS 201 covers Medieval, Renaissance, Baroque and Classical era music while MUS 202 discusses music and composers from the Romantic, 20th century and Contemporary periods. MUS 203 typically diverges from Western fine-art music and focuses on various musical styles from around the world. The classes need not be taken in sequence and do not require any previous musical experience. Students interested in learning how to read musical notation (rhythm, notes) should enroll in MUS 101.

MUS 203 Understanding Music (3 Credits)

Introduces the history of Western fine-art music and its literature. Encompasses the study of musical vocabulary, style, form, principal composers and the historical development of music in various style periods. The content of each course varies somewhat from term to term, but typically MUS 201 covers Medieval, Renaissance, Baroque and Classical era music while MUS 202 discusses music and composers from the Romantic, 20th century and Contemporary periods. MUS 203 typically diverges from Western fine-art music and focuses on various musical styles from around the world. The classes need not be taken in sequence and do not require any previous musical experience. Students interested in learning how to read musical notation (rhythm, notes) should enroll in MUS 101.

MUS 205 Introduction to Jazz History (3 Credits)

Introduction to the history of jazz. Major styles and significant jazz artists are studied in depth. No previous musical knowledge required.

MUS 207 History of Rock Music (3 Credits)

Students will learn the history of rock music from its beginnings in earlier forms of popular music to the present; to understand the relationship of this music to larger cultural, political, and economic formations; and to become familiar with aspects of musical structure that have been used in rock music. Students will communicate their knowledge through participation with discussion groups, activities, listening examples, and a written project about an artist or rock band that came out of Rock Music.

MUS 211 Music Theory IIA (3 Credits)

Recommended preparation: MUS 113; recommended to be taken with MUS 214.

A continuation of common-practice period harmony (Music Theory I) with stress on chromatic resources, musical form, and style analysis including an introduction to harmonic practices of the 20th and 21st centuries.

MUS 212 Music Theory IIB (3 Credits)

Recommended preparation: MUS 211; recommended to be taken with MUS 215.

A continuation of common-practice period harmony (Music Theory I) with stress on chromatic resources, musical form, and style analysis including an introduction to harmonic practices of the 20th and 21st centuries.

MUS 213 Music Theory IIC (3 Credits)

Recommended preparation: MUS 212; recommended to be taken with MUS 216.

A continuation of common-practice period harmony (Music Theory I) with stress on chromatic resources, musical form, and style analysis including an introduction to harmonic practices of the 20th and 21st centuries.

MUS 214 Musicianship IIA (2 Credits)

Recommended preparation: MUS 116; recommended to be taken with MUS 211.

Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work.

MUS 215 Musicianship IIB (2 Credits)

Recommended preparation: MUS 214; recommended to be taken with MUS 212.

Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work.

MUS 216 Musicianship IIC (2 Credits)

Recommended preparation: MUS 215; recommended to be taken with MUS 213.

Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work.

MUS 280 Co-op Work Experience Music (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

MUS 298 Independent Study: Music (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Music -Small Ensembles/Lessons (MUP)

MUP 105 Jazz Combo (2 Credits)

Performance of wide range of jazz styles in a small-group setting with an emphasis on developing knowledge and skills in improvising. Students should have some previously developed proficiency on an instrument or voice. May be repeated, no limit.

MUP 111 Woodwind Ensemble (2 Credits)

Prerequisites: instructor approval.

The study and performance of chamber music for woodwind instruments in an ensemble such as a woodwind or a clarinet quartet. May be repeated, no limit.

MUP 114 Vocal Ensemble (2 Credits)

A select group of singers that focuses on various jazz idioms: blues, funk, Latin and straight-ahead. Enrollment is by audition. Recommended to be taken with MUS 197A, College Choir. Contact choral program director for information about required audition. May be repeated, no limit.

MUP 146 String Ensemble (2 Credits)

Prerequisites: Instructor approval.

Study and performance of chamber music for bowed string instruments in a group such as string quartet or for string ensembles including a keyboard instrument. May be repeated, no limit.

MUP 171 Applied Piano (1 Credit)

Prerequisites: Instructor approval.

Provides individual private piano instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to piano performance. Additional fee required. Repeatable for credit.

MUP 174 Applied Voice (1 Credit)

Prerequisites: Instructor approval.

Provides individual private voice instruction. Develops applied performance skills using repertory and pedagogical techniques from classical, jazz and popular traditions. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, diction, sight-reading and other aspects of musicianship as applied to vocal performance. Additional fee required. Repeatable for credit.

MUP 175 Applied Violin (1 Credit)

Prerequisites: Instructor approval.

Provides individual private violin instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to violin performance. Additional fee required. Repeatable for credit.

MUP 176 Applied Viola (1 Credit)

Prerequisites: Instructor approval.

Provides individual private viola instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to viola performance. Additional fee required. Repeatable for credit.

MUP 177 Applied Cello (1 Credit)

Prerequisites: Instructor approval.

Provides individual private cello instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to cello performance. Additional fee required. Repeatable for credit.

MUP 178 Applied Bass (1 Credit)

Prerequisites: Instructor approval.

Provides individual private bass instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to bass performance. Additional fee required. Repeatable for credit.

MUP 180 Applied Guitar (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private guitar instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical, jazz and popular traditions. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to guitar performance. Additional fee required. Repeatable for credit.

MUP 181 Applied Flute (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private flute instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to flute performance. Additional fee required. Repeatable for credit.

MUP 182 Applied Oboe (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private oboe instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to oboe performance. Additional fee required. Repeatable for credit.

MUP 186 Applied Trumpet (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private trumpet instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to trumpet performance. Additional fee required. Repeatable for credit.

MUP 187 Applied French Horn (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private French horn instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to French horn performance. Additional fee required. Repeatable for credit.

MUP 188 Applied Trombone (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private trombone instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to trombone performance. Additional fee required. Repeatable for credit.

MUP 271 Applied Piano (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private piano instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to piano performance. Additional fee required. Repeatable for credit.

MUP 274 Applied Voice (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private voice instruction. Develops applied performance skills using repertory and pedagogical techniques from classical, jazz and popular traditions. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, diction, sight-reading and other aspects of musicianship as applied to vocal performance. Additional fee required. Repeatable for credit.

MUP 276 Applied Viola (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private viola instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to viola performance. Additional fee required. Repeatable for credit.

MUP 277 Applied Cello (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private cello instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical tradition. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to cello performance. Additional fee required. Repeatable for credit.

MUP 280 Applied Guitar (1 Credit)**Prerequisites:** Instructor approval.

Provides individual private guitar instruction. Develops applied performance skills using repertory and pedagogical techniques from the classical, jazz and popular traditions. Includes training in performance practice and stylistic interpretation through focus on tone production, technique, articulation, sight-reading and other aspects of musicianship as applied to guitar performance. Additional fee required. Repeatable for credit.

Nursing (NUR)

NUR 088 Special Studies: Nursing (1-8 Credits)

Allows nursing students to pursue a special content area. Special study arrangements must be made through the nursing program coordinator.

NUR 099 Special Topics: Nursing (1-8 Credits)

This course is in development.

NUR 103 Nursing Assistant (7 Credits)**Prerequisites:** Department approval.

Covers basic nursing assistant level one care and effective communication skills for clients in acute and longterm care facilities. Issues of confidentiality, client rights and role of the nursing assistant are discussed. Students are eligible to sit for the Oregon State Board of Nursing-sanctioned certified nursing assistant level one examination upon satisfactory performance of course outcomes and assessments; and completion of the minimum 155 mandatory student contact hours: 80 hours of lecture/lab and 75 hours of clinical experience. Clinic takes place in acute and long-term care facilities. To enroll in the course, students must hold a current American Heart Association, BLS Provider CPR card, pass a criminal history check, pass a urine drug screen and meet immunization and TB test requirements.

NUR 104 Certified Nursing Assistant: Level 2 (6 Credits)**Prerequisites:** NUR 103 and department approval.

Provides an Oregon State Board of Nursing-approved standardized curriculum and competency evaluation for the designation of Certified Nursing Assistant Level 2. This course focuses on technical skills, interpersonal skills and communication, safety, infection control, and documentation with the outcome of demonstrated proficiency in knowledge, skills and abilities in these areas. The course has a clinical component to be scheduled at with a clinical partner. Requires that students hold a current, unencumbered Oregon CNA 1 certificate (verified prior to registration) as well as hold a current American Heart Association BLS Provider CPR card, pass a criminal history check, and meet immunization and TB test requirements (required after registration but prior to class participation).

NUR 106 Nursing I (12 Credits)**Prerequisites:** department approval based on admission to the nursing program.

Introduces fundamental concepts of nursing practice including nursing process, critical thinking, therapeutic communication, and cultural considerations. Students will have the opportunity to begin learning about patients with altered states of health. Students will become familiar with the major drug classifications and develop a working knowledge of pharmacological principles. The skills lab focuses on assessment and development of a core set of beginning level nursing skills. The clinical practicum provides students with the opportunity to apply knowledge and clinical skills to the adult patient with basic nursing care needs. First term of the practical nurse sequence and of the nursing program.

NUR 107 Nursing II (10 Credits)**Prerequisites:** NUR 106.

Introduces students to the knowledge and skills that are necessary in providing nursing care to individual patients experiencing an altered state of health. The clinical lab focuses on developing skills in the areas of medication administration, intravenous therapy, and simple wound management. The clinical practicum provides students with the opportunity to apply knowledge and clinical skills to the adult patient with medical-surgical nursing needs. Second term of the practical nursing certificate and the nursing degree.

NUR 108 Nursing III (11 Credits)**Prerequisites:** NUR 107.

Provides students with the opportunity to obtain the knowledge and skills that are necessary to implement the role of a practical nurse in providing care to acutely ill patients across the lifespan. Concepts of mental health and maternal child nursing are introduced. The ability to communicate effectively, therapeutically and professionally is emphasized. The learning resource center lab focuses on developing skills in parenteral, and nutritional therapies. Students will also complete a simulation experience and a comprehensive assessment of a complete set of core nursing skills from the first year of the Nursing program. The clinical practicum provides the opportunity for patient-centered care based on established standards and contributes to nursing care delivery at the practical nurse level. Final term of the practical nursing certificate and third term of the nursing degree.

NUR 188 Special Studies: Nursing I (1-8 Credits)

Allows first-year nursing students to pursue a special content area in nursing. Special study arrangements must be made through the designated Nursing Department Special Studies Coordinator.

NUR 199 Selected Topics: Nursing I (1-8 Credits)

Presents selected topics of study in the field of nursing offered on a temporary or experimental basis for first year Nursing students.

NUR 206 Nursing IV (11 Credits)**Prerequisites:** NUR 108.

Focuses on the integration of knowledge and skills acquired in the first year of the nursing program as the student transitions from the practical nurse to the registered nurse role. Nursing curriculum expands on the concepts of nursing process, caring, holism and professionalism at the registered nurse level. Emphasis is on the development of competency in critical thinking and caring interventions toward individuals and families. The learning resource center lab focuses on the development of higher-level assessment and intravenous medication and fluid therapy. Clinical practicum provides the students with an opportunity to provide holistic, individualized nursing care for complex medical-surgical and mentally ill clients. Fourth term of the nursing degree, first term of the registered nurse sequence.

NUR 207 Nursing V (10 Credits)**Prerequisites:** NUR 206.

Introduces community-based nursing care of individuals and families, care of the critically ill patient, as well as maternal child care of the high-risk patient. The nursing curriculum continues to expand on the role of the registered nurse to promote critical thinking and clinical decision-making. Students further develop their skills in patient teaching, patient care planning, and management. A simulation experience allows the students to manage the care of a patient through multiple stages of an illness using a team approach. The clinical practicum focuses on mastering the nursing process to provide and direct holistic and individualized patient care to increasingly complex patients. Students are provided additional experiences in the community-based and mental health settings. Fifth term of the nursing degree, second term of the registered nurse sequence.

NUR 208 Nursing VI (9 Credits)**Prerequisites:** NUR 207.

Focuses on refining clinical decision-making skills related to the complex health care needs of patients across the lifespan in a variety of health care settings. Concepts of quality nursing care, legal and ethical issues, professional communication, leadership and management of care, and collaborative practice are addressed in relation to nursing practice. Students participate in a four-week, full-time capstone clinical experience focusing on managing groups of patients or individual patients with high-level needs. The course concludes with a capstone case study presentation and a national board preparation exam. Sixth term of the nursing degree, third term of the registered nurse sequence.

NUR 218 Basic EKG (1 Credit)

Basic three-lead electrocardiograph interpretation. Open to allied health, exercise science, and nursing students.

NUR 280A CWE Nursing I (1-4 Credits)**Prerequisites:** admission to the nursing program and certified nursing assistant status and department approval.

Provides an opportunity for first year Nursing students who also possess their CNA license to obtain college credit while providing direct patient care in acute or long-term care facility. P/NP grading.

NUR 280B CWE Nursing II (1-4 Credits)**Prerequisites:** admission to the nursing program and LPN status and department approval.

Provides an opportunity for second year Nursing students who also possess their LPN license to obtain college credit for providing direct patient care while employed in a long-term or acute-care facility. P/NP grading.

NUR 288 Special Studies: Nursing (1-8 Credits)

Allows second-year nursing students to pursue a special content area in nursing. Special study arrangements must be made through the Nurse Administrator.

NUR 298 Independent Study: Nursing (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

NUR 299 Selected Topics: Nursing (1-3 Credits)

Presents selected topics of study in the field of nursing offered on a temporary or experimental basis for second year Nursing students.

Outdoor Leadership (OL)

OL 111 Introduction to Outdoor Leadership (3 Credits)

Prerequisites: WR 065 or higher.

Designed to introduce students to the field of outdoor recreation, outdoor education, adventure education, therapeutic recreation, and experiential education. Upon completion of this course, students should have a good understanding of the differences between the subspecialties in the field. Includes the history of programs, an introduction to theories, current topics, career options, and preparation needed for those careers. Course may help students decide if an educational path in outdoor leadership is something they wish to pursue. Guest speakers representing various careers/areas will present their experiences to the class. This course is a recommended foundation for other outdoor leadership program courses.

OL 160 Processing the Experience (2 Credits)

Students will be introduced to a variety of creative processing tools to be used either during or after the experience. The use of a field journal for reflection notes, as well as for processing through creative pursuits like sketching or painting will be introduced, as will group-based processing tools like formal debriefs, creating skits and collaborative art projects.

OL 171 Technical Skills for Outdoor Leadership (2 Credits)

Introduces basic skills, gear, and systems necessary for a variety of outdoor pursuits, including alpine mountaineering, challenge course and rock climbing. Provides an introduction to a variety of skills, with the intention of moving into more guide-oriented courses later in their program. Presents technical skills that will serve as a foundation for the advanced training in specific outdoor disciplines. Introduces gear, such as software (ropes, webbing, harnesses) and hardware (carabiners, friction devices); skills, such as knots, belaying, rappelling; and systems such as anchors, raises, lowers.

OL 194AA Avalanche Level I Training and Companion Rescue (2 Credits)

Introduces the various factors that contribute to avalanche hazard including terrain, weather, snowpack, and the human component (good vs. bad decision making). Avalanche safety equipment such as transceivers, probes and shovels are also presented, with instruction on how to use each of these critical pieces of safety gear. Field time is spent on: 1) developing rescue skills, including transceiver search techniques (single and multiple burial), probing and shoveling; 2) snowpack assessment; and 3) safe travel practices / group travel skills.

OL 194AB Avalanche Level I Refresher (1 Credit)

Recommended preparation: OL 194AA.

This course is designed to review the materials from Avalanche Level I, including the various factors that contribute to avalanche hazard including terrain, weather, snowpack, and the human component (good vs. bad decision making). Avalanche safety equipment such as transceivers, probes and shovels are also reviewed, along with how to use each of these critical pieces of safety gear. Field time is spent practicing transceiver search techniques (single and multiple burial), snowpack assessment (through a 'Test-pit Plus'), and safe travel practices and group travel skills. Students must have completed an Avalanche Level I course within the past five years.

OL 194AC Avalanche Level II (2 Credits)

Recommended preparation: OL 194AA or OL 194AB.

This course is designed to build on the skills developed in an Avalanche Level I course. The various factors that contribute to avalanche hazard including terrain, weather, snowpack, and the human component (good vs. bad decision making) will be reviewed, as will avalanche safety equipment such as transceivers, probes and shovels and their correct use. New material will include use of a field notebook and standardized data recording, as well as completing full pit profiles. Field time is spent practicing and reviewing transceiver search techniques (single and multiple burial), snowpack assessment (through test pit, test pit plus, and full pit), and safe travel practices and group travel skills. Students must have completed an Avalanche Level I or Level I Refresher course within the past five years.

OL 199 Selected Topics: Outdoor Leadership (1-4 Credits)

This course is in development.

OL 207 Seminar in Outdoor Leadership (2 Credits)

This course will help prepare students for entering the job market and/or setting up a professional practicum through the following: where to search for jobs, how to apply and how to interview; and how to prepare professional resumes, cover letters, experience resumes and professional portfolios. Professional development opportunities such as conferences, certifications, trainings, etc. will be discussed, as will current research and trends in employment in fields related to outdoor leadership.

OL 244 Psychology of Risk and Adventure (3 Credits)

Recommended preparation: or to be taken with WR 121.

Introduces students to psychological theories and topics relevant to adventure and risk, including perception, motivation, anxiety, arousal and risk-taking. This course will provide a theoretical and skills-based approach to understanding why the psychological components of risk and adventure play a pinnacle role in outdoor leadership.

OL 251 Wilderness First Aid (1 Credit)

Designed to provide the student with the necessary knowledge and skills to care for an injured or suddenly ill person in a remote location. The methods and protocols presented follow the Wilderness Medical Society guidelines for a 16 hour certification and are specific to a wilderness setting. The Wilderness Medical Society defines wilderness as a remote geographical location more than one hour from definitive care. Open to all and counts as an elective for Outdoor Leadership students.

OL 253 Wilderness Advanced First Aid (3 Credits)

This Course is designed to provide the student with the necessary knowledge and skills to care for an injured or suddenly ill person in a remote location. The methods and protocols presented in this class follow the Wilderness Medical Society guidelines for a 36 hour certification and are specific to a wilderness setting. The Wilderness Medical Society defines wilderness as a remote geographical location more than one hour from definitive care.

OL 255 Outdoor Living Skills (5 Credits)

Educates the student on how to travel safely for extended periods in the backcountry. Presents essentials of life (water, food and shelter/clothing) and how they can be provided in an outdoors setting. Also, discusses navigation, backcountry medicine and wilderness use/wilderness concepts. Lecture, discussion and lab (demonstration, practical application and practice) used. Students conduct one solo overnight and one group weekend outing. This course is a recommended foundation for other outdoor leadership program courses.

OL 263 Basic Wilderness Life Support (5 Credits)

Basic Wilderness Life Support is a wilderness first responder course designed to provide an individual with an in-depth knowledge of wilderness medicine and the basic skills to treat the most common injuries and illnesses encountered in the wilderness. This course is appropriate for those who spend a lot of time in remote locations (professionally or recreationally). The methods and protocols presented in this class follow the Wilderness Medical Society guidelines for a 74 hour certification and are specific to a wilderness setting. The Wilderness Medical Society defines wilderness as a remote geographical location more than one hour from definitive care. Students are required to complete a 1 credit CPR course with certification in order to satisfy the BWLS certification. A specific section of the American heart Association's Healthcare Provider CPR course will be offered exclusively for BWLS students. Registration for the CPR class will be separate from registration for the BWLS class.

OL 271 Facilitating Group Experiences (5 Credits)

Prerequisites: OL 111, OL 263, OL 255 and WR 121.

Introduces the broad concepts of group facilitation and presents the various "generations" of adventure facilitation. Students will become familiar with various models of the facilitation process and how each relates to experiential learning. Coursework integrates introductory concepts of leadership, foundational experiential education theory and the practice of facilitation in a variety of modes, including both high and low elements. Students are responsible for facilitating various group initiatives as a way to further comprehend the concepts presented. Successful students will be prepared to effectively and confidently facilitate groups in a variety of learning environments. This is a foundation course and a recommended preparation for other outdoor leadership program courses.

OL 273 Outdoor Recreation Leadership (5 Credits)

Prerequisites: OL 111, OL 263, OL 255 and WR 121.

This course is designed to provide both theoretical and practical knowledge of group leadership in an outdoor setting. Topics will be presented in lecture, discussed in various leadership scenarios, and then applied in group outings that the students will plan and lead. Special emphasis will be placed on group safety issues and risk assessment/risk management.

OL 280 Co-op Work Experience-OL (2 Credits)

Prerequisites: instructor approval.

Recommended preparation: complete a minimum of three OL classes.

Provides practicums by the department in conjunction with the community in outdoor recreation, outdoor education, adventure education, environmental education, experiential education, and wilderness therapy. Students must be approved for enrollment by an HHP-OL advisor before registering for this course. P/NP grading.

OL 294AC Alpine Climbing (3 Credits)

Prerequisites: OL 171, OL 271, OL 273.

Designed to introduce the student to guiding, teaching and leading technical mountain travel with specific emphasis on rock, snow, and ice anchors; glacier travel and crevasse rescue; and climbing steeper snow and ice. Additional relevant topics may also be introduced (e.g., avalanche safety, high altitude).

OL 294CA Canoe Program Instruction and Guiding (3 Credits)

Prerequisites with concurrency: OL 271 and OL 273.

Introduce students to guiding, teaching and leading flat and moving water canoe programs. May also introduce swift water rescue, whitewater techniques, etc.. Students will be instructed on the use of a variety of canoeing equipment and techniques used for travel by canoe within instructing/guiding situations (this course will teach much of the preliminary level material). Topics will include such areas as: water dynamics, rescue, client care and welfare, managing a group setting, risk assessment, as well as specific technical skills. Emphasis will be placed on advanced technical skill development and practical application. Although some time will be spent canoeing, this is not an activity course; all aspects of the course will be designed to teach the basic concepts of leading others in a variety of canoeing situations.

OL 294MB Mountain Bike Guiding and Trail Stewardship (3 Credits)

Prerequisites: OL 271 and OL 273.

This course is designed to instruct the student how to provide a fun and safe guided mountain bike experience to people of all ages through a combination of field lecture and hands-on practice. Students will learn how to teach basic mountain bike skills, design and lead group trips, diagnose trailside mechanical issues and perform basic trailside bike maintenance, and understand the characteristics and importance of sustainable mountain bike trail development and stewardship. The majority of the class time for this course will be spent in the field.

OL 294RC Teaching Rock Climbing (3 Credits)

Prerequisites: OL 171, OL 271 and OL 273.

This course is designed as an introduction to guiding/teaching rock climbing. Students will be instructed on the use of a variety of climbing equipment and techniques used for top-roped and lead climbing in guiding/teaching situations (this course will not teach beginning level material except in how to teach such material to a beginner student/client/friend). Topics will include such areas as: client care and welfare, managing a group setting, risk assessment, as well as technical skills. Emphasis will be placed on group work, discussion and practical application. Although some time will be spent climbing, this is not an activity course; all aspects of the course will be designed to teach the basic concepts of leading others in a variety of rock climbing situations.

OL 294WG Whitewater Raft Guiding (3 Credits)

Prerequisites: OL 271, OL 273 and OL 171.

This course is designed to instruct the student on how to provide a fun and safe whitewater raft experience to people of all ages through a combination of lecture and hands-on practice. Students will learn how to guide paddle rafts and oar rafts, read whitewater, lead group trips, and execute various whitewater rescue techniques. The majority of the class time for this course will be spent in the field, including overnight camping, and a variety of weather conditions may be encountered. A background in camping or outdoor living skills is strongly recommended. Please dress appropriately.

OL 298 Independent Study: OL (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Pharmacy Technician (PHM)

PHM 100 Pharmacy Technician Practice I (5 Credits)

Prerequisites: AH 105 or MTH 105 (or higher math course) or minimum placement into MTH 060; WR 065 (or higher) or BA 214 or minimum placement into WR 121 or WR 121 plus WR 098 Writing Seminar; and BI 105.

Corequisites: PHM 101, PHM 115, PHM 120.

Introduces basic information, techniques and procedures needed to assist the pharmacist in delivery of pharmaceutical products and services. Provides a working knowledge of the many aspects of pharmacy in community, institution and other practice settings. Progressive learning takes place as new information and skill sets are studied throughout the course. Covers the regulatory agencies and laws that affect pharmacy practice. Emphasis is placed on the duties and responsibilities of the pharmacy technician to assist the pharmacist. Explores employment opportunities, interpretation and processing of prescriptions, pharmacy law, standards of practice and orientation to the skills required for the occupation of a pharmacy technician.

PHM 101 Pharmacy Tech Law and Ethics (3 Credits)

Corequisites: PHM 100, PHM 120.

This course orients students to the work of pharmacy technicians. Students learn the concept of direct patient care and the technician's role in its delivery with emphasis on the complementary roles of pharmacists and technicians in both the community and institutional pharmacy setting. Students are introduced to the federal and state laws as well as the standards of practice which govern the practice of pharmacy. Students will be able to identify examples of professionalism in pharmacy and discuss the important areas of the Health Insurance Portability and Accountability Act (HIPAA) as it relates to patient confidentiality.

PHM 110 Pharmacy Calculations (3 Credits)

Prerequisites: MTH 095 or higher, PHM 100, PHM 101 and PHM 120.

Corequisites: PHM 130, PHM 140.

This online course reviews basic mathematics related to the application of math concepts to the duties of the pharmacy technician. This course covers the systems of weight, measurement and temperature and the conversion from one system to the other. Emphasis is placed on the math skills needed to calculate doses, drug quantity or volume, intravenous flow rates and percentage concentrations and to learn the mechanics of proportions related to pharmaceutical dosing. The basics of retail pricing and accounting are introduced.

PHM 115 Retail Simulation Lab (2 Credits)

Laboratory instruction complements the lecture with hands-on experience in medication preparation, dispensing, calculations and business applications.

PHM 120 Pharmacology I (5 Credits)

Corequisites: PHM 100, PHM 101.

This online course introduces students to trade and generic names of commonly prescribed drugs used in prevention and treatment of various disease entities. Emphasis is placed on important contraindications, side effects, precautions and interaction of drugs and the process of drug utilization review. The course will provide a basic understanding of pharmacological categories and factors that can affect drug kinetics.

PHM 130 Pharmacology II (5 Credits)

Corequisites: PHM 110, PHM 140.

This online course continues the introduction to trade and generic names of commonly prescribed drugs used in prevention and treatment of various disease entities. Emphasis is placed on important contraindications, side effects, precautions and interaction of drugs and the process of drug utilization review. The course will provide a basic understanding of pharmacological categories and factors that can affect drug kinetics.

PHM 140 Pharmacy Technician Practice II (5 Credits)

Corequisites: PHM 110, PHM 130.

Teaches the information, techniques and procedures needed to assist the pharmacist in delivery of pharmaceutical products and services. Provides a working knowledge of the many aspects of pharmacy in a community, institution and other practice settings. Progressive learning takes place as new information and skill sets are studied throughout the course. Students will understand the regulatory agencies and laws that affect pharmacy practice. Emphasis is placed on the duties and responsibilities of the pharmacy technician. This course explores employment opportunities, interpretation and processing of prescriptions, pharmacy law, standards of practice and orientation to the skills required for the occupation of a pharmacy technician. Application of skills in a practical setting will be covered. This is a four-credit hybrid course and students should expect to spend nine to 12 hours per week completing the required course work. In addition to the online section, this course requires a one-credit (20 hour) lecture-lab session. Lab sessions are 1.5 hours once a week (days and times to be determined). The labs will be held on the COCC Bend campus and students are responsible for all travel expenses.

PHM 145 Institutional Simulation Lab (2 Credits)

Laboratory instruction completes the lecture with hands-on experience in intravenous medication preparation, sterile compounding, calculations, and maintaining drug stocks.

PHM 180 Co-op Work Experience Pharmacy Technician (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

PHM 181 Pharmacy Technician Seminar (2 Credits)

Prerequisites: PHM 110, PHM 130 and PHM 140.

Corequisites: PHM 190, PHM 191.

This online seminar presents discussions on various aspects of the practicum. Students will share work related experiences with the instructor and their peers. Students will prepare to take the Pharmacy Technician National Certification exam. Covers employment opportunities, resume writing, completing job applications and interviewing skills. P/NP grading.

PHM 188 Special Studies: Pharmacy Technician (1-4 Credits)

Explores topics of current interest in the discipline.

PHM 190 Pharmacy Technician Practicum I: Hospital/Institutional (1-4 Credits)**Corequisites:** PHM 181, PHM 191.

This course is an unpaid learning experience which takes place on site at a prearranged clinical facility and is supervised by a registered pharmacist. Each credit is equivalent to 30 hours participation in the clinical worksite. Passing grade will require completion of 120 hours of practice at a facility registered with the Central Oregon Community College Pharmacy Technician Program. You must keep a notebook to log experiences at the worksite and report in the Journal Section of the Pharmacy Seminar Course (PHM 181). A satisfactory evaluation must be submitted by your preceptor that you have successfully exhibited skills in a hospital (institutional) pharmacy. P/NP grading.

PHM 191 Pharmacy Technician Practicum II: Retail/Community (1-4 Credits)**Corequisites:** PHM 181, PHM 190.

This course is an unpaid learning experience which takes place on-site at a prearranged clinical facility and is supervised by a registered pharmacist. Each credit is equivalent to 30 hours participation in the clinical setting. Passing grade will require completion of 120 hours of practice at a facility registered with the Central Oregon Community College Pharmacy Technician Program. You must keep a notebook to log experiences at the worksite and report in the Journal Section of the Pharmacy Seminar Course (PHM 181). A satisfactory evaluation must be submitted by your preceptor that you have successfully exhibited skills in a retail (community) pharmacy. P/NP grading.

PHM 199 Selected Topics: Pharmacy Technician (1-4 Credits)

This course is in development.

PHM 298 Independent Study: Pharmacy Technician (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Philosophy (PHL)

PHL 170 Philosophy of Love and Sex (3 Credits)

Provides an overview of the primary historical and contemporary Western views on the nature and meaning of romantic love. Students will analyze the links philosophers have found among beauty, friendship, passion, loyalty and transcendence and will also create their own philosophies of romantic love.

PHL 199 Selected Topics: Philosophy (1-3 Credits)

This course is in development.

PHL 200 Fundamentals of Philosophy (4 Credits)**Recommended preparation:** WR 121.

Explores some of the major questions and philosophical subject areas of the Western World. Includes questions such as the existence of God, or not; how we know what we think we know; social and political philosophy; ethics; free will and determinism; the existence of other minds; questions concerning the existence of a mind-independent external world; and philosophical underpinnings of science.

PHL 201 Epistemology - Knowledge, Science, and the History of Reason (4 Credits)**Recommended preparation:** WR 121.

Epistemology in the analytic tradition boils down to the "science of knowledge." what does it mean to "know?" How do we know the things we supposedly know? What makes up the objects of possible knowledge? This course explores basic problems and different theories of knowledge along with related issues in metaphysics, for example: how to define the nature and limits of knowledge; rationalist vs. empiricist perspectives; assumptions about reality and existence; and arguments for and against the existence of God.

PHL 202 Problems of Philosophy - Ethics (3 Credits)**Recommended preparation:** WR 121.

Explores basic problems in moral and social philosophy along with issues related to human nature, for example: how to define a good life or a good society; what is the nature of happiness, pleasure, virtue and justice; consequence vs. duty-based theories; the role of reason and/or passion; and arguments for and against natural law.

PHL 203 Problems of Philosophy - Logic (3 Credits)**Recommended preparation:** MTH 095 or minimum placement into

MTH 105 and WR 121.

Introduction to the study of reasoning and critical thinking. This involves identifying and evaluating deductive and inductive forms, distinguishing validity from truth/soundness, examining informal fallacies and the limits of language, constructing different types of arguments and applying these tools to issues in science, politics, morality and everyday life.

PHL 298 Independent Study: Philosophy (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

Physics (PH)

PH 201 General Physics I (5 Credits)

Studies Newtonian Mechanics beginning with basic math concepts and continuing into kinematics, dynamics, uniform circular motion, energy, momentum, and rotational equivalents of some of these topics. Lab addresses experiments and applied settings of Newtonian Mechanics along with explorations of diverse methods for analyzing and interpreting scientific data. Meets the basic requirements for many pre-health and life science programs. Should be taken in sequence. Recommended to be taken with MTH 111.

PH 202 General Physics II (5 Credits)

Studies basic electrostatic and magnetic interactions. Builds on concepts from PH 201 and continues into electrostatic forces, electric field concepts, electric potential, basic DC circuit concepts, magnetic interactions and forces, sources of magnetic fields and Faraday's Law. Lab addresses concepts and measurements in thermal physics and continues to explore the processes by which science seeks answers to questions. Meets the basic requirements for many pre-health and life science programs. Should be taken in sequence. Recommended to be taken with MTH 112.

PH 203 General Physics III (5 Credits)

Studies periodic behavior and topics from modern physics. Builds on concepts from previous terms and considers the physics of periodic motion, mechanical waves, wave interference, standing waves, acoustic waves, electromagnetic waves, geometric optics, diffractions and topics from special relativity to quantum mechanics. Lab includes basic optical experiences along with a long-term project to affirm student abilities to integrate investigative lab concepts from previous terms. Meets the basic requirements for many pre-health and life science programs. Should be taken in sequence.

PH 211 General Physics I (5 Credits)

Recommended preparation: MTH 251.

Studies Newtonian Mechanics beginning with basic math concepts and continuing into kinematics, dynamics, uniform circular motion, energy, momentum, and rotational equivalents of some of these topics. At all stages, applications of calculus to the solving of problems will be explored. Lab addresses experiments and applied settings of Newtonian Mechanics along with explorations of diverse methods for analyzing and interpreting scientific data. Required for engineering students and most students planning programs in the physical sciences. Should be taken in sequence.

PH 212 General Physics II (5 Credits)

Recommended preparation: MTH 252 and PH 211.

Studies basic electrostatic and magnetic interactions. Builds on concepts from PH 211 and continues into electrostatic forces, electric field concepts, electric potential, basic DC circuit concepts, magnetic interactions and forces, sources of magnetic fields and Faraday's Law. At all stages, applications of calculus to the solving of problems will be explored. Lab addresses concepts and measurements in thermal physics and continues to explore the processes by which science seeks answers to questions. Required for engineering students and most students planning programs in the physical sciences. Should be taken in sequence.

PH 213 General Physics III (5 Credits)

Recommended preparation: MTH 253 and PH 212; recommended to be taken with MTH 256.

Studies periodic behavior and topics from modern physics. Builds on concepts from previous terms and considers the physics of periodic motion, mechanical waves, wave interference, standing waves, acoustic waves, electromagnetic waves, geometric optics, diffractions and topics from special relativity to quantum mechanics. At all stages, applications of calculus to the solving of problems will be explored. Lab includes basic optical experiences along with a long-term project to affirm student abilities to integrate investigative lab concepts from previous terms. Required for engineering students and most students planning programs in the physical sciences. Should be taken in sequence.

PH 299 Selected Topics: Physics (1-5 Credits)

This course is in development.

Political Science (PS)

PS 188 Special Studies: Political Science (1-4 Credits)

Explores topics of current interest in the discipline.

PS 199 Selected Topics: Political Science (1-4 Credits)

This course is in development.

PS 201 Introduction to US Government and Politics (4 Credits)

Recommended preparation: WR 121.

Examines the American political system with its separation of powers, limited authority and guarantee of individual liberty. Includes a study of political ideology, parties, voting, media, and interest groups. Special emphasis will be placed on a detailed study of the Constitution and its application in today's America.

PS 203 State/Local Government (3 Credits)

Recommended preparation: or to be taken with WR 121.

Examines the thousands of governments located at the state and local levels. Explores separation of powers between governors, legislatures and state court systems. Opportunity for individual involvement in the administration, innovation and promotion of democracy is investigated.

PS 204 Introduction to Comparative Politics (4 Credits)

Recommended preparation: WR 121.

Surveys the field of comparative politics through in-depth analyses of countries in Europe, the Middle East, Asia, Africa, and the Americas. Comparative structures of these governments will be explored and analyzed in light of separation of powers, limited authority, and individual rights.

PS 205 Introduction to International Relations (4 Credits)

Recommended preparation: WR 121.

Introduces complex relations among the nations of a rapidly changing world. Focuses on the nature of the international system and factors affecting conflict and cooperation within the system.

PS 206 Introduction to Political Thought (4 Credits)

Recommended preparation: WR 121.

Introduces the broad range of issues and approaches in political theory. Examines the diversity of the field, as it includes both classic and historical texts as well as contemporary thought. From Plato to Machiavelli, and from Locke to Nietzsche, this course examines the major political themes of justice, equality, democracy, power, and liberty.

PS 207 Politics of the Middle East (4 Credits)

This course is intended as an introduction to politics in the Middle East and therefore provides a general overview of some of the chief issues of contemporary Middle Eastern politics. These include the impact of colonialism, nationalism and nation-state formation, regional crisis, the Arab-Israeli conflict, the politics of oil, Islamism, democratization, political economy, globalization, and human rights.

PS 250 Terrorism and the American Public (4 Credits)

Recommended preparation: WR121.

The course defines terrorism, considers the motivations of terrorists, considers policy proposals that might be taken to reduce the likelihood of terrorism, and investigates the tensions inherent in democracies between civil liberties and national security.

PS 280 Co-op Work Experience Political Science (1-4 Credits)

Prerequisites: instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

PS 298 Independent Study: Political Science (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

PS 299 Selected Topics: Political Science (1-4 Credits)

This course is in development.

Psychology (PSY)

PSY 101 Applied Psychology (3 Credits)

This course introduces the basic foundation of psychology to degree-seeking students and career and technical students. Focuses on practical applications of psychological principles in the workplace and everyday life. Topics include motivation, emotions, individual development, identifying problem behavior, coping resources, group dynamics and communication skills.

PSY 188 Special Studies: Psychology (1-4 Credits)

Explores topics of current interest in the discipline.

PSY 199 Selected Topics: Psychology (1-4 Credits)

This course is in development.

PSY 201 Mind and Brain (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Introduces psychology as a scientific study of the biological bases of behavior. Includes history of psychology as a science and surveys methods of inquiry, statistics, sensation, perception, states of consciousness including drug effects, motivation, emotion, learning, memory, language, thinking and intelligence. The major theoretical approaches to psychology are included.

PSY 202 Mind and Society (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Emphasizes psychology as a scientific process, surveying methods of inquiry. Overview of selected areas of psychological study including: human development through the life span; human sexuality; health psychology; personality theories and assessment; psychological disorders; intervention and therapy; social psychology, and human factors psychology. The major theoretical approaches to psychology are included.

PSY 204 Research Methods: Design and Analysis (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Learn scientific method and deepen your appreciation of why it is a valuable method for learning about the world. Teaches scientific concepts and terminology, how the scientific literature is used to generate hypotheses and interpret research findings, how research studies are designed, how data are collected and managed, and how statistics are used to understand data. Class will include discussions of parametric and nonparametric analyses, between subject designs, within subject designs, differences between experimental and correlational research and the differences between qualitative and quantitative data.

PSY 213 Introduction to Physiological Psychology (4 Credits)

Recommended preparation: BI 121, BI 122, BI 231, BI 232, BI 233 or PSY 201.

This course provides a scientific introduction to the brain's anatomy and function. It builds a foundation for understanding sensory and motor systems, brain rhythms and brain plasticity. Essential neurophysiological processes that underlie topics such as human development, cognitive and emotional behavior, gender, and psychological disorders will be presented.

PSY 214 Personality Psychology (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Examines the major theoretical perspectives on personality formation, including biological, psychodynamic, humanistic, cognitive, behavioral, and sociocultural influences. Personality tests and measures are also discussed. The major theoretical approaches to psychology are included.

PSY 215 Developmental Psychology (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Comprehensive study of human development over the life span from prenatal through late adult development. Focuses on physical, cognitive and psychosocial changes throughout the human life cycle and emphasizes an interactionist approach to explain developmental processes and outcomes. The major theoretical approaches to psychology are included.

PSY 216 Social Psychology (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065; and PSY 202 or SOC 201.

Surveys influence of psychological processes on groups and the influence of culture, society and groups on individuals. Includes analysis and exploration of behavior from a social psychology perspective. Topics include aggression, prejudice, conformity, affiliation, altruism, persuasion, interpersonal attraction, social cognition, conflict resolution, attitude formation and change, and applied social psychology.

PSY 219 Abnormal Psychology (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Introductory survey of the variety of emotional, mental and behavioral disorders experienced by humans. History, theoretical perspectives, diagnostic criteria and issues, etiology and treatment strategies are covered for the major forms of psychopathology.

PSY 225 Eating Disorders (3 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

This course explores eating behavior, weight regulation, and body image in contemporary society. Cultural, familial, social, personal and biological factors in eating and weight problems will be examined. The course will cover the full continuum from normal, healthy eating to clinical eating disorders and related behaviors, which include chronic dieting, excessive exercise, emotional eating, binge eating, obesity or poor body image.

PSY 227 Animal Behavior (4 Credits)

This course will cover the fundamental aspects of animal behavior: how and why animals behave and how animal behavior is studied. Topics include mechanisms of behavior, behavioral ecology, feeding, predation, mating, parenting, communication and social behavior.

PSY 228 Positive Psychology (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

This course explores the components necessary to help a person flourish in their environment by addressing the biopsychosocial aspects that contribute to positive behaviors and human strengths. Material will provide an overview of the theories of happiness, importance of self-care and positive social cognitions, utilizing strengths in personal and professional venues, and means of achieving healthy relationships personally and with one's community.

PSY 233 Psychology of Violence & Aggression (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Addresses the developmental, social, physiological and cultural aspects that contribute to violence and aggression as well as the legal issues involved. Includes an overview of the theories of aggression, as well as factors influencing family violence, violent children, mob mentality, hate crimes, war and terrorism, stalking, sex crimes and murder.

PSY 250 Readings in Psychology (1 Credit)

Prerequisites: Instructor approval.

Provides a scientific introduction to how to critically read and discuss scientific literature.

PSY 261 Indonesia Field Study (3 Credits)

Prerequisites: Instructor approval.

Prepares students for International Field Study Program in Indonesia. Topics include Indonesian culture and history, Indonesian language and development and design of a field research project to be conducted in Indonesia.

PSY 280 Co-op Work Experience Psychology (1-4 Credits)

Prerequisites: instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

PSY 288 Special Studies: Psychology (1-4 Credits)

Explores topics of current interest in the discipline.

PSY 298 Independent Study: Psychology (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline. Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

PSY 299 Selected Topics: Psychology (1-4 Credits)

This course is in development.

Reading (RD)

RD 099 Selected Topics: Reading (1-4 Credits)

This course is in development.

RD 117 College Reading (3 Credits)

Offers instruction in flexible reading skills. Focuses on building reading speed and comprehension, and acquiring a repertoire of reading strategies suitable for understanding and retaining information acquired in typical college reading.

RD 199 Selected Topics: Reading (1-4 Credits)

This course is in development.

Sociology (SOC)

SOC 141 Film & Society: Race, Gender, and Class (2 Credits)

Examines the representation of race, social class and gender in film. Special attention is given to how particular representations reflect the broader historical context surrounding when the films were produced and culturally based audience sentiments. Anthropological and sociological analyses of the films will be provided to give a multi-disciplinary account of how films reflect, create and support various ideological positions regarding race, class and gender. This course is also offered as ANTH 141; students can not use credit from both courses.

SOC 142 Film & Society: Global Cultures (2 Credits)

Examines global issues in both foreign and domestic films from sociological and anthropological perspectives. Selected films cover topics that are relevant to understanding global processes such as global economy and Islam in the contemporary world, as well as films that address the more regionally localized processes of community and family. The purpose of the course is to use film to expose students to diverse perspectives and to encourage the critical awareness of the global interconnections that influence and constrain our modern lives. Films will include documentaries, as well as feature films.

SOC 143 Film & Society: Contemporary Issues (2 Credits)

Examines contemporary issues in film from sociological and anthropological perspectives. Selected films cover such topics as youth culture, nationalism, local culture and poverty, mental health or other social problems. The content of the films, as well as issues of film production, historical context and audience reception will be the major focus of analysis.

SOC 188 Special Studies: Sociology (1-4 Credits)

Explores topics of current interest in the discipline.

SOC 199 Selected Topics: Sociology (1-4 Credits)

This course is in development.

SOC 201 Introduction to Sociology (4 Credits)

Recommended preparation: WR 121.

Provides conceptual tools for analyzing and understanding social forces that shape our lives. The relationships among socialization and social groups, as well as economic, political and religious systems are investigated. This course is considered a human relations component.

SOC 208 Sport and Society (4 Credits)

Recommended preparation: SOC 201.

While we use sociology to help make sense of sport, we also use sport to develop the ability to think sociologically about society. Subjects include sport and: values, socialization, deviance, social problems and social inequities.

SOC 211 Social Deviance (4 Credits)

Recommended preparation: WR 121 or SOC 201.

Examines the definition of deviant behavior. Focuses on deviant behavior of societies as well as individuals including issues such as drugs, organized crime, government deviance and crimes against women.

SOC 212 Race, Class, and Gender (4 Credits)

Recommended preparation: WR 121 or SOC 201.

Analyzes the relationship between race, class, and gender and political and economic systems. Critically examines the interrelationship between race, class, and gender and societal structures and history.

SOC 215 Social Issues and Social Movements (4 Credits)

Recommended preparation: WR 121 or SOC 201.

Applies sociological analysis to contemporary issues and movements. Examples include the environmental crisis, race and ethnic relations, sexual deviancy, drug abuse, health care and violence.

SOC 219 Sociology of Religion (4 Credits)

Recommended preparation: SOC 201.

Surveys a variety of religious traditions and introduces the sociological perspective for the study of religion as part of a larger social order. Explores the nature of religious beliefs and practices, both historically and in contemporary context. Examines the relationship between religious traditions and the current globalization of the institution of religion in culture and society.

SOC 222 Sociology of Family and Intimate Relationships (4 Credits)

Recommended preparation: WR 121.

Examines the connections between family and intimate relations and society. Addresses the impact of economic, social, and political conditions on families and intimate relations past and present.

SOC 250 Sociology of Popular Culture (4 Credits)

Recommended preparation: WR 121.

Course applies a sociological perspective to the study of films, music, advertising and other forms of popular culture. Three separate elements of popular culture are examined: the production of culture, the reception of culture and the text or symbols themselves.

SOC 280 Co-op Work Experience Sociology (1-4 Credits)**Prerequisites:** Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

SOC 298 Independent Study: Sociology (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

SOC 299 Selected Topics: Sociology (1-4 Credits)

This course is in development.

Spanish (SPAN)

SPAN 101 First Year Spanish I (4 Credits)

Course designed for beginners; students with prior Spanish experience should contact COCC Spanish instructors to determine which Spanish course is appropriate for them. Begins the development of reading, writing, listening and speaking skills. Focuses on the concepts of pronunciation, gender, descriptions, possessives, present tense -ar verbs, numbers, question words, and vocabulary that includes the following categories: alphabet, people, greetings, school items, family and activities.

SPAN 102 First Year Spanish II (4 Credits)**Recommended preparation:** SPAN 101 or one year of high school Spanish.

Continues the development of reading, writing, listening and speaking skills. Focuses on the concepts of weather, time & date, clothing, colors, regular -er/-ir verbs, the verb gustar, interrogatives, stem-changing verbs (-ie, e-i, o-ue), the city, the home, furniture & appliances, the verb estar (used with prepositions, adjectives, the present progressive, and contrasted with the verb ser), the verb ir and the phrase ir + infinitivo (used to refer to the future), and adjectives referring to physical and emotional states. Students are encouraged to review SPAN 101 concepts and vocabulary prior to class.

SPAN 103 First Year Spanish III (4 Credits)**Recommended preparation:** SPAN 102 or two years of high school Spanish.

Final course in the first-year sequence. Continues the development of reading, writing, listening and speaking skills. Focuses on the concepts of , professions, verbs with changes in the first person (yo), saber/ conocer, body parts, reflexive verbs, adverbs of time and frequency, sports and outdoor activities, the preterite tense (including regular, stem-changing, and irregular verbs), food vocabulary, por/para, vocabulary related to meals and table settings, and direct object pronouns. Students are encouraged to review the concepts of SPAN 101 and SPAN 102 prior to class.

SPAN 188 Special Studies: Spanish (1-4 Credits)

Explores topics of current interest in the discipline.

SPAN 199 Selected Topics: Spanish (1-4 Credits)

This course is in development.

SPAN 201 Second Year Spanish I (4 Credits)**Recommended preparation:** SPAN 103 or three years of high school Spanish.

First course of the second-year sequence. Continues, after SPAN 103, with the intermediate development of reading, writing, listening and speaking skills. Includes review of the preterite tense and vocabulary from SPAN 103. Focuses on the imperfect tense, (usages with and in conjunction with the preterite), indirect, direct, and double object pronouns, indefinite and negative words, por/para, creating adverbs, and vocabulary including the following categories: chores and housework, fiestas and other celebrations, pastimes and diversion, and accidents.

SPAN 202 Second Year Spanish II (4 Credits)**Recommended preparation:** SPAN 201 or four years of high school Spanish.

Continues with the intermediate development of reading, writing, listening and speaking skills. Focuses on the concepts of relative pronouns, the imperative (commands: formal, informal, plural, and singular), the use of pronouns with the imperative, the impersonal and passive se, comparisons, using se to describe unplanned occurrences or accidents, the simple future tense, and vocabulary including the following categories: travel, shopping, fine art, and nature and the environment.

SPAN 203 Second Year Spanish III (4 Credits)**Recommended preparation:** SPAN 202 or four years of high school Spanish.

Final course in the second-year sequence. Continues with the intermediate development of reading, writing, listening and speaking skills. Focuses on the concepts of estar used with past participles, the presente perfecto, the present subjunctive (used with: impersonal expressions, expressions of doubt, expressions of desire, expressions of emotion, adjective clauses, adverbial clauses and conjunctions), reciprocal verbs, the conditional tense, the past subjunctive, the past perfect tense, and vocabulary covering the following: animals, personal relationships, popular culture, health and medical emergencies, and nationalities and political terms.

SPAN 211 Spanish Conversation and Culture I (3 Credits)**Recommended preparation:** or to be taken with SPAN 203.

Designed for students who wish to continue mastering fluency in the speaking of Spanish. Objective is to study various Spanish-speaking cultures. Taught exclusively in Spanish and some student participation is required. Does not meet baccalaureate degree language requirements.

SPAN 212 Spanish Conversation and Culture II (3 Credits)**Recommended preparation:** or to be taken with SPAN 203.

Designed for students who wish to continue mastering fluency in the speaking of Spanish. Objective is to study various Spanish-speaking cultures. Taught exclusively in Spanish and some student participation is required. Does not meet baccalaureate degree language requirements.

SPAN 213 Spanish Conversation and Culture III (3 Credits)**Recommended preparation:** or to be taken with SPAN 203.

Designed for students who wish to continue mastering fluency in the speaking of Spanish. Objective is to study various Spanish-speaking cultures. Taught exclusively in Spanish and some student participation is required. Does not meet baccalaureate degree language requirements.

SPAN 288 Special Studies: Spanish (1-4 Credits)

Explores topics of current interest in the discipline.

SPAN 298 Independent Study: Spanish (1-4 Credits)**Prerequisites:** instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

SPAN 299 Selected Topics: Spanish (1-4 Credits)

This course is in development.

Structural Fire Science (SFS)

SFS 101 Introduction to Emergency Services (4 Credits)

Provides an overview to fire protection and EMS; career opportunities, related fields, philosophy and history, organization and function of public and private agencies, nomenclature, functions. In addition, provides new students a broad overview of college and life success strategies as related to this field.

SFS 102 Fire Service Safety and Survival (3 Credits)

This course broadens the scope of the national firefighter life-safety initiatives and emphasizes their importance to firefighters and on up the ranks through management levels. It is designed to create a positive attitude towards firefighter safety; to have the student recognize how serious the firefighter injury and death problem is; to recognize their responsibility for reducing future injuries and deaths; to provide information for improving safety considerations; to demonstrate that most firefighter injuries and deaths are preventable.

SFS 105 Fire Behavior & Combustion I (3 Credits)

Prerequisites: department approval.

Prerequisites with concurrency: GS105 or CH104 or higher.

Explores the theories and fundamentals of how and why fires start, spread, and how they are controlled.

SFS 110 Building Construction for Fire Personnel (3 Credits)

Recommended preparation: SFS 101, SFS 102.

Studies building construction with emphasis on how buildings fail when subjected to fire. Case studies used to illustrate points. Studies of roof and wall construction enable the student to predict failure points and adapt fire fighting strategies accordingly. Buildings under construction and those subjected to external forces will also be studied. Field trips take students into the community to study various construction techniques.

SFS 112 Public Education and Fire Prevention (3 Credits)

Studies fundamentals of public relations pertaining to fire service including emergency operations, general public appearances, writing news releases, articles and speeches and general media contact. Students work in developing an effective public education campaign for delivery. Audience type and message content is carefully analyzed. Recommended to be taken with WR 121, SFS 101 and SFS 102.

SFS 120 Fixed Systems and Extinguishers (3 Credits)

Recommended preparation: SFS 101 and SFS 102.

Studies portable and fixed extinguisher equipment, fire alarm and detection systems, sprinkler systems and standpipes, and special hazard protection systems. Covers extinguishing agents, system design and maintenance procedures. Field exercises expose students to systems discussed in class.

SFS 121 Fire Law (1 Credit)

Recommended preparation: SFS 101, SFS 102.

Introduces the modern legal system with emphasis on cases related to fire service. Case law is studied to understand underlying concepts. Reviews case law affecting modern fire service agencies. Explores laws relating to medical treatment of patients, fire protection, codes, emergency response and department activities on the fire ground.

SFS 122 Fire Department Budget (1 Credit)

Outlines the budget process as required by Oregon laws to include types of budgets, the process of preparing the budget and classifying expenditures.

SFS 123 HazMat Awareness & Operations (3 Credits)

Designed to prepare individuals to safely respond to hazardous materials emergencies. Individuals will learn to analyze an incident; detect the presence of hazardous materials; survey the scene; collect hazard information from the DOT Emergency Response Guidebook; implement actions consistent with standard operating procedures; initiate protective actions and initiate the notification process. Students complete all training and education requirements for Hazardous Materials Awareness and Operations level certification, per National Fire Protection Association (NFPA) Standard 472 and State certification requirements per Oregon Department of Public Safety Standards and Training (DPSST).

SFS 133 Fire Entry Exams (3 Credits)

Introduces and prepares student for employment testing in a structural fire agency; beneficial for both initial employment testing and promotional examinations within their agency. Exposure to testing in a variety of methods currently in use in the fire service hiring processes, offers strategies for improving test performance as well as job search skills.

SFS 188 Special Studies: Structural Fire Science (1-4 Credits)

Explores topics of current interest in the discipline.

SFS 199 Selected Topics: SFS (1-4 Credits)

This course is in development.

SFS 205 Fire Behavior and Combustion II (2 Credits)

Prerequisites: SFS 105 and department approval based on Firefighter I Academy.

Builds on the foundational knowledge and skills objectives developed in SFS 105, Fire Behavior & Combustion I and Firefighter I academy. Due to safety and OSHA requirements, students must be affiliated with a fire department and have passed the SCBA Fit test within the previous year. Designed for second year students to be taken the year of graduation. Requires three full days in the field with live fire.

SFS 210 Fire Investigation (3 Credits)

Prerequisites: SFS 101; SFS 102; SFS 105; SFS 110; and SFS 112.

Prerequisites with concurrency: SFS 120.

Provides basic information in fire cause determination. Studies arson detection, protection of point of origin, fire indicators, motives and vehicle fire investigation. Field trips and classroom props aid the student in understanding the science of fire investigation.

SFS 212 Fire Codes and Ordinances (3 Credits)

Recommended preparation: SFS 101, SFS 102.

Introduces the International Fire and Building Code (IFC) and laws promulgated by the Office of the State Fire Marshal relating to fire safety and prevention. Includes overview of administrative provisions and many of the applicable standards in the codes. Students apply the codes to specific situations to illustrate understanding and application of the codes and related laws. Students also identify applicable sections of the codes in response to scenarios presented in the classroom or in the field.

SFS 230 Rescue Practices (3 Credits)

Recommended preparation: SFS 101 and SFS 102.

Explores techniques and applications of specialized rescue practices in modern fire service. Focuses on vehicle rescue, steep-angle rescue and swift-water rescue with basic overviews of ice rescue, electrical rescue and trench rescue techniques. Using modern tools and techniques, students apply classroom learning in several comprehensive and dynamic field exercises. Emergency Medical Technician - Basic training allows students to integrate fire and EMS activities at an emergency rescue scene.

SFS 232 Fire Protection Hydraulics and Water Supply (4 Credits)

Prerequisites: department approval.

Recommended preparation: MTH 065 or higher, GS 104, GS 105, SFS 105, and access to engines or affiliation are highly recommended for students' success in the class.

This course provides a foundation of theoretical knowledge in conjunction with hands on labs in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

SFS 263 Human Behavior in Fire (3 Credits)

Prerequisites: SFS 101; SFS 102; SFS 110; SFS 112; SFS 120; MTH 060 or higher or minimum placement into MTH 065.

Provides fundamental information on human behavior as it relates to fire and mass casualties. Understanding human behavior is important as it relates to building design, evacuation and fire department operations. It is especially important where populations are large or include the disabled or persons having limited mobility.

SFS 275 Capstone: Tactics & Strategies (3 Credits)

Prerequisites: SFS 101; SFS 102; SFS 110; SFS 105; and SFS 120.

Prerequisites with concurrency: SFS 232.

Provides a capstone experience to the Structural Fire AAS program with an in-depth analysis of the principles of fire control through the utilization of personnel, equipment, and extinguishing agents on the fire ground.

Taken in the final term prior to program completion.

SFS 280 Co-op Work Experience Structural Fire Science (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

SFS 288 Special Studies: Structural Fire (1-4 Credits)

Explores topics of current interest in the discipline.

SFS 298 Independent Study: Structural Fire Science (1-4 Credits)

Prerequisites: Instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

SFS 299 Selected Topics: Structural Fire Science (1-4 Credits)

This course is in development.

Theater Arts (TA)

TA 141 Acting I (3 Credits)

Acquaints students with fundamental principles of acting. In-class performance of memorized material required. Grading based primarily on in-class participation. Attendance is mandatory.

TA 142 Acting II (3 Credits)

Recommended preparation: TA 141.

Emphasizes in-depth character study and textual analysis through preparation of scenes from modern American plays. Attendance is mandatory. Repeatable for credit.

TA 143 Acting III (3 Credits)

Recommended preparation: TA 141 and TA 142.

Further in-depth character study and scene work. Attendance is mandatory. Repeatable for credit.

TA 153 Rehearsal/Performance (1-3 Credits)

Prerequisites: instructor approval through audition or interview.

Practical application of classroom theory through participation in Magic Circle Theatre and Magic Circle Dance Theatre productions. Credit can be earned in three areas: dance, technical theater and acting.

TA 188 Special Studies: Theater (1-4 Credits)

Explores topics of current interest in the discipline.

TA 199 Selected Topics: Theater Arts (1-4 Credits)

This course is in development.

TA 200 Introduction to Theater (3 Credits)

Introduces student to the world of theater. Combines overview of historical facts and theory with contemporary practice. Explores career options in theatrical production.

TA 207 Readings In Theater (3 Credits)

Offers a study of selected plays, loosely grouped by country of origin, theme, era or playwrights. Emphasis placed on texts in performance rather than on literary analysis. Repeatable for credit.

TA 280 Co-op Work Experience Theater Arts (1-4 Credits)

Prerequisites: instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

TA 298 Independent Study: Theater Arts (1-4 Credits)

Prerequisites: instructor approval.

Recommended preparation: prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

TA 299 Selected Topics: Theater Arts (1-4 Credits)

This course is in development.

Veterinary Technician (VT)

VT 101 Intro to Veterinary Technician (3 Credits)

Prerequisites: BI 101 or BI 211; GS 105 or CH 104; MTH 095, 111 or higher; WR 121; and COMM 218.

Corequisites: VT 102, VT 103, VT 117.

Introduces the role of the veterinary technician within the veterinary health care team, career opportunities for veterinary technicians, the history of veterinary medicine, ethics, common small animal breeds and effective communication techniques within the veterinary teams and with clientele.

VT 102 Veterinary Terminology (3 Credits)

Corequisites: VT 101, VT 103, VT 117.

Introduces veterinary medical terminology, including medical word parts, common medical terms, and a basic knowledge of word construction.

VT 103 Animal Hospital and Office Procedures (2 Credits)

Corequisites: VT 101, VT 102, VT 117.

Introduces veterinary medical records, admitting procedures, and record maintenance. Covers basic bookkeeping skills, inventory control measures, marketing, and the use of computer software specifically designed for use in a veterinary hospital.

VT 108 Small Animal Nursing (4 Credits)

Prerequisites: VT 101, VT 102, VT 103 and VT 117.

Corequisites: VT 110, VT 114, VT 118.

Introduces basic techniques necessary for the provision of nursing care to small animals, including small animal restraint, husbandry, behavior, physical examination, medication administration, and grooming. Includes kennel duty experience in the care of a variety of companion animals.

VT 110 Parasitology and Pathology (4 Credits)**Prerequisites:** VT 101, VT 102, VT 103 and VT 117.**Corequisites:** VT 108, VT 114, VT 118.

Explores the life cycles, modes of transmission, and diseases associated with common parasites of animals. Lab introduces diagnostic procedures and covers identification of parasites using prepared slides and collected specimens.

VT 111 Hematology and Urinalysis (5 Credits)**Prerequisites:** VT 108, VT 110, VT 114, VT 118.**Corequisites:** VT 112, VT 113, VT 116.

Covers laboratory techniques of hematology, serum chemistry, and urinalysis. Also explores special commercial laboratory test procedures.

VT 112 Advanced Small Animal Nursing (4 Credits)**Prerequisites:** VT 108, VT 110, VT 114 and VT 118.**Corequisites:** VT 111, VT 113, VT 116.

Covers advanced nursing techniques including parenteral administration of medication, bandaging and wound care, cardiopulmonary resuscitation (CPR), physical rehabilitation, diagnostic sample collection, and vaccination of small animals.

VT 113 Exotic and Lab Animal Medicine (3 Credits)**Prerequisites:** VT 108, VT 110, VT 114 and VT 118.**Corequisites:** VT 111, VT 112, VT 116.

Provides an overview of the anatomy and physiology, the care and handling, and diseases of common laboratory and exotic small animals. Covers the principles of lab animal use in research with an emphasis on animal welfare.

VT 114 Pharmaceutical Math (3 Credits)**Prerequisites:** VT 101, VT 102, VT 103 and VT 117.**Corequisites:** VT 108, VT 110, VT 118.

Covers pharmacological mathematics, including drug dosage calculations and fluid calculations. Introduces prescription terminology and labeling.

VT 116 Pharmacology (4 Credits)**Prerequisites:** VT 108, VT 110, VT 114 and VT 118.**Corequisites:** VT 111, VT 112, VT 113.

Explores pharmacological principles, including classes, mechanisms, and side effects of drugs used in veterinary medicine.

VT 117 Veterinary Anatomy & Physiology I (6 Credits)**Corequisites:** VT 101, VT 102, VT 103.

This is the first of two courses covering the structure and function of animal bodies and the anatomical and physiological differences between selected species. Examines body organization, cellular biology, histology, and gross anatomy and physiology of the integumentary, skeletal, muscular, and nervous systems. Concurrent labs include the use of skeletons, models, virtual anatomy tools and dissection of cadavers.

VT 118 Veterinary Anatomy & Physiology II (5 Credits)**Prerequisites:** VT 101, VT 102, VT 103 and VT 117.**Corequisites:** VT 108, VT 110, VT 114.

This is the second of two courses covering the structure and function of animal bodies and the anatomical and physiological differences between domestic species. Continues the study of the interrelationship of organ systems, including the endocrine, reproductive, cardiovascular, lymphatic, digestive, respiratory, and urinary systems.

VT 188 Special Studies Vet Technician (1-4 Credits)

Special studies for Veterinary Technician.

VT 200 Radiation Safety (2 Credits)**Prerequisites:** VT 111, VT 112, VT 113 and VT 116.**Corequisites:** VT 201, VT 203, VT 208, VT 212.

Covers the physics of x-ray photon production, radiation safety, quality control measures, federal and state radiation regulations, film processing, radiographic technique evaluation, positioning of animals, and proper identification and storage of radiographic images.

VT 201 Anesthesiology and Surgery Techniques (4 Credits)**Prerequisites:** VT 111, VT 112, VT 113, and VT 116.**Corequisites:** VT 200, VT 203, VT 208, VT 212.

Covers the principles and practices of veterinary anesthesia and surgical assistance.

VT 202 Surgical Nursing and Dentistry (4 Credits)**Prerequisites:** VT 200, VT 201, VT 203, VT 208, and VT 212.**Corequisites:** VT 204, VT 206, VT 209.

Covers common dental problems and dental prophylaxis. Explores pre-operative, operative, and post-operative protocols for routine surgical procedures. Provides hands-on experience in anesthesiology, surgical patient preparation, surgical assistance, and dentistry.

VT 203 Large Animal Nursing (4 Credits)**Prerequisites:** VT 111, VT 112, VT 113 and VT 116.**Corequisites:** VT 200, VT 201, VT 208, VT 212.

Covers common large animal breeds (ruminant, equine, swine, and chickens). Introduces techniques necessary for the provision of nursing care to large animals, including restraint, husbandry, behavior, physical examination, medication administration, diagnostic sample collection, grooming, bandaging, nutrition, and vaccination. Includes animal husbandry experience in the care of large animals.

VT 204 Diagnostic Imaging (3 Credits)**Prerequisites:** VT 200, VT 201, VT 203, VT 208 and VT 212.**Corequisites:** VT 202, VT 206, VT 209.

Covers the operation and use of fixed, portable, and dental x-ray machines; the care and development of films; radiographic positioning of animals; and evaluation of radiographic technique. Explores additional diagnostic imaging modalities, such as ultrasound, MRI, CT, and endoscopy.

VT 206 Small Animal Diseases (4 Credits)**Prerequisites:** VT 200, VT 201, VT 203, VT 208 and VT 212.**Corequisites:** VT 202, VT 204, VT 209.

Covers preventative medicine and diseases of small animals including the public health significance of relevant small animal diseases. Examines the role of the veterinary technician in performing diagnostics, nursing care, and client education.

VT 208 Animal Nutrition (2 Credits)**Prerequisites:** VT 200, VT 201, VT 203, VT 209 and VT 212.**Corequisites:** VT 202, VT 204, VT 206.

Covers the basic principles of nutrition, the development of nutrition protocols based on the life stage and health status of the patient, and explores special prescription diets used in veterinary medicine.

VT 209 Large Animal Diseases (3 Credits)**Prerequisites:** VT 111, VT 112, VT 113 and VT 116.**Corequisites:** VT 200, VT 201, VT 203, VT 212.

Covers preventative medicine and diseases of large animals including the public health significance of relevant large animal diseases. Examines the role of the veterinary technician in performing diagnostics, nursing care, and client education.

VT 212 Veterinary Microbiology (4 Credits)**Prerequisites:** VT 111, VT 112, VT 113 and VT 116.**Corequisites:** VT 200, VT 201, VT 203, VT 208.

Explores clinical microbiology and cytology as it relates to veterinary technology. Covers the basic principles of microbial classification, growth, and pathogenicity as well as various laboratory methods used in identification of microorganisms.

VT 280 Clinical Practicum I (6 Credits)**Prerequisites:** VT 202, VT 204, VT 206 and VT 209.**Corequisites:** VT 281.

Provides hands-on experience working with actual animal cases in a clinical veterinary setting. Links prior coursework with off-campus learning experiences providing development of increased proficiency of essential skills necessary for a career as a veterinary technician. In this first practicum course, students are matched to two different practicum sites, each for a three-week period. Each student is expected to attend 120 total hours for each three-week period at a clinical site.

VT 281 Clinical Practicum II (4 Credits)**Prerequisites:** VT 202, VT 204, VT 206 and VT 209.

Provides hands-on experience working with actual animal cases in a clinical veterinary setting. Links prior coursework with off-campus learning experiences providing development of increased proficiency of essential skills necessary for a career as a veterinary technician. In this second practicum course, students will be matched to a practicum site for a three-week period. Each student is expected to attend 120 total hours for the three-week period at the clinical site. Reflection upon the practicum experiences will occur during the final week of the course.

VT 288 Special Studies Vet Technician (1-4 Credits)

Special Studies for Veterinary Technician.

VT 298 Independent Study: Veterinary Technician (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** prior coursework in the discipline.

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading.

VT 299 Special Topics Vet Technician (1-4 Credits)

Special Topics Veterinary Technician.

Wildland Fire (WF)

WF 101 Firefighter Type II Training (3 Credits)

The purpose of this course is to train new firefighters in basic firefighting skills and the basic fire behavior factors that will aid them in the safe and effective control of wildland fires. Students will receive NWCG certification in S-130, S-190, L-180 and S-133.

WF 103 Safety for Survival (3 Credits)

Provides the fundamentals and technical knowledge needed for fire line safety as it pertains to: entrapment avoidance, fire shelter deployment, hazards, injuries and safety issues, mental and physical health, fitness, and current issues. Meets the NWCG requirement for RT-130.

WF 111 Tactical Decision Simulations (2 Credits)

The course uses classroom and simulations to focus on the fire environment and the indicators fireline personnel should recognize in order to anticipate or predict problem fire behavior during fireline operations while utilizing lookouts, communications, escape routes and safety zones. Upon completion of the course and given a Fireline Handbook, Incident Response Pocket Guide (IRPG), and specific problem situations related to fire assignments, student will be provided with the knowledge and practice in decision making necessary to effectively apply tactical decisions making in wildland fire. P/NP grading.

WF 131 S-131, Firefighter Type I (2 Credits)**Recommended preparation:** WF 100 and WF 101.

Firefighter Type 1, S-131, is designed to meet the training needs of the Firefighter Type 1 (FFT1). This course is designed to be interactive in nature. It contains several tactical decision games designed to facilitate learning the objectives and class discussion. Topics include fireline reference materials, communications, and tactical decision making.

WF 134 S-134 Lookouts, Communication, Escape Routes, Safety Zones (2 Credits)

Students become engaged in the process of designing their own safety program. The small group exercises will discuss and develop the L, C, E, S, creating a list of performance standards. The entire class will then work together to produce and edit a contract, based on consensus, which guides performance.

WF 188 Special Studies: Wildland Fire (1-4 Credits)

Explores topics of current interest in the discipline.

WF 199 Selected Topics: Wildland Fire (1-4 Credits)

This course is in development.

WF 200 S-200 Initial Attack Incident Command (2 Credits)

Designed to meet the training needs of the ICT4. Presented in a lecture/discussion format and supplemented with group exercises. The six instructional units cover: readiness and mobilization; size up, planning and ordering; deployment and containment; administrative requirements; and post-fire evaluation.

WF 201 NFPA Instructor 1 (3 Credits)

NFPA Instructor 1 is an intensive, instructional methodology program. It addresses the job performance requirement of the National Fire Protection Agency, 1041 Standard for Fire Service Instructor Professional Qualifications and the National Wildfire Coordinating Group. The course prepares students for planning instruction, using a variety of instructional methods, teaching diverse learners, and evaluating course outcomes. The course also provides guidelines for addressing the critical issues of safety and the legal issues of training, and it provides opportunities for participants to participate in application activities. P/NP grading.

WF 203 S-203 Introduction to Incident Information (3 Credits)

Provides students with the knowledge and skills they need to serve as public information officers (PIOF). Touches on virtually all aspects of establishing and maintaining an incident information operation, from communicating with internal and external audiences to handling special situations. Format of the course is lecture and exercises with a final simulation.

WF 210 FI-210 Wildfire Origin/Cause (3 Credits)

The primary purpose of this course is to provide a consistent knowledge and skill base for the wildland fire origin and cause determination investigator (INVF). The concepts taught in this course will help an INVF perform at an acceptable level on a national basis without regard to geographic boundaries. The course is presented by lectures, electronic presentations, field exercises and class discussion.

WF 211 S-211 Portable Pumps (2 Credits)**Recommended preparation:** WF 100 and WF 101.

This is an instructor-led course intended to be presented at the local level. The course consists of three skill areas: supply, delivery and application of water. Students will be required to demonstrate their knowledge of correct water use, basic hydraulics and equipment care. The field exercise requires set up, operation and maintenance of pump equipment. To receive credit for this course, students must have field work observed and approved, and take a closed-book written final examination.

WF 215 S-215 Fire Operations in the Urban Interface (3 Credits)

Recommended preparation: WF 100 and WF 101.

This course is designed to assist structure and wildland firefighters who will be making tactical decisions when confronting wildland fire that threatens life, property, and improvements, in the wildland/urban interface. Instructional units include interface awareness, size-up, initial strategy and incident action plan, structure triage, structure protection tactics, incident action plan assessment and update, follow-up and public relations, and firefighter safety in the interface.

WF 215S S-215 Fire Operations in Urban Interface for Structure Fire (3 Credits)

Prerequisites: Department approval based on certified NWCG Firefighter Type II or have completed NWCG S-130/190 and be certified NFPA Firefighter I or be qualified NWCG Firefighter Type I.

Recommended preparation: WF 101.

Designed to assist structure and wildland firefighters who will be making tactical decisions when confronting wildland fire that threatens life, property, and improvements, in the wildland/urban interface. Instructional units include interface awareness, size-up, initial strategy and incident action plan, structure triage, structure protection tactics, incident action plan assessment and update, follow-up and public relations, and firefighter safety in the interface.

WF 219 S-219 Fire Operations (2 Credits)

Prerequisites: department approval.

The course introduces the roles and responsibilities of a firing boss (FIRB) and outlines duties of other personnel who may engage firing operations. The course discusses and illustrates common firing devices and techniques. Although comprehensive in nature, the course work is not a substitute for the dynamic fire environment.

WF 230 S-230 Crew Boss (3 Credits)

Designed to produce student proficiency in the performance of duties associated with the single resource boss position from initial dispatch through demobilization to the home unit. Topics include: operational leadership, preparation and mobilization, assignment preparation, risk management, entrapment avoidance, safety and tactics, offline duties, demobilization and post incident responsibilities.

WF 231 S-231 Engine Boss (1 Credit)

Skill course designed to produce student proficiency in the performance of all duties associated with the single resource engine boss. Topics include tactical use and safety precautions required to establish an effective engine operation on a large incident.

WF 236 S-236 Heavy Equipment Boss (2 Credits)

Prerequisites: department approval.

This is a skill course designed to meet the training needs of a Heavy Equipment Boss on an incident as outlined in the PMS 310-1 and the Position Task Book developed for the position. Primary considerations are tactical use and safety precautions required to establish and maintain an effective dozer operation.

WF 244 S-244 Field Observer (2 Credits)

Provides students with the necessary skills to perform as a field observer (FOBS) and/or a prescribed fire effects monitor (FEMO). Topics include: identifying and interpreting maps, making map calculations, using observation aids and instruments, performing field observations and communicating information. There will be a daylong field trip.

WF 248 S-248 Status/Check-In Recorder (2 Credits)

Prerequisites: department approval.

This course is designed to introduce students to the tools and techniques used to perform the duties of a status check-in recorder (SCKN). The course provides an overview of what a student can expect if dispatched to an incident.

WF 261 S-261 Applied Interagency Incident Business Management (2 Credits)

This course is designed to provide the prerequisite skills/knowledge necessary to perform the tasks of the entry-level finance positions, i.e., commissary manager, personnel time recorder, equipment time recorder, compensation for injury specialist, and claims specialist, in the Incident Command System (ICS). It is designed to be taken after completion of Interagency Incident Business Management (S-260).

WF 270 S-270 Basic Air Operations (2 Credits)

Recommended preparation: WF 131 and WF 134.

Covers aircraft types and capabilities, aviation management and safety, tactical and logistical uses of aircraft, and requirements for helicopter take-off and landing areas.

WF 280 Co-op Work Experience Wildland Fire (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

WF 281 L-280 Followership/Leadership (2 Credits)

Training course designed as a self-assessment opportunity for individuals preparing to step into a leadership role. There is one day of classroom instruction followed by a day in the field with small teams of students working through a series of problem-solving events (Field Leadership Assessment Course). Topic areas include: leadership values and principles; transition challenges for new leaders; situational leadership; team cohesion factors; ethical decision making.

WF 286 Pacific Northwest Engine Academy (3 Credits)

Students attending the Pacific Northwest Engine Academy will receive training utilizing a variety of methods and techniques, which will provide information about water handling and will improve engine operation skills. These skills are applicable to both fuels management and fire suppression activities. The student will be instructed using ICS terminology. P/NP grading.

WF 288 Special Studies: Wildland Fire (1-4 Credits)

Explores topics of current interest in the discipline.

WF 290 S-290 Intermediate Wildfire Behavior (3 Credits)

Recommended preparation: WF 131, WF 260 and WF 134.

This is a classroom-based skills course designed to prepare the prospective fireline supervisor to undertake safe and effective fire management operations. It is the second course in a series that collectively serves to develop fire behavior prediction knowledge and skills. Fire environment differences are discussed as necessary; instructor should stress local conditions.

WF 293 RX-340 (RX-310) Fire Effects (3 Credits)

Provides the student with the knowledge and skills to recognize basic fire regimes, the results of fire treatment on first order fire and fire effects, and to manipulate fire treatments to achieve desired first order fire effects.

WF 294 S-300 IC Extended Attack (2 Credits)

Meets the training needs of the incident commander, type 3 (ICT3). Presented in a lecture/discussion format and supplemented with group exercises. There are six instructional units that cover information gathering, planning, supporting organization, operations, transitioning, and demobilization/administrative requirement.

WF 295 S-330 Task Force/Strike Team Leader (3 Credits)

Prepares the student to perform in the role of task force leader (TFLD) or any strike team leader. Examples and exercises are specific to wildland fire suppression. If the student is expected to perform in another risk area, applicable examples and exercises area will be added.

WF 297 S-339 Division Group Supervisor (2 Credits)

Prepares student to perform in the role of division/group supervisor. Provides instruction in support of the specific tasks of division/group supervisor, but will not instruct the student in general management/supervision or in the incident command system (ICS). Topics include: division/group management, organizational interaction, and division operations.

WF 298 S-390 Fire Behavior Calculation (3 Credits)

Prerequisites: department approval.

This is an NWCG (National Wildfire Coordinating Group) Certified course. This course is designed to introduce fire behavior calculations by manual methods, using nomograms and the Fire Behavior Handbook Appendix B. Students gain an understanding of the determinants of fire behavior through studying Inputs (weather, slope, fuels, and fuel moisture). Students also learn how to interpret fire behavior outputs, documentation processes, and fire behavior briefing components.

WF 299 Selected Topics: Wildland Fire (1-4 Credits)

This course is in development.

Women's Studies (WS)

WS 101 Introduction to Women's and Gender Studies (4 Credits)

Recommended preparation: WR 121.

Explores the impact of women's and gender studies in many academic fields. Examines women's status and achievements, and the issues raised for men and women by feminism and the women's movement.

Writing (WR)

WR 060 Rhetoric and Critical Thinking I (4 Credits)

Recommended preparation: Minimum placement into WR 060.

Introduce concepts of rhetorical reading, thinking, and writing as tools for college-level study. Establish an understanding and basic familiarity with key rhetorical concepts, such as audience and purpose, for both reading and writing. Reflect on their reading and writing as processes in order to understand their own practice as readers and writers. Demonstrate familiarity with using MLA conventions for format and citations in writing. Produce at least 1,500 words of revised, final draft copy, including at least one thesis-driven, minimum 750-word academic essay. P/NP grading.

WR 065 Rhetoric and Critical Thinking II (4 Credits)

Recommended preparation: WR 060 or minimum placement into WR 065.

Develop rhetorical reading, thinking, and writing skills as tools for success in reading and writing college level texts. Develop an understanding and basic fluency with key rhetorical concepts, such as audience and purpose, for both reading and writing. Evaluate their reading and writing as processes in order to examine and develop their own practice. Employ MLA conventions for format and citations in writing. Produce at least 2,000 words of revised, final draft copy, including at least one thesis-driven, minimum 1,000-word academic essay. P/NP grading.

WR 095 Basic Writing II (3 Credits)

Recommended preparation: WR 065 or minimum placement into WR 121.

Provides instruction and practice in basic essay structures and development. Students learn effective options for introductions, transitions, body paragraphs and conclusions. Includes brief review of sentence mechanics and paragraphing principles within the context of student's own writing. Also provides practice and instruction in the writing process, including peer review and analysis. WR 095 is an optional course in the developmental writing sequence for students who need or want additional preparation for WR 121. This course is not suitable for students who place into WR 060 or WR 065.

WR 098 Writing Seminar (2 Credits)

Prerequisites: Minimum placement into WR 098.

Corequisites: WR 121.

A companion course to WR 121 for students who place into WR 98. Supports students by incrementally breaking down assignments while building self-efficacy and growth mindset to increase academic success. P/NP grading.

WR 099 Selected Topics: Writing (1-4 Credits)

This course is in development. P/NP grading.

WR 121 Academic Composition (4 Credits)

Prerequisites: WR 065 or WR 095 or minimum placement into WR 121.

WR 121 focuses on rhetorical reading, thinking, and writing as a means of inquiry. Students will gain fluency with key rhetorical concepts and utilize these in a flexible and collaborative writing process, reflecting on their writing process with the goal of developing metacognitive awareness. They will employ conventions, including formal citations, appropriate for a given writing task, attending to the constraints of audience, purpose, genre, and discourse community. Students will compose in two or more genres.

WR 122 Argument, Research, and Multimodal Composition (4 Credits)

Prerequisites: WR 121.

WR 122 continues the focus of WR 121 in its review of rhetorical concepts and vocabulary, in the development of reading, thinking, and writing skills, along with metacognitive competencies understood through the lens of a rhetorical vocabulary. Specifically, students will identify, evaluate, and construct chains of reasoning, a process that includes an ability to distinguish assertion from evidence, recognize and evaluate assumptions, and select sources appropriate for a rhetorical task. Students will employ a flexible, collaborative, and appropriate composing process, working in multiple genres, and utilizing at least two modalities.

WR 170 Documentation (1 Credit)

Instruction emphasizes what constitutes plagiarism and how to avoid it by applying college-level documentation practices, using accepted discipline-appropriate academic and professional styles, in research-based writing assignments across the curriculum.

WR 188 Special Studies: Writing (1-4 Credits)

Explores topics of current interest in the discipline.

WR 199 Selected Topics: Writing (1-4 Credits)

This course is in development.

WR 227 Technical Writing (4 Credits)

Prerequisites: WR 121.

Prepares students to produce instructive, informative, and persuasive technical documents. Grounded in rhetorical theory, the course focuses on producing usable, reader-centered content that is clear, concise, and ethical. Students will engage in current best practices and work individually and in groups to learn strategies for effective communication in the digital and networked, global workplace.

WR 240 Introduction to Creative Writing: Nonfiction (4 Credits)

Recommended preparation: WR 121.

Introduces the many forms and purposes of creative nonfiction such as science or nature writing, travel writing, memoir, biography, and journalistic essay. Requires individual and collaborative workshop activities to develop skills in drafting and revision. Examines topics, purposes for writing, and elements of craft, including voice, scene, description, and structure. Requires creation of a portfolio of works reflecting various stages of their writing process.

WR 241 Introduction to Creative Writing: Fiction (4 Credits)

Recommended preparation: WR 121.

Practical study of effective strategies for creating vivid, dramatic stories. Students learn the basic craft of generating conflict and plot, openings that grab the reader, complications that build tension, and details that reveal character. Critical reading of published authors, prose craft exercises and responding constructively to other student work are essential learning processes.

WR 242 Introduction to Creative Writing: Poetry (4 Credits)

Recommended preparation: WR 121.

Introduces students to the craft of poetry through study of the poetry and notebooks of established writers for writing techniques, forms, styles and work processes and through the writing and submission of approximately one complete poem per week for class discussion and analysis.

WR 243 Introduction to Creative Writing: Scriptwriting (4 Credits)

Recommended preparation: WR 121.

Introduces students to dramatic writing for both stage and screen. Essential learning processes in the course include scene and dialogue craft exercises, developing strong characters and viable narrative structures, critical reading of plays, screenplays, and/or teleplays and responding constructively to other student work.

WR 280 Co-op Work Experience Writing (1-4 Credits)

Prerequisites: Instructor approval.

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading.

WR 288 Special Studies: Writing (1-4 Credits)

Explores topics of current interest in the discipline.

WR 299 Selected Topics: Writing (1-4 Credits)

This course is in development.

DEGREE AND CERTIFICATE OVERVIEW

Central Oregon Community College offers a variety of transfer and Career and Technical Education (CTE) options which allows students to choose a program based on their educational goals.

- Transfer Preparation (p. 393)
- Career and Technical Education (p. 394)
- Individualized Study (p. 396)
- Special Curriculum (p. 396)

Course Lists

- General Education List (p. 397)
- CTE List (p. 406)
- Related Instruction List (p. 406)
- OSU Bacc Core List (p. 407)

Transfer Preparation

Students wishing to attend COCC and use credits earned toward a bachelor's degree have several options that range from completing individual courses to completing an associate degree designed for transfer.

Associate of Arts Oregon Transfer Degree (AAOT)

The Associate of Arts Oregon Transfer (AAOT) degree conforms to the state of Oregon guidelines and therefore allows students to transfer to an Oregon public university (some Oregon private colleges and some out-of-state universities) having met all lower-division general education requirements. With appropriate planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The AAOT degree is not associated with a major, and is awarded as "Associate of Arts/Oregon Transfer." However, COCC provides specific focus areas (e.g., psychology, geology) within the degree that can assist students with selecting courses that align with the student's intended major (indicated as "recommended" on the course list and sample plan) and the degree requirements of the baccalaureate institution to which the student plans to transfer.

Advantages

- Fulfills the lower-division (freshman/sophomore) general education requirements for baccalaureate degrees at all Oregon public universities.
- Allows student to transfer with junior standing for registration purposes.

Colleges which accept the COCC AAOT degree besides Oregon's public universities include: Concordia College (OR), George Fox College (OR), Linfield College (OR), Marylhurst College (OR), Pacific University (OR), University of Portland (OR), Warner Pacific College (OR) and Willamette University (OR), Evergreen State College (WA), Pacific Lutheran University (WA) and Washington State University (WA).

Considerations

- No formal agreements exist for this degree to meet general education requirements at out-of-state colleges, although courses for COCC's AAOT degree parallel many of them.
- Students transferring to an Oregon public university should review any world language and specialty course requirements of the transfer institution.
- The AAOT does not guarantee that two additional years will suffice to earn a baccalaureate degree nor give students junior standing in their majors. Students must still meet their transfer institution's admission requirements.
- Students may transfer prior to receiving an AAOT degree. However, they risk losing credits that are normally accepted within the degree or may fall short on the transfer institution's general education requirements.

Requirements

Required courses:

- 90-108 credits
- Course requirements align with state standard
- General education courses (foundational skills and discipline studies) must be a minimum of three credits except health
- Courses may only count in one requirement (except cultural literacy)
- Limit of 12 CTE credits
- See individual focus areas for recommendations for specific bachelor degree majors

Performance standards:

- Students must have a minimum cumulative GPA of 2.0.
- All courses must be completed with a C grade or higher. Transfer programs may have a higher grade requirement.

Associate of Science Oregon Transfer (ASOT)

Like the AAOT degree, a student who completes this program will have met the lower division general education requirements of baccalaureate degree programs of any Oregon public university institution. Unlike the AAOT degree, the ASOT includes courses that institutional representatives recommend as preparation for specific majors. Please note that the degree does not guarantee completion of lower division major requirements for the major and that course, class standing and GPA requirements for specific majors are not necessarily satisfied. Students should always check with the receiving institutions to ensure they have the most current transfer and degree information. COCC currently offers Associate of Science Oregon Transfer degrees in Business (p. 67) and Computer Science (p. 110).

Advantages

- Students can meet all or most general education and/or major requirements for a specific transfer college or university if appropriate courses are chosen.

Considerations

- The ASOT degree can limit a student's flexibility in choosing both the major and the transfer college.
- The ASOT degree does not assure junior standing at Oregon transfer universities and does not guarantee that a student will meet all lower-division general education and major requirements.

Requirements

Required courses:

- 90-108 credits
- Course requirements align with state standard
- General education courses (foundational skills and discipline studies) must be a minimum of three credits except health
- Courses may only count in one requirement (except cultural literacy)
- Limit of 12 CTE credits
- See individual programs for specific requirements aligned with a bachelor's degree major.

Performance standards:

- Students must have a minimum cumulative GPA of 2.0.
- All courses must be completed with a C grade or higher. Transfer programs may have a higher grade requirement.

Associate of Science (AS)

COCC is approved by the state to offer AS degrees to prepare students to transfer to a specific baccalaureate program. Classes are identified to assist students in transitioning to upper division programs. Unlike the Associate of Arts Oregon Transfer or Associate of Science Oregon Transfer degrees, this degree has no guarantee on how it will be treated by receiving institutions. Students should always check with receiving institutions to ensure they have the most current transfer and degree information. COCC currently offers Associate of Science degrees with a focus in the following areas:

- Agricultural Science/Oregon State University (p. 157)
- Aviation/Oregon Institute of Technology (p. 53)
- Cybersecurity/OIT (p. 112)
- Engineering/Oregon State University (p. 144)
- Fire Service Administration/Eastern Oregon University (p. 282)
- Forestry/Oregon State University (p. 163)
- General Transfer/Oregon State University (p. 171)
- Natural Resources/Oregon State University (p. 165)
- Outdoor Leadership/Oregon State University (p. 259)

Advantages

- Students can meet all or most general education and/or major requirements for a specific transfer college or university if appropriate courses are chosen.
- The AS degree works well for students in more technical majors (e.g., science, business, engineering) or specific universities.

Considerations

- The AS degree can limit a student's flexibility in choosing both the major and the transfer college.

- The AS degree does not assure junior standing at Oregon transfer universities and does not guarantee that a student will meet all lower-division general education and major requirements.
- This degree is awarded as "Associate of Science" on the transcript and diploma without reference to a major.

Requirements

Required courses:

- 90-108 credits
- General education courses (foundational skills and discipline studies) must be a minimum of three credits except health
- Courses may only count in one requirement (except cultural literacy)
- Limit of 12 CTE credits
- See individual programs for specific requirements aligned with a bachelor's degree major.

Performance standards:

- Students must have a minimum cumulative GPA of 2.0.
- All courses must be completed with a C grade or higher. Transfer programs may have a higher grade requirement.

Transfer Without a Degree

Students may select individual courses at COCC and transfer them to a college or university. Students who will not complete a degree at COCC are encouraged to research degree requirements for the college at which they will earn their bachelor's degree and select courses accordingly. The Oregon public universities have equivalency guides to aid in selecting equivalent courses. Every college will have a policy on transfer credit that can usually be located on the destination college's website, often under the admissions information for transfer students. A COCC faculty advisor or a CAP Services advisor can assist students with locating this information.

Articulation Agreements

COCC partners with several colleges and universities to offer a seamless transfer among institutions for certain majors in the form of an articulation agreement. These agreements identify specific degree requirement equivalencies between two institutions and often provide alignment beyond general transfer tables. Note that articulation agreements apply to a specific time frame. Please visit COCC's articulation and partnership agreement webpage (<https://www.cocc.edu/departments/admissions/grades-and-student-records/articulation-and-partnership-agreements.aspx>) for a list of current articulation agreements.

Career and Technical Education

COCC's Career and Technical Education (CTE) programs prepare students to enter the workforce in a specific field. CTE programs provide hands-on training in a variety of technical areas with the goal of giving students the skills needed for various technical jobs (examples include dental assisting, welding technician and licensed massage therapist.) Refer to individual program listings (p. 6) for specific requirements.

Associate of Applied Science Degree (AAS)

The Associate of Applied Science degree prepares graduates for direct entry into the workforce and includes courses that build technical career skills and proficiency.

Advantages

- The AAS degree provides students with the hands-on technical skills needed for employment or certification/licensure in a variety of career areas.
- The AAS degree is generally a two-year degree option for full-time students. Some AAS degrees have smaller certificates contained within them that can be earned along the way.

Considerations

- The degree is not intended to transfer, though most general education and some Career and Technical Education (CTE) courses may be eligible for transfer.
- Certification obtained through the completion of career and technical programs does not imply or guarantee reciprocity or job attainment in another state or in another country.

Requirements

Required courses:

- 90-108 credits
- Core courses which build technical career skills and proficiency
- May include prerequisite, support, and other required courses
- Included in these categories is related instruction courses in the areas of communication, computation, and human relations.

Performance standards:

- Students must have a minimum cumulative GPA of 2.0.
- All prerequisite and core courses must be completed with a "C" grade or higher. Individual programs may set higher standards.

Associate of Applied Science Option Degree (AASO)

The Associate of Applied Science degree option prepares graduates for direct entry into the workforce with the option reflecting a specialization in the field (at least 70% of the credits are shared with the base AAS degree). The AAS option includes courses that build technical career skills and proficiency.

Requirements

Required courses:

- 90-108 credits (at least 70% of the credits are shared with the base degree)
- Core courses which build technical career skills and proficiency
- May include prerequisite, support, and other required courses
- Included in these categories is related instruction courses in the areas of communication, computation, and human relations.

Performance standards:

- Students must have a minimum cumulative GPA of 2.0.
- All prerequisite and core courses must be completed with a C grade or higher. Individual programs may set higher standards.

Two year Certificate of Completion (CC2)

Similar to the AAS but smaller in scale, a two year certificate of completion prepares graduates for direct entry into the workforce and includes courses that build technical career skills and proficiency. Certificates can be related to an AAS degree, which means all the certificate credits are included in the degree, or they can be independent of a degree. A two year certificate of completion can range from 36 to 108 credits and takes more than one year to complete.

Requirements

Required courses:

- 36-108 credits and it takes longer than one year/four consecutive terms of full time attendance to complete
- Core courses which build technical career skills and proficiency
- May include prerequisite, support, and other required courses
- Included in these categories is related instruction courses in the areas of communication, computation, and human relations.

Performance standards:

- Students must have a minimum cumulative GPA of 2.0.
- All prerequisite and core courses must be completed with a C grade or higher. Individual programs may set higher standards.

One year Certificate of Completion (CC1)

Similar to the two-year certificate but smaller in scale, one year certificate of completion prepares graduates for direct entry into the workforce and includes courses that build technical career skills and proficiency. Certificates can be related to an AAS degree, which means all the certificate credits are included in the degree, or they can be independent of a degree. A one year certificate of completion ranges from 36 to 71 credits and can be completed in one year of full time attendance (which could include summer).

Requirements

Required courses:

- 36-71 credits and it can be completed in one year/four consecutive terms
- Core courses which build technical career skills and proficiency
- May include prerequisite, support, and other required courses
- Included in these categories is related instruction courses in the areas of communication, computation, and human relations.

Performance standards:

- Students must have a minimum cumulative GPA of 2.0.
- All prerequisite and core courses must be completed with a C grade or higher. Individual programs may set higher standards.

Career Pathway Certificate of Completion (CPCC)

Career Pathway certificates of completion are a cluster of courses from within an AAS or AASO degree which acknowledges specific technical skill attainment that meets an employment need. CPCCs are related to

(contained within) an approved associate of applied science degree/option and have a defined job entry point.

Requirements

Required courses:

- 12-35 credits
- Core courses which build technical career skills and proficiency
- May include prerequisite, support, and other required courses

Performance standards:

- Students must have a minimum cumulative GPA of 2.0.
- All prerequisite and core courses must be completed with a C grade or higher. Individual programs may set higher standards.

Individualized Study

Associate of General Studies (AGS)

For students who are not pursuing specific transfer or Career and Technical Education (CTE) programs, the Associate of General Studies (AGS) (p. 167) degree provides an alternative to pursue a broad general education and accomplish personal educational goals. It is important for a student to work closely with an advisor in designing a course plan for this degree. Students must have a minimum cumulative GPA of 2.0.

Advantages

- The AGS awards a degree for completion of college-level coursework in core skills and general education and allows students flexibility to customize more than half of the degree's required number of credits. It can be used to enhance employment, meet sponsoring agency requirements and/or meet unusual baccalaureate requirements.

Considerations

- The AGS degree is not transferable as a whole and does not meet certification requirements for any Career and Technical Education (CTE) area.
- The AGS degree does not guarantee that a student will meet all lower-division general education and major requirements; however, with careful academic advising and in consideration of transfer institution requirements, the AGS degree may be designed to do so.

Requirements

Required courses:

- 90-108 credits
- Contains general education and elective courses
- Elective credits must be numbered 100 and higher

Performance standards:

- Students must have a minimum cumulative GPA of 2.0.
- All courses must be completed with a C grade or higher.

Exploratory

Students may elect to be an exploratory student at the beginning of their academic career at COCC. This provides students the opportunity to explore different programs and majors before deciding on a program or degree. Students may choose the Exploratory - Associate of Arts Oregon

Transfer (AAOT) (p. 169), which allows room to explore different subjects while completing general education classes.

Special Curriculum

COCC offers curricular options in addition to credit courses and programs.

Continuing Education Non-credit Training Certificate (NCTC)

A "Non-credit Training Certificate" is a form of recognition awarded by a community college made up of a single stand-alone course or a series of courses that do not offer college credit for completion. An assessment of measurable outcomes or mastery of learning or knowledge is required. OAR 589-006-050 (36)

Non-credit training certificates (NCTCs) provide documentation of skill attainment for specific occupational employment needs. "Attendance only" classes do not qualify for the non-credit training certificate.

Continuing Education Rules Associated with NCTC

Admission

As with all non-credit Continuing Education courses and programs at COCC, there is no formal application or admission process. However, NCTC programs may have specific entrance requirements and/or pre-requisites that are noted in each NCTC Program Guide (<https://www.cocc.edu/departments/continuinged/nctc.aspx>).

Registration and Refund Policy

Pre-registration is required for all classes. Registration is through the Central Oregon Community College Continuing Education department. Payment or arrangement for payment is required at the time of registration. Cancellations received five days prior to the start of the class will receive a full refund. Students must cancel by contacting Continuing Education via phone 541-383-7270 or email: ceinfo@cocc.edu. Full refunds are also issued for any class cancelled by COCC. Refunds will be issued to the credit card used at time of registration or via check if paid by check or cash. Refund checks will be mailed within two weeks of the cancellation date. Failure to participate in a course or program does not result in a refund (and will affect the final grade). Exceptions to the general refund policy are noted in course descriptions on the COCC Continuing Education website (<https://www.cocc.edu/departments/continuinged/>) and in the printed schedule of classes.

Student Records

Upon successful completion of a non-credit training certificate, students will receive a printed certificate. Program outcome objectives will appear on the back of the original certificate. Grades will be indicated on the COCC non-credit transcript for the courses involved in the NCTC program. Transcripts may be ordered through Admissions & Records as indicated on the transcript request web page (<https://www.cocc.edu/departments/admissions/grades-and-student-records/request-a-transcript.aspx>).

Program Standards

Students enrolled in courses that are part of a NCTC program will receive a pass/no-pass grade on the official COCC non-credit transcript, based on specific course assessments stated under each program. NCTC grades are transcribed on an official college non-credit transcript and are indicated as P for a passing grade, NP for a non-passing grade and IP for in progress for incomplete or in progress work. Program standards for each specific NCTC are listed in each program guide.

School Calendar

The COCC Continuing Education website (<http://www.cocc.edu/departments/continuinged/>) lists current and future course offerings. Non-credit training certificate programs are offered based on industry needs rather than a defined college term basis. Specific dates are identified in each NCTC program guide and include total number of clock hours for each NCTC.

Student Code of Conduct

Students will adhere to COCC general policies on conduct and academic honesty. NCTC programs impose expectations of student conduct in support of and in alignment with the broader reaching COCC Student Rights and Responsibilities (<https://www.cocc.edu/policies/general-procedures-manual/student/student-rights-and-responsibilities.aspx>).

Satisfactory Academic Progress

The COCC Continuing Education Department will hold all NCTC students accountable for Satisfactory Academic Progress (SAP). Instructors meet with students on a regularly scheduled basis to assess progress. NCTC program guides list each program's standards for SAP.

Continuing Education Credit for Prior Learning

Students entering an NCTC program at COCC may receive credit for prior certification (CPC) if they have completed a course, training or other program that is taught to state, national or other officially recognized standards. Credit is not awarded for other life experiences. Students interested in receiving credit for prior certification must submit official copies of prior certifications to the Continuing Education office, along with a credit for prior certification approval form. The student will return the signed form and copy of the certification to the Continuing Education office, to be reviewed and approved or denied by the Continuing Education director. At the time CPC is awarded, the student pays a \$40/ certification fee prior to having certification recorded and/or transcribed.

Because NCTC programs require classroom participation and interaction between peers, the maximum amount of CPC that will be accepted for the NCTC program is 10% of the entire program requirement. CPC will be awarded only to students currently enrolled in a NCTC program at COCC.

Dismissal from Program

Because NCTC programs are short-term and competency based, it is imperative that students participate in classes. Absence from greater than 10% of required course hours will be grounds for a failing grade. Attendance will contribute to the overall grade in all NCTC classes, so students should be aware of the need to arrange other obligations to be able to attend classes.

If student behavior violates the COCC Student Code of Conduct, the student's case will be referred to the college's Director of Student Life for investigation and review. All NCTC student code of conduct review and disciplinary procedures will follow standard College policy.

Readmission

NCTC programs are short-term and are offered on an "as-needed" basis according to regional business and industry demand. Readmission into a NCTC program after dismissal is not guaranteed. Before registering for a subsequent NCTC program following a formal dismissal, the student must submit an appeal to the Continuing Education Director.

Oregon Transfer Module (OTM)

The Oregon Transfer Module is designed for students who plan to transfer to an Oregon community college or public university. Composed of 45 credits in writing, math, speech, social sciences, sciences, arts and

letters, and electives, it is similar to many institutions' freshman year requirements.

Advantages

- Completion of the OTM guarantees that another Oregon community college or public university will accept all credits toward the institution's general education requirements and depending on courses chosen, may meet some lower-division major requirements.
- The Oregon Transfer Module provides students with documentation of completion of a standard set of commonly accepted courses.

Considerations

- Depending on the institution, students may be required to take additional general education courses. Students transferring to an Oregon public university should review any world language and specialty course requirements of the transfer institution. The OTM is not designed to be an endpoint, but rather a tool toward degree completion. The OTM is not a degree or certificate but can be noted on a transcript to confirm completion of a subset of general education courses common among Oregon's colleges and universities.
- All courses must be completed with a "C" or higher. Students must have a minimum cumulative GPA of 2.0.

Course	Title	Credits
General Education/Foundational Requirements		
The following course numbers cannot be used in foundational requirements: X80, X88, X99, or 298		
Writing: (p. 399)		8
Two college-level English Composition courses		
Oral Communication: (p. 399)		
COMM 111	Fundamentals of Public Speaking	4
Mathematics: (p. 399)		
Choose one course		
General Education/Discipline Studies		
One course must be designated as Cultural Literacy		
Arts and Letters: (p. 399)		
Choose three courses		
Social Science: (p. 404)		
Choose three courses		
Science/Math/Computer Science: (p. 403)		
Choose three courses, including at least one biological science with a lab		
Electives		
Choose enough courses to bring the total credits to 45 quarter hours. Courses must be from the Discipline Studies List.		

General Education List

General Education Purpose

The purpose of general education is to help students develop the habits of mind that lead to thoughtful and productive global citizenship. COCC includes general education requirements in each degree intended to prepare students to transfer to earn a bachelor's degree; general education is divided into foundational requirements (writing, oral communication, mathematics, and health/wellness/fitness) and discipline studies (cultural literacy, arts and letters, social sciences, and science/math/computer science). All courses in these categories have

been approved as meeting the statewide general education outcomes at the time of approval.

Explanation of Abbreviations

The following COCC courses have been approved by the College's Curriculum Committee for use as general education courses for the AAOT, AS, and AGS degrees and are requirements in some AAS degrees and certificates. Abbreviations are listed below.

- Foundtl Health = Foundational Requirements, Health
- Foundtl Math = Foundational Requirements, Mathematics
- Foundtl Oral Communication = Foundational Requirements, Oral Communication
- Foundtl Writing Info Lit = Foundational Requirements, Writing & Information Literacy
- Discipl Stud Arts Letters = Discipline Studies, Arts & Letters
- Discipl Stud Cultural Literacy = Discipline Studies, Cultural Literacy
- Discipl Stud Social Science = Discipline Studies, Social Science
- Discipl Stud Science Not Lab = Discipline Studies, Science/Math/Computer Science, Not Lab
- Discipl Stud Science Lab = Discipline Studies, Science/Math/Computer Science, Lab

Foundational Requirements Courses

Health

Course	Fulfills Requirements For
HHP 100 Introduction to Public Health	Foundtl Health, Discipl Stud Social Science
HHP 110 Orientation to Public Health Professions	Foundtl Health
HHP 131 Introduction to Exercise/Sport Science	Foundtl Health
HHP 210 Introduction to the Health Care System	Foundtl Health, Discipl Stud Social Science
HHP 212 CPR - American Heart Association Heartsaver with Pediatric	Foundtl Health
HHP 212A AHA Basic Life Support for Providers CPR	Foundtl Health
HHP 216 Sociocultural Dimensions of Physical Activity	Foundtl Health
HHP 231 Human Sexuality	Foundtl Health
HHP 240 Science of Nutrition	Foundtl Health, Discipl Stud Science Not Lab
HHP 242 Stress Management	Foundtl Health
HHP 243 Occupation Health, AHA BLS CPR	Foundtl Health
HHP 246 Introduction to Adapted Physical Activity	Foundtl Health
HHP 248 Health Psychology	Foundtl Health, Discipl Stud Cultural Literacy, Discipl Stud Social Science
HHP 252 First Aid AHA Basic Life Support Provider CPR	Foundtl Health
HHP 252A Fitness/First Aid	Foundtl Health
HHP 258 Holistic Wellness	Foundtl Health
HHP 259 Care and Prevention of Athletic Injury	Foundtl Health, Discipl Stud Science Not Lab
HHP 260 Anatomical Kinesiology	Foundtl Health, Discipl Stud Science Not Lab
HHP 261 Exercise Physiology	Foundtl Health, Discipl Stud Science Not Lab
HHP 262 Exercise Testing and Prescription	Foundtl Health, Discipl Stud Science Not Lab
HHP 266 Nutrition for Health	Foundtl Health
HHP 267 Wellness Coaching Fundamentals	Foundtl Health, Discipl Stud Social Science
HHP 268 Sustainable Food and Nutrition	Foundtl Health, Discipl Stud Social Science
HHP 270 Sport and Exercise Psychology	Foundtl Health, Discipl Stud Social Science
HHP 283 Introduction to Alternative Medicine	Foundtl Health
HHP 291 Lifeguard Training	Foundtl Health
HHP 295 Health and Fitness	Foundtl Health
HHPA 102 Beginning Rock Climbing	Foundtl Health
HHPA 103 Training for Rock Climbing	Foundtl Health
HHPA 104 Intermediate Rock Climbing	Foundtl Health
HHPA 105 Backpacking	Foundtl Health
HHPA 106 Snowshoeing	Foundtl Health
HHPA 107 Backcountry Skiing	Foundtl Health
HHPA 109 Whitewater Kayaking I	Foundtl Health
HHPA 110 Whitewater Rafting I	Foundtl Health
HHPA 112 Beginning Mountain Biking	Foundtl Health
HHPA 114 Intermediate Mountain Biking	Foundtl Health
HHPA 115 Wilderness Training: Beginning	Foundtl Health
HHPA 120 Tai Chi/Qigong	Foundtl Health
HHPA 122 Yoga-Beginning	Foundtl Health
HHPA 125 Yoga-Intermediate	Foundtl Health
HHPA 126 Yoga-All Levels	Foundtl Health
HHPA 127 Yoga for Athletes	Foundtl Health
HHPA 128 Yoga/Pilates Blend	Foundtl Health
HHPA 130 Total Fitness	Foundtl Health
HHPA 132 Jogging	Foundtl Health
HHPA 133 Ski Conditioning-Nordic	Foundtl Health
HHPA 134 Circuit Training	Foundtl Health
HHPA 135 Cycling: Studio	Foundtl Health
HHPA 136 Boot Camp	Foundtl Health
HHPA 137 Progressive Walking	Foundtl Health
HHPA 138 Ki Aikido	Foundtl Health
HHPA 140 Basketball	Foundtl Health
HHPA 141 Golf	Foundtl Health
HHPA 142 Beginning Rugby	Foundtl Health
HHPA 143 Softball	Foundtl Health
HHPA 144 Soccer	Foundtl Health

HHPA 146 Tennis I	Foundtl Health
HHPA 147 Tennis II	Foundtl Health
HHPA 148 Volleyball-All Levels	Foundtl Health
HHPA 149 Volleyball-Doubles	Foundtl Health
HHPA 150 Cultural Dance Fitness	Foundtl Health
HHPA 153 Aerobic Dance-Hip Hop	Foundtl Health
HHPA 154 Dancercise	Foundtl Health
HHPA 156 Pilates-Beginning	Foundtl Health
HHPA 157 Pilates-All Levels	Foundtl Health
HHPA 158 Stretch and Relaxation	Foundtl Health
HHPA 159 Barre Body	Foundtl Health
HHPA 170 Snowboarding I	Foundtl Health
HHPA 171 Snowboarding II	Foundtl Health
HHPA 172 Snowboarding III-Competitive Freestyle Riding	Foundtl Health
HHPA 173 Brazilian Jujitsu	Foundtl Health
HHPA 174 Swimming I-Swim Fitness and Technique	Foundtl Health
HHPA 176 Masters Swimming	Foundtl Health
HHPA 177 Swimming Fundamentals	Foundtl Health
HHPA 178 Ski Alpine I	Foundtl Health
HHPA 179 Ski Alpine II	Foundtl Health
HHPA 182 Tae Kwon Do	Foundtl Health
HHPA 183 Water Aerobics	Foundtl Health
HHPA 184 ZUMBA	Foundtl Health
HHPA 185 Weight Training	Foundtl Health
HHPA 186 Stand Up Paddle Boarding	Foundtl Health

Mathematics

Course	Fulfills Requirements For:
MTH 105 Math in Society	Foundtl Math, Discipl Stud Science Not Lab
MTH 111 College Algebra	Foundtl Math, Discipl Stud Science Not Lab
MTH 112 Trigonometry	Foundtl Math, Discipl Stud Science Not Lab
MTH 113 Topics in Precalculus	Foundtl Math, Discipl Stud Science Not Lab
MTH 211 Fundamentals of Elementary Mathematics I	Foundtl Math, Discipl Stud Science Not Lab
MTH 212 Fundamentals of Elementary Mathematics II	Foundtl Math, Discipl Stud Science Not Lab
MTH 213 Fundamentals of Elementary Mathematics III	Foundtl Math, Discipl Stud Science Not Lab
MTH 231 Discrete Mathematics	Foundtl Math, Discipl Stud Science Not Lab
MTH 241 Calculus for Management/Social Science	Foundtl Math, Discipl Stud Science Not Lab
MTH 243 Introduction to Probability and Statistics I	Foundtl Math, Discipl Stud Science Not Lab
MTH 244 Introduction to Probability and Statistics 2	Foundtl Math, Discipl Stud Science Not Lab

MTH 245 Mathematics for Management, Life, and Social Sciences	Foundtl Math, Discipl Stud Science Not Lab
MTH 251 Calculus I	Foundtl Math
MTH 252 Calculus II	Foundtl Math
MTH 253 Calculus III	Foundtl Math
MTH 254 Vector Calculus I	Foundtl Math, Discipl Stud Science Not Lab
MTH 255 Vector Calculus II	Foundtl Math, Discipl Stud Science Not Lab
MTH 256 Applied Differential Equations	Foundtl Math, Discipl Stud Science Not Lab

Oral Communication

Course	Fulfills Requirements For:
COMM 111 Fundamentals of Public Speaking	Foundtl Oral Communication
COMM 114 Argumentation and Critical Discourse	Foundtl Oral Communication
COMM 115 Introduction to Intercultural Communication	Foundtl Oral Communication, Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
COMM 218 Interpersonal Communication	Foundtl Oral Communication
COMM 219 Small Group Communication	Foundtl Oral Communication

Writing & Information Literacy

Course	Fulfills Requirements For:
WR 121 Academic Composition	Foundtl Writing Info Lit
WR 122 Argument, Research, and Multimodal Composition	Foundtl Writing Info Lit
WR 227 Technical Writing	Foundtl Writing Info Lit

Discipline Studies Courses

Arts and Letters

Course	Fulfills Requirements For:
AH 205 Medical Ethics	Discipl Stud Arts Letters
ARH 201 Art History: Western: Prehistory to Early Byzantine	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ARH 202 Art History: Western: Early Medieval to Late Renaissance	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ARH 203 Art History: Western: Baroque to Early Modern	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ARH 206 Art History: Western: Modern and Contemporary	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ARH 207 Native American Art History	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ARH 208 Art History: Non-Western	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ART 101 Introduction to the Visual Arts	Discipl Stud Arts Letters
ART 115 Basic Design: 2-D	Discipl Stud Arts Letters
ART 116 Basic Design: Color	Discipl Stud Arts Letters
ART 117 Basic Design: 3-D	Discipl Stud Arts Letters

ART 131 Drawing I	Discipl Stud Arts Letters	FA 101 Introduction to Film	Discipl Stud Arts Letters
ART 132 Drawing II	Discipl Stud Arts Letters	FA 125 World Cinema	Discipl Stud Arts Letters
ART 133 Drawing III	Discipl Stud Arts Letters	FA 257 Literature Into Film	Discipl Stud Arts Letters
CHN 141 Chinese Culture Through Film	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	FR 201 Second Year French I	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
CHN 201 Second Year Mandarin Chinese I	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	FR 202 Second Year French II	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
CHN 202 Second Year Mandarin Chinese II	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	FR 203 Second Year French III	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
CHN 203 Second Year Mandarin Chinese III	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	FR 211 French Conversation and Culture I	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
COMM 115 Introduction to Intercultural Communication	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy, Foundtl Oral Communication	FR 212 French Conversation and Culture II	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
COMM 230 Introduction to the Rhetoric of Film	Discipl Stud Arts Letters	FR 213 French Conversation and Culture III	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
COMM 234 Introduction to Visual Rhetoric	Discipl Stud Arts Letters	GER 201 Second Year German I	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
COMM 241 Media, Communication, Society	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	GER 202 Second Year German II	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
COMM 255 Free Expression and Public Assembly	Discipl Stud Arts Letters	GER 203 Second Year German III	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ED 112 Children's Lit Curriculum	Discipl Stud Arts Letters	HST 206 War and Society in the 20th century, 1914-1945	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 104 Introduction to Literature: Fiction	Discipl Stud Arts Letters	HUM 106 British Life and Culture	Discipl Stud Arts Letters
ENG 105 Introduction to Literature: Drama	Discipl Stud Arts Letters	HUM 210 Culture And Literature Of Asia	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 106 Introduction to Literature: Poetry	Discipl Stud Arts Letters	HUM 211 Culture and Literature of Africa	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 107 Western World Literature: Ancient	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 212 Culture and Literature of the Americas	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 108 Western World Literature: Middle Ages	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 213 Culture and Literature of Middle East	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 109 Western World Literature: Modern	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 230 Immigrant Experience American Literature	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 201 Shakespeare	Discipl Stud Arts Letters	HUM 240 Native American Literature and Culture	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 202 Shakespeare	Discipl Stud Arts Letters	HUM 255 Cultural Diversity in Contemporary American Literature	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 204 Survey British Literature I	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 256 Introduction to African-American Literature	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 205 Survey British Literature II	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 261 Popular Culture: Science Fiction	Discipl Stud Arts Letters
ENG 212 Autobiography	Discipl Stud Arts Letters	HUM 262 Popular Culture: The American Western	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 221 Introduction to Children's Literature	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 263 Popular Culture: Detective Stories	Discipl Stud Arts Letters
ENG 232C Topics in American Literature: Contemporary Fiction	Discipl Stud Arts Letters	HUM 264 Popular Culture: Spy Thriller	Discipl Stud Arts Letters
ENG 250 Introduction to Folklore and Mythology	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 265 Popular Culture: Noir Film and Fiction	Discipl Stud Arts Letters
ENG 253 Survey American Literature I	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 266 Popular Culture: Travel Literature	Discipl Stud Arts Letters
ENG 254 Survey American Literature II	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 268 Digital Games Culture	Discipl Stud Arts Letters
ENG 256 Folklore and US Popular Culture	Discipl Stud Arts Letters	HUM 269 Popular Culture Graphic Novels	Discipl Stud Arts Letters
ENG 260 Introduction to Women Writers	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy		

ED 219 Multicultural Issues in Education Settings	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HHP 248 Health Psychology	Discipl Stud Cultural Literacy, Discipl Stud Social Science, Foundtl Health
ENG 107 Western World Literature: Ancient	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HS 208 Multicultural Issues in Human Services	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ENG 108 Western World Literature: Middle Ages	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 101 History of Western Civilization	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ENG 109 Western World Literature: Modern	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 102 Europe: From the Middle Ages to Enlightenment (700-1700 C.E.)	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ENG 204 Survey British Literature I	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 103 Europe: Revolution and War (1789 - Present)	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ENG 205 Survey British Literature II	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 104 Ancient Societies (Pre-history - 500 C.E.)	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ENG 221 Introduction to Children's Literature	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 105 The Expansion of World Religions (500 - 1700)	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ENG 250 Introduction to Folklore and Mythology	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 106 Modern World History: Industrialization, Nations and War (1800-Present)	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ENG 253 Survey American Literature I	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 201 Early America - History of the United States (pre-history to 1820)	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ENG 254 Survey American Literature II	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 202 19th and early 20th Century United States History (1820-1920)	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ENG 260 Introduction to Women Writers	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 203 20th and Early 21st Century United States History (1920-present)	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ES 101 Introduction to Ethnic Studies	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 204 History of the Civil War	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ES 211 Introduction to Native American Studies	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 206 War and Society in the 20th century, 1914-1945	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
ES 212 Introduction to African American Studies	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 207 History of the American West	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ES 213 Introduction to Chican@/ Latin@ Studies	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 218 Native American History	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ES 214 Introduction to Asian/Pacific Islander American Studies	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 225 US Women's History	Discipl Stud Cultural Literacy, Discipl Stud Social Science
FR 201 Second Year French I	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 235 Sexuality in 20th Century Europe	Discipl Stud Cultural Literacy, Discipl Stud Social Science
FR 202 Second Year French II	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 242 History of the Pacific NW	Discipl Stud Cultural Literacy, Discipl Stud Social Science
FR 203 Second Year French III	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 258 Colonial Latin American History	Discipl Stud Cultural Literacy, Discipl Stud Social Science
FR 211 French Conversation and Culture I	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 259 Modern Latin American History	Discipl Stud Cultural Literacy, Discipl Stud Social Science
FR 212 French Conversation and Culture II	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 260 History of Islamic Civilizations	Discipl Stud Cultural Literacy, Discipl Stud Social Science
FR 213 French Conversation and Culture III	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 270 20th Century European History	Discipl Stud Cultural Literacy, Discipl Stud Social Science
GEOG 107 Cultural Geography	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 290 East Asian History	Discipl Stud Cultural Literacy, Discipl Stud Social Science
GEOG 201 World Regional Geography I	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 291 East Asian History	Discipl Stud Cultural Literacy, Discipl Stud Social Science
GEOG 202 World Regional Geography II	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 292 East Asian History	Discipl Stud Cultural Literacy, Discipl Stud Social Science
GER 201 Second Year German I	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters		
GER 202 Second Year German II	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters		
GER 203 Second Year German III	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters		

HUM 210 Culture And Literature Of Asia	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SPAN 202 Second Year Spanish II	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
HUM 211 Culture and Literature of Africa	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SPAN 203 Second Year Spanish III	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
HUM 212 Culture and Literature of the Americas	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SPAN 211 Spanish Conversation and Culture I	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
HUM 213 Culture and Literature of Middle East	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SPAN 212 Spanish Conversation and Culture II	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
HUM 230 Immigrant Experience American Literature	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SPAN 213 Spanish Coversation and Culture III	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
HUM 240 Native American Literature and Culture	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	WS 101 Introduction to Women's and Gender Studies	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
HUM 255 Cultural Diversity in Contemporary American Literature	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	Science/Math/Computer Science, Not Lab	
HUM 256 Introduction to African-American Literature	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	Course	Fulfills Requirements For:
HUM 262 Popular Culture: The American Western	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	ANTH 235 Evolution of Human Sexuality	Discipl Stud Science Not Lab
IT 201 Second Year Italian I	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	ANTH 237 Forensic Anthropology	Discipl Stud Science Not Lab
IT 202 Second Year Italian II	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	CS 160 Computer Science Orientation	Discipl Stud Science Not Lab
IT 203 Second Year Italian III	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	CS 161 Computer Science I	Discipl Stud Science Not Lab
KIK 201 Second Year Kiksht Native Langauge I	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	CS 162 Computer Science II	Discipl Stud Science Not Lab
KIK 202 Second Year Kiksht Native Language II	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	ENGR 201 Electrical Fundamentals	Discipl Stud Science Not Lab
KIK 203 Second Year Kiksht Native Language III	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	FN 225 Human Nutrition	Discipl Stud Science Not Lab
MUS 205 Introduction to Jazz History	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	FOR 230A Map, Compass and GPS	Discipl Stud Science Not Lab
PSY 101 Applied Psychology	Discipl Stud Cultural Literacy, Discipl Stud Social Science	FOR 240A Forest Ecology	Discipl Stud Science Not Lab
PSY 202 Mind and Society	Discipl Stud Cultural Literacy, Discipl Stud Social Science	FOR 240B Wildlife Ecology	Discipl Stud Science Not Lab
PSY 215 Developmental Psychology	Discipl Stud Cultural Literacy, Discipl Stud Social Science	FOR 241A Field Dendrology	Discipl Stud Science Not Lab
PSY 216 Social Psychology	Discipl Stud Cultural Literacy, Discipl Stud Social Science	FOR 251 Recreational Resource Management	Discipl Stud Science Not Lab
PSY 219 Abnormal Psychology	Discipl Stud Cultural Literacy, Discipl Stud Social Science	FOR 260 Conservation of Natural Resources	Discipl Stud Science Not Lab
PSY 228 Positive Psychology	Discipl Stud Cultural Literacy, Discipl Stud Social Science	FW 251 Wildlife Conservation	Discipl Stud Science Not Lab
PSY 233 Psychology of Violence Aggression	Discipl Stud Cultural Literacy, Discipl Stud Social Science	GEOG 265 Geographic Information Systems	Discipl Stud Science Not Lab
SOC 201 Introduction to Sociology	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HHP 240 Science of Nutrition	Discipl Stud Science Not Lab, Foundtl Health
SOC 212 Race, Class, and Gender	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HHP 259 Care and Prevention of Athletic Injury	Discipl Stud Science Not Lab, Foundtl Health
SOC 219 Sociology of Religion	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HHP 260 Anatomical Kinesiology	Discipl Stud Science Not Lab, Foundtl Health
SOC 250 Sociology of Popular Culture	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HHP 261 Exercise Physiology	Discipl Stud Science Not Lab, Foundtl Health
SPAN 201 Second Year Spanish I	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HHP 262 Exercise Testing and Prescription	Discipl Stud Science Not Lab, Foundtl Health
		HS 224 Psychopharmacology	Discipl Stud Science Not Lab
		MTH 105 Math in Society	Discipl Stud Science Not Lab, Foundtl Math
		MTH 111 College Algebra	Discipl Stud Science Not Lab, Foundtl Math
		MTH 112 Trigonometry	Discipl Stud Science Not Lab, Foundtl Math
		MTH 113 Topics in Precalculus	Discipl Stud Science Not Lab, Foundtl Math
		MTH 211 Fundamentals of Elementary Mathematics I	Discipl Stud Science Not Lab, Foundtl Math

MTH 212 Fundamentals of Elementary Mathematics II	Discipl Stud Science Not Lab, Foundtl Math	GEOG 279 Physical Geography- Weather and Climate	Discipl Stud Science Lab
MTH 213 Fundamentals of Elementary Mathematics III	Discipl Stud Science Not Lab, Foundtl Math	GS 104 Physical Science: Physics	Discipl Stud Science Lab
MTH 231 Discrete Mathematics	Discipl Stud Science Not Lab, Foundtl Math	GS 105 Physical Science: Chemistry	Discipl Stud Science Lab
MTH 241 Calculus for Management/Social Science	Discipl Stud Science Not Lab, Foundtl Math	GS 106 Physical Science: Geology	Discipl Stud Science Lab
MTH 243 Introduction to Probability and Statistics I	Discipl Stud Science Not Lab, Foundtl Math	GS 107 Physical Science: Astronomy	Discipl Stud Science Lab
MTH 244 Introduction to Probability and Statistics 2	Discipl Stud Science Not Lab, Foundtl Math	PH 201 General Physics I	Discipl Stud Science Lab
MTH 245 Mathematics for Management, Life, and Social Sciences	Discipl Stud Science Not Lab, Foundtl Math	PH 202 General Physics II	Discipl Stud Science Lab
MTH 254 Vector Calculus I	Discipl Stud Science Not Lab, Foundtl Math	PH 203 General Physics III	Discipl Stud Science Lab
MTH 255 Vector Calculus II	Discipl Stud Science Not Lab, Foundtl Math	PH 211 General Physics I	Discipl Stud Science Lab
MTH 256 Applied Differential Equations	Discipl Stud Science Not Lab, Foundtl Math	PH 212 General Physics II	Discipl Stud Science Lab
		PH 213 General Physics III	Discipl Stud Science Lab
		PSY 204 Research Methods: Design and Analysis	Discipl Stud Science Lab
		PSY 213 Introduction to Physiological Psychology	Discipl Stud Science Lab
		PSY 227 Animal Behavior	Discipl Stud Science Lab

Science/Math/Computer Science, Lab

Course	Fulfills Requirements For:
ANTH 234 Biological Anthropology	Discipl Stud Science Lab
BI 101 General Biology: Cells Genes	Discipl Stud Science Lab
BI 102 General Biology: Evolution	Discipl Stud Science Lab
BI 103 General Biology: Ecology	Discipl Stud Science Lab
BI 142 Introduction to Marine Biology	Discipl Stud Science Lab
BI 202 General Botany	Discipl Stud Science Lab
BI 211 Principles of Biology	Discipl Stud Science Lab
BI 212 Principles of Biology	Discipl Stud Science Lab
BI 213 Principles of Biology	Discipl Stud Science Lab
BI 231 Human Anatomy and Physiology I	Discipl Stud Science Lab
BI 232 Human Anatomy and Physiology II	Discipl Stud Science Lab
BI 233 Human Anatomy and Physiology III	Discipl Stud Science Lab
BI 234 Microbiology	Discipl Stud Science Lab
CH 104 Introduction to Chemistry I	Discipl Stud Science Lab
CH 105 Introduction to Chemistry II	Discipl Stud Science Lab
CH 106 Introduction to Chemistry III	Discipl Stud Science Lab
CH 221 General Chemistry I	Discipl Stud Science Lab
CH 222 General Chemistry II	Discipl Stud Science Lab
CH 223 General Chemistry III	Discipl Stud Science Lab
G 162CV Cascade Volcanoes	Discipl Stud Science Lab
G 201 Geology I	Discipl Stud Science Lab
G 202 Geology II	Discipl Stud Science Lab
G 203 Geology III	Discipl Stud Science Lab
G 207 Geology of the Pacific Northwest	Discipl Stud Science Lab
GEOG 278 Physical Geography- Landforms and Water	Discipl Stud Science Lab

Social Sciences

Course	Fulfills Requirements For:
ANTH 102 Archaeology	Discipl Stud Social Science
ANTH 103 Cultural Anthropology	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ANTH 202 Archaeology Of Oregon	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ANTH 240 Language and Culture	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ANTH 250 Food and Culture	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ANTH 254 Magic, Witchcraft, Religion	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ANTH 283 Introduction to Medical Anthropology	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ANTH 295 Gender and Sexuality in an Anthropological Perspective	Discipl Stud Social Science, Discipl Stud Cultural Literacy
CHN 140 Contemporary Chinese Cultures	Discipl Stud Social Science, Discipl Stud Cultural Literacy
CJ 100 Survey of the Criminal Justice System	Discipl Stud Social Science
CJ 101 Introduction to Criminology	Discipl Stud Social Science
CJ 110 Law Enforcement	Discipl Stud Social Science
CJ 120 Judicial Process	Discipl Stud Social Science
CJ 153 Ethical Issues in Criminal Justice	Discipl Stud Social Science
CJ 201 Introduction to Juvenile Justice	Discipl Stud Social Science
CJ 210 Criminal Investigation I	Discipl Stud Social Science
CJ 211 Criminal Investigation II	Discipl Stud Social Science
CJ 214 Crime, Justice and Diversity	Discipl Stud Social Science
CJ 220 Introduction to Substantive Law	Discipl Stud Social Science
CJ 222 Search And Seizure	Discipl Stud Social Science
CJ 230 Juvenile Corrections	Discipl Stud Social Science

CJ 234 The World of Violent Criminals	Discipl Stud Social Science	HS 101 Orientation to Human Services	Discipl Stud Social Science
CJ 243 Drugs and Crime in Society	Discipl Stud Social Science	HS 206 Group Counseling Skills for Human Services	Discipl Stud Social Science
CJ 250 Domestic Terrorism and Emergency Management	Discipl Stud Social Science	HS 208 Multicultural Issues in Human Services	Discipl Stud Social Science, Discipl Stud Cultural Literacy
CJ 253 Corrections	Discipl Stud Social Science	HS 209 Introduction to Psychological Trauma: Theory and Practice	Discipl Stud Social Science
EC 201 Microeconomics	Discipl Stud Social Science	HST 101 History of Western Civilization	Discipl Stud Social Science, Discipl Stud Cultural Literacy
EC 202 Macroeconomics	Discipl Stud Social Science	HST 102 Europe: From the Middle Ages to Enlightenment (700-1700 C.E.)	Discipl Stud Social Science, Discipl Stud Cultural Literacy
EC 230 Contemporary World Economic Issues: International Economics	Discipl Stud Social Science	HST 103 Europe: Revolution and War (1789 - Present)	Discipl Stud Social Science, Discipl Stud Cultural Literacy
EC 285 Introduction to Political Economy	Discipl Stud Social Science	HST 104 Ancient Societies (Pre-history - 500 C.E.)	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ED 152 Family, School and Community Relationships in ECE	Discipl Stud Social Science	HST 105 The Expansion of World Religions (500 - 1700)	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ED 216 Purpose, Structure and Function of Education in a Democracy	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 106 Modern World History: Industrialization, Nations and War (1800-Present)	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ED 219 Multicultural Issues in Education Settings	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 201 Early America - History of the United States (pre-history to 1820)	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ES 101 Introduction to Ethnic Studies	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 202 19th and early 20th Century United States History (1820-1920)	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ES 211 Introduction to Native American Studies	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 203 20th and Early 21st Century United States History (1920-present)	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ES 212 Introduction to African American Studies	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 204 History of the Civil War	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ES 213 Introduction to Chican@/ Latin@ Studies	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 207 History of the American West	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ES 214 Introduction to Asian/ Pacific Islander American Studies	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 218 Native American History	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 106 Economic Geography	Discipl Stud Social Science	HST 225 US Women's History	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 107 Cultural Geography	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 235 Sexuality in 20th Century Europe	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 190 Environmental Geography	Discipl Stud Social Science	HST 242 History of the Pacific NW	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 198 Field Geography of Central Oregon	Discipl Stud Social Science	HST 258 Colonial Latin American History	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 201 World Regional Geography I	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 259 Modern Latin American History	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 202 World Regional Geography II	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 260 History of Islamic Civilizations	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 290 Environmental Problems	Discipl Stud Social Science	HST 270 20th Century European History	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 295 Wilderness and Society	Discipl Stud Social Science	HST 290 East Asian History	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HHP 100 Introduction to Public Health	Discipl Stud Social Science, Foundtl Health	HST 291 East Asian History	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HHP 210 Introduction to the Health Care System	Discipl Stud Social Science, Foundtl Health		
HHP 248 Health Psychology	Discipl Stud Social Science, Discipl Stud Cultural Literacy, Foundtl Health		
HHP 267 Wellness Coaching Fundamentals	Discipl Stud Social Science, Foundtl Health		
HHP 268 Sustainable Food and Nutrition	Discipl Stud Social Science, Foundtl Health		
HHP 270 Sport and Exercise Psychology	Discipl Stud Social Science, Foundtl Health		

HST 292 East Asian History	Discipl Stud Social Science, Discipl Stud Cultural Literacy
OL 244 Psychology of Risk and Adventure	Discipl Stud Social Science
PS 201 Introduction to US Government and Politics	Discipl Stud Social Science
PS 203 State/Local Government	Discipl Stud Social Science
PS 204 Introduction to Comparative Politics	Discipl Stud Social Science
PS 205 Introduction to International Relations	Discipl Stud Social Science
PS 206 Introduction to Political Thought	Discipl Stud Social Science
PS 207 Politics of the Middle East	Discipl Stud Social Science
PS 250 Terrorism and the American Public	Discipl Stud Social Science
PSY 101 Applied Psychology	Discipl Stud Social Science, Discipl Stud Cultural Literacy
PSY 201 Mind and Brain	Discipl Stud Social Science
PSY 202 Mind and Society	Discipl Stud Social Science, Discipl Stud Cultural Literacy
PSY 215 Developmental Psychology	Discipl Stud Social Science, Discipl Stud Cultural Literacy
PSY 216 Social Psychology	Discipl Stud Social Science, Discipl Stud Cultural Literacy
PSY 219 Abnormal Psychology	Discipl Stud Social Science, Discipl Stud Cultural Literacy
PSY 228 Positive Psychology	Discipl Stud Social Science, Discipl Stud Cultural Literacy
PSY 233 Psychology of Violence Aggression	Discipl Stud Social Science, Discipl Stud Cultural Literacy
SOC 201 Introduction to Sociology	Discipl Stud Social Science, Discipl Stud Cultural Literacy
SOC 208 Sport and Society	Discipl Stud Social Science
SOC 211 Social Deviance	Discipl Stud Social Science
SOC 212 Race, Class, and Gender	Discipl Stud Social Science, Discipl Stud Cultural Literacy
SOC 215 Social Issues and Social Movements	Discipl Stud Social Science
SOC 219 Sociology of Religion	Discipl Stud Social Science, Discipl Stud Cultural Literacy
SOC 222 Sociology of Family and Intimate Relationships	Discipl Stud Social Science
SOC 250 Sociology of Popular Culture	Discipl Stud Social Science, Discipl Stud Cultural Literacy

CTE List

Students may use up to 12 credits of Career and Technical Education (CTE) courses indicated in the following list to meet elective credit requirements for the Associate of Arts Oregon Transfer (AAOT) and Associate of Science (AS) degree. Note that CTE courses are not intended to transfer, and if accepted by baccalaureate institutions, are usually limited in number.

Course	Title	Credits
AH 111	Medical Terminology I	3
AH 112	Medical Terminology II	3
All AUT courses		
All AV courses		
All BAK courses		
All CIS courses ¹		
All CUL courses		
All DA courses		
All EMT courses		
FOR 130	Chainsaw Use and Maintenance	2
GEOG 211	Computer Cartography	4
GEOG 265	Geographic Information Systems	4
GEOG 266	Arc GIS	5
GEOG 267	Geodatabase Design	5
GEOG 273	Spatial Data Collection	5
GEOG 280	Co-op Work Experience GIS	1-3
GEOG 284	GIS Customization	5
GEOG 285	Data Conversion and Documentation	5
GEOG 286	Remote Sensing	5
GEOG 287	Analysis of Spatial Data	5
All HIM/HIT courses		
All LMT courses		
All MA courses		
All MFG courses		
All NUR courses		
All OA courses		
All SFS courses		
All VT courses		
All WF courses		

¹ Except CIS 276 Advanced SQL

Related Instruction List

Related Instruction Purpose

The purpose of related instruction is to ensure minimum, essential skills in the areas of communication, computation, and human relations which align with and support program goals or outcomes. COCC includes related instruction requirements in every career and technical education program that is at least a year in length (36 credits or greater). Related instruction courses are embedded in the course list under program requirements. All courses used for related instruction have been approved as meeting the College's communication, computation, or human relations outcomes at the time of approval.

Related Instruction Courses

Communication

Course	Fulfills Requirements For:
BA 214 Business Communications	Rel Instr Communications
WR 121 Academic Composition	Rel Instr Communications

Computation

Course	Fulfills Requirements For:
AH 105 Calculations for Allied Health	Rel Instr Computation
BA 104 Business Math	Rel Instr Computation
CUL 090 Applied Math for Culinary Arts	Rel Instr Computation
MTH 085 Technical Mathematics I	Rel Instr Computation
MTH 105 Math in Society	Rel Instr Computation

Human Relations

Course	Fulfills Requirements For:
AH 115 Cultural Responsiveness in Allied Health	Rel Instr Human Relations
ANTH 103 Cultural Anthropology	Rel Instr Human Relations
BA 178 Customer Service	Rel Instr Human Relations
BA 206 Management Fundamentals I	Rel Instr Human Relations
BA 285 Business Human Relations	Rel Instr Human Relations
COMM 218 Interpersonal Communication	Rel Instr Human Relations
ED 176 Supporting Social, Emotional, and Mental Health in Early Childhood	Rel Instr Human Relations
ED 219 Multicultural Issues in Education Settings	Rel Instr Human Relations
ED 224 Anti-Bias Curriculum in Education	Rel Instr Human Relations
FOR 211 Supervision and Leadership	Rel Instr Human Relations
GEOG 107 Cultural Geography	Rel Instr Human Relations
HM 130 Hospitality Industry Supervision and Principles of Leadership	Rel Instr Human Relations
HS 101 Orientation to Human Services	Rel Instr Human Relations
HS 162 Effective Helping Skills I	Rel Instr Human Relations
HS 208 Multicultural Issues in Human Services	Rel Instr Human Relations
PSY 101 Applied Psychology	Rel Instr Human Relations
PSY 215 Developmental Psychology	Rel Instr Human Relations
PSY 216 Social Psychology	Rel Instr Human Relations
PSY 228 Positive Psychology	Rel Instr Human Relations
SOC 201 Introduction to Sociology	Rel Instr Human Relations
SOC 222 Sociology of Family and Intimate Relationships	Rel Instr Human Relations

OSU Bacc Core List

The following course list is used for the Associate of Science program with an emphasis on transfer to Oregon State University (p. 171). This information reflects an accurate picture of OSU requirements at the time of approval, using the OSU catalog, advisors and web resources for consultation. However, degree requirements can and do change. Students can verify transfer information at the OSU baccalaureate core equivalencies website (<https://admissions.oregonstate.edu/>

baccalaureate-core-course-equivalencies-central-oregon-community-college/).

Baccalaureate Core

Skills Courses

Writing I

Course	Title	Credits
WR 121	Academic Composition	4

Writing II

Course	Title	Credits
WR 122	Argument, Research, and Multimodal Composition	4
WR 227	Technical Writing	4
WR 240	Introduction to Creative Writing: Nonfiction	4
WR 241	Introduction to Creative Writing: Fiction	4
WR 242	Introduction to Creative Writing: Poetry	4
WR 243	Introduction to Creative Writing: Scriptwriting	4

Speech

Course	Title	Credits
COMM 111	Fundamentals of Public Speaking	4
COMM 114	Argumentation and Critical Discourse	3
COMM 115	Introduction to Intercultural Communication	4
COMM 218	Interpersonal Communication	3
COMM 219	Small Group Communication	4

Mathematics

Course	Title	Credits
MTH 105	Math in Society	4
MTH 111	College Algebra	4
MTH 112	Trigonometry	4
MTH 113	Topics in Precalculus	4
MTH 211	Fundamentals of Elementary Mathematics I	4
MTH 241	Calculus for Management/Social Science	4
MTH 245	Mathematics for Management, Life, and Social Sciences	4
MTH 251	Calculus I	4

Fitness

Course	Title	Credits
HHP 295	Health and Fitness	3

Perspectives Courses

No more than two courses (or lecture/lab combinations) from any one department may be used by a student to satisfy the Perspectives category of the core. GEO courses listed under Physical Science are considered to be from a different department than GEO courses listed under any other Perspective category. Choose one Biological Science lecture/lab combination, one Cultural Diversity, one Literature and the Arts, one Physical Science lecture/lab combination, one Social Processes and Institutions, one Western Culture, one Difference, Power and Discrimination, plus one additional lecture/lab combination from either Physical Science or Biological Science.

Physical Science

Course	Title	Credits
CH 104	Introduction to Chemistry I	5
CH 105	Introduction to Chemistry II	5
CH 106	Introduction to Chemistry III	5
CH 221	General Chemistry I	5
CH 222	General Chemistry II	5
CH 223	General Chemistry III	5
FOR 208	Soils: Sustainable Ecosystems	4
G 201	Geology I	4
G 202	Geology II	4
G 203	Geology III	4
GEOG 265	Geographic Information Systems	4
GEOG 278	Physical Geography-Landforms and Water	4
GEOG 279	Physical Geography-Weather and Climate	4
GS 104	Physical Science: Physics	4
GS 105	Physical Science: Chemistry	4
GS 106	Physical Science: Geology	4
GS 107	Physical Science: Astronomy	4
PH 201	General Physics I	5
PH 202	General Physics II	5
PH 203	General Physics III	5
PH 211	General Physics I	5
PH 212	General Physics II	5
PH 213	General Physics III	5

Biological Science

Course	Title	Credits
BI 101	General Biology: Cells & Genes	4
BI 102	General Biology: Evolution	4
BI 103	General Biology: Ecology	4
BI 202	General Botany	4
BI 211	Principles of Biology	5
BI 212	Principles of Biology	5
BI 213	Principles of Biology	5
BI 234	Microbiology	4
FOR 208	Soils: Sustainable Ecosystems	4

Physical or Biological Science

Course	Title	Credits
Choose one additional course from the Physical Science or Biological Science lists above		

Western Culture

Course	Title	Credits
ARH 201	Art History: Western: Prehistory to Early Byzantine	4
ARH 202	Art History: Western: Early Medieval to Late Renaissance	4
ARH 203	Art History: Western: Baroque to Early Modern	4
ARH 206	Art History: Western: Modern and Contemporary	4
ENG 107	Western World Literature: Ancient	4
ENG 108	Western World Literature: Middle Ages	4
ENG 109	Western World Literature: Modern	4
ENG 201	Shakespeare	4

ENG 202	Shakespeare	4
ENG 204	Survey British Literature I	4
ENG 205	Survey British Literature II	4
ENG 253	Survey American Literature I	4
ENG 254	Survey American Literature II	4
FA 257	Literature Into Film	4
GEOG 201	World Regional Geography I	4
HST 101	History of Western Civilization	4
HST 102	Europe: From the Middle Ages to Enlightenment (700-1700 C.E.)	4
HST 103	Europe: Revolution and War (1789 - Present)	4
HST 104	Ancient Societies (Pre-history - 500 C.E.)	4
HST 105	The Expansion of World Religions (500 - 1700)	4
HST 106	Modern World History: Industrialization, Nations and War (1800-Present)	4
HST 201	Early America - History of the United States (pre-history to 1820)	4
HST 202	19th and early 20th Century United States History (1820-1920)	4
HST 203	20th and Early 21st Century United States History (1920-present)	4
HST 270	20th Century European History	4
HUM 106	British Life and Culture	3
PHL 170	Philosophy of Love and Sex	3
PHL 200	Fundamentals of Philosophy	4
PHL 201	Epistemology - Knowledge, Science, and the History of Reason	4
PHL 202	Problems of Philosophy - Ethics	3
PS 206	Introduction to Political Thought	4

Cultural Diversity

Course	Title	Credits
ANTH 283	Introduction to Medical Anthropology	4
ARH 207	Native American Art History	4
CHN 141	Chinese Culture Through Film	4
ES 199	Selected Topics: Ethnic Studies	1-4
ES 213	Introduction to Chican@/Latin@ Studies	4
GEOG 107	Cultural Geography	4
GEOG 202	World Regional Geography II	4
HS 208	Multicultural Issues in Human Services	4
HST 104	Ancient Societies (Pre-history - 500 C.E.)	4
HST 105	The Expansion of World Religions (500 - 1700)	4
HST 106	Modern World History: Industrialization, Nations and War (1800-Present)	4
HST 207	History of the American West	4
HST 218	Native American History	4
HST 258	Colonial Latin American History	4
HST 259	Modern Latin American History	4
HST 260	History of Islamic Civilizations	4
HST 290	East Asian History	4
HST 291	East Asian History	4
HST 292	East Asian History	4
HUM 210	Culture And Literature Of Asia	4
HUM 211	Culture and Literature of Africa	4

HUM 212	Culture and Literature of the Americas	4
HUM 213	Culture and Literature of Middle East	4
HUM 230	Immigrant Experience American Literature	4
HUM 240	Native American Literature and Culture	4
HUM 255	Cultural Diversity in Contemporary American Literature	4
HUM 256	Introduction to African-American Literature	4

Literature and the Arts

Course	Title	Credits
ARH 201	Art History: Western: Prehistory to Early Byzantine	4
ARH 202	Art History: Western: Early Medieval to Late Renaissance	4
ARH 203	Art History: Western: Baroque to Early Modern	4
ARH 206	Art History: Western: Modern and Contemporary	4
ARH 207	Native American Art History	4
ART 101	Introduction to the Visual Arts	4
ENG 104	Introduction to Literature: Fiction	4
ENG 105	Introduction to Literature: Drama	4
ENG 106	Introduction to Literature: Poetry	4
ENG 107	Western World Literature: Ancient	4
ENG 108	Western World Literature: Middle Ages	4
ENG 109	Western World Literature: Modern	4
ENG 201	Shakespeare	4
ENG 202	Shakespeare	4
ENG 204	Survey British Literature I	4
ENG 205	Survey British Literature II	4
ENG 232C	Topics in American Literature: Contemporary Fiction	4
ENG 250	Introduction to Folklore and Mythology	4
ENG 253	Survey American Literature I	4
ENG 254	Survey American Literature II	4
ENG 260	Introduction to Women Writers	4
FA 101	Introduction to Film	4
FA 125	World Cinema	4
FA 257	Literature Into Film	4
HUM 210	Culture And Literature Of Asia	4
HUM 211	Culture and Literature of Africa	4
HUM 212	Culture and Literature of the Americas	4
HUM 230	Immigrant Experience American Literature	4
HUM 240	Native American Literature and Culture	4
HUM 256	Introduction to African-American Literature	4
MUS 201	Understanding Music	3
MUS 202	Understanding Music	3
MUS 203	Understanding Music	3
MUS 205	Introduction to Jazz History	3
TA 200	Introduction to Theater	3

Social Processes and Institutions

Course	Title	Credits
ANTH 103	Cultural Anthropology	4
EC 201	Microeconomics	4
EC 202	Macroeconomics	4
GEOG 106	Economic Geography	4

HHP 210	Introduction to the Health Care System	3
HHP 231	Human Sexuality	3
HHP 248	Health Psychology	4
HST 101	History of Western Civilization	4
HST 102	Europe: From the Middle Ages to Enlightenment (700-1700 C.E.)	4
HST 103	Europe: Revolution and War (1789 - Present)	4
PS 201	Introduction to US Government and Politics	4
PS 204	Introduction to Comparative Politics	4
PS 205	Introduction to International Relations	4
PSY 201	Mind and Brain	4
PSY 202	Mind and Society	4
SOC 201	Introduction to Sociology	4

Difference, Power and Discrimination

Course	Title	Credits
HST 201	Early America - History of the United States (pre-history to 1820)	4
HST 202	19th and early 20th Century United States History (1820-1920)	4
HST 203	20th and Early 21st Century United States History (1920-present)	4
HST 225	US Women's History	4
SOC 212	Race, Class, and Gender	4
SOC 215	Social Issues and Social Movements	4
WS 101	Introduction to Women's and Gender Studies	4

AREAS OF STUDY

- Anthropology (p. 9)
- Art (p. 12)
- Automotive Technology (p. 19)
- Aviation (p. 41)
- Biology (p. 56)
- Business Administration (p. 63)
- Cascade Culinary Institute (p. 78)
- Chemistry (p. 91)
- Communication (p. 93)
- Computer & Information Systems (p. 97)
- Criminal Justice (p. 113)
- Dental Assisting (p. 117)
- Economics (p. 121)
- Education (p. 123)
- Emergency Medical Services (p. 136)
- Engineering & Physics (p. 142)
- Exercise Science (p. 147)
- Forest Resources Technology/Forestry (p. 154)
- General Transfer (p. 167)
- Geographic Information Systems (p. 175)
- Geography (p. 178)
- Geology (p. 181)
- Health Information Management (p. 183)
- History (p. 191)
- Human Services (p. 195)
- Humanities (p. 202)
- Manufacturing Technology (p. 211)
- Massage Therapy (p. 230)
- Mathematics (p. 235)
- Medical Assistant (p. 239)
- Music (p. 243)
- Nursing (p. 248)
- Nursing Assistant (p. 255)
- Outdoor Leadership (p. 256)
- Pharmacy Technician (p. 263)
- Political Science (p. 266)
- Psychology (p. 269)
- Public Health (p. 272)
- Sociology (p. 276)
- Structural Fire Science (p. 281)
- Veterinary Technician (p. 288)
- Wildland Fire/Fuels Management (p. 292)
- World Languages (p. 298)

STUDENT RESOURCES

Welcome to Central Oregon Community College! The following information shares details on COCC's admissions criteria, financial aid information, registration dates and deadlines, student support services and so much more. All of these programs and services are designed to help students be as successful as possible, so we invite you to explore the information listed here and contact any of the offices should you want additional details.

- Admissions (p. 411)
- Payment & Financial Aid (p. 412)
- Registration (p. 418)
- Student Services (p. 420)
- Academic Calendar (p. 426)

Admissions

Central Oregon Community College is an open-door, equal-access institution. Enrollment Services is located in the Boyle Education Center. Services include admission, registration, student payment, financial aid, veterans' benefits, transcript evaluation, degree/certificate evaluation, student records, grades and transcript requests. Most services are also available at COCC's Redmond, Madras and Prineville Campuses.

Admission Criteria

New Students

To qualify for admission, students must be 18 years of age or older, or possess a high school diploma or GED. Applications are available online (<https://www.cocc.edu/departments/admissions/getting-started/default.aspx>) or at any campus. All new students (those who have never taken credit courses at COCC) are required to submit a \$25 non-refundable application fee at the time of application. Applications will not be processed without this fee.

Students Returning After an Absence

Students who have attended COCC but have been absent for four quarters or more must submit a new application. No application fee is required.

Transfer Students

First time COCC students transferring from another college or university must submit an application for admission and a \$25 application fee. In addition, all official transcripts from previous institutions must be submitted prior to advising and/or registration.

Students not Seeking a Certificate or Degree

Many students take college credit courses at COCC, yet are not planning to earn a certificate or degree. Non-certificate/non-degree-seeking students apply through the regular application process and are required to take the placement assessment prior to registration. Some students may be exempt from placement assessment; see the College website for exemption criteria. Non-certificate/non-degree-seeking students are not required to participate in advising.

Application Dates

COCC accepts applications on a continuing basis. For term specific application deadlines check the academic calendar - important dates by term (<https://www.cocc.edu/departments/admissions/degrees->

[and-classes/academic-calendar-important-dates-by-term.aspx](#)). COCC reserves the right to close admission prior to the application deadline. Students are strongly encouraged to apply early.

Residency Policy

Determination of residency for purposes of tuition will be made according to the following definitions. Applicants to the nursing program must satisfy in-district residency requirements as outlined in the nursing program application packet.

In-District Residency

An individual who, for one full year prior to beginning taking credit classes has either: a) owned property (or if under the age of 24, whose parent/guardian owns property); or b) maintained a permanent and continuous residence in the district will be classified as an in-district resident. The COCC District consists of all of Deschutes, Crook and Jefferson counties, the northern portions of Klamath and Lake counties, and the Warm Springs Indian Reservation in Jefferson and Wasco counties.

Out-of-District (In-State) Residency

An individual who, for one full year prior to beginning taking credit classes has either:

1. owned property (or if under the age of 24, whose parent/guardian owns property); or
2. maintained a permanent and continuous residence in the state of Oregon (but outside the COCC District) will be classified as an out-of-district resident.

The student will remain an out-of-district student for two calendar years after the term in which the student began courses; at that time, the student will convert to in-district residency.

Out-of-State Residency

(CA, ID, NV, WA residents see exemption below.) An individual who has not maintained a permanent and continuous residence in the state of Oregon during the year prior to the beginning of the first term of enrollment will be classified as an out-of-state resident. The student will remain an out-of-state student for two calendar years after the term in which the student began courses; at that time the student will convert to in-district residency.

Exemption

Per Oregon Administrative Rules, residents of California, Idaho, Nevada and Washington will be charged in-state (out-of-district) tuition.

Verification

Residency of each applicant for college credit courses is determined from information provided at the time of application. When there appears to be an inconsistency, the College may require documentation to verify residency.

Transferring to Another Oregon Institution

In-state residency classifications may be different at Oregon community colleges than at Oregon public universities and can affect tuition rates. Students are encouraged to check residency classifications before beginning their education in Oregon.

Military Personnel

Military veterans who have been discharged from service under honorable conditions (and/or their qualifying dependents) will be assessed tuition as follows:

- Students who were in-district residents prior to military service will be charged the in-district tuition rate.
- Students who were in-state/out-of-district/border state residents prior to military service will be charged the non-resident veteran tuition rate.
- Students who were not Oregon residents prior to military service will be charged the non-resident veteran tuition rate. The non-resident veteran tuition rate is calculated as the in-district tuition rate plus 50 percent of the difference between COCC's in-district rate and out-of-district/border state rate.

In order to receive the non-resident veteran tuition rate, a student must submit a certificate of eligibility or DD214 to the COCC Veteran Certifying Official. Per the College's standard residency policy, a non-resident veteran student will be classified as an in-district resident after two years of enrollment.

Native American Students

Students who are enrolled members of federally recognized tribes of Oregon or of a Native American tribe that had traditional and customary tribal boundaries that included part of Oregon or which had ceded or reserved lands within the state of Oregon shall be charged in-state/out-of-district tuition regardless of their state of residence. Residents of the Confederated Tribes of Warm Springs are automatically charged in-district tuition. For a listing of eligible tribes, refer to COCC's residency policy (<https://www.cocc.edu/departments/admissions/tuition-fees-payment/residency-policy.aspx>). Note that out-of-state students must provide a copy of tribal enrollment documents prior to receiving in-state/out-of-district tuition.

Residency Appeals

Students may appeal their residency status by completing a residency petition, available through the Admissions and Records office. Residency petitions and supporting documentation must be submitted within 30 days of receipt of letter of admission or the Friday prior to the start of the term, whichever is sooner. Petitions received after the deadline will be considered for the following term. Any change in residency status will not be retroactive.

High School Students

Students who are still attending high school, but wish to take credit courses at COCC, have the following options:

Special Admission/Concurrent Enrollment

High school students 15 years and older are eligible to register in up to 19 credits at COCC. High school students who register at COCC are fully responsible for complying with all the policies and procedures of the College as outlined in the Information for High School Students (<https://www.cocc.edu/departments/admissions/getting-started/high-school/>) resource sent to each high school student upon admission. It is important to note that parents cannot access student records (grades, class schedule, attendance, etc.) without written permission from the student. Although members of the College staff can provide academic advising, they cannot interpret high school requirements or act in a

supervisory role. The student is responsible for all tuition, fees, books and related expenses.

College Now

COCC works with area high schools to offer students the opportunity to earn college credit for certain career and technical education and general education transfer courses, which they complete at their schools. Courses offered vary by high school and are designed for high school juniors and seniors. The fee is \$25 per college credit. General education transfer courses may be used to meet COCC certificate or degree requirements as well as for transfer to most Oregon community colleges and universities. Students should check with all colleges about their policies for transferring college credits earned in high school. For complete details and a listing of courses offered by high schools, contact the appropriate high school counselor, COCC's College Now office at 541-504-2930, or visit the College Now webpage (<https://www.cocc.edu/departments/college-now/>).

Expanded Options

High school students have the opportunity to take credit courses at COCC with no charge to them for tuition, fees, supplies and books (transportation to and from COCC not included). Students interested in the Expanded Options program must meet the high school's participation requirements and submit all required paperwork. Check with the high school counselor or ASPIRE coordinator for more information on eligibility requirements and required paperwork.

Students Under Age 15

Students under the age of 15 must meet with the Director of Admissions/Registrar or designee to assess readiness for college-level work prior to applying for admission. Students must meet minimum placement assessment scores, provide a statement of support from their school counselor and obtain permission from each instructor every term. If admission is approved, the student must submit a Special Admission form at the time of registration. Please visit the concurrent enrollment webpage (<https://www.cocc.edu/departments/admissions/getting-started/high-school/concurrent-enrollment.aspx>) for more information.

Students under age 15 who register at COCC are fully responsible for complying with all policies and procedures of the College. Parents cannot access student records (grades, class schedule, attendance, etc.) without written permission from the student. Although College staff members can provide academic advising, they cannot interpret high school requirements or act in a supervisory role.

Payment & Financial Aid

Tuition for Credit Courses for 2019-2020

COCC tuition and student fees are reviewed annually and set by the Board. In addition, courses with unusually high operating costs may include additional course fees. Note, the 2020-21 tuition, student fee, and course fee rates will go into effect beginning summer term 2020; check the Tuition and Fees (<https://www.cocc.edu/departments/admissions/tuition-fees-payment/>) page for more information.

Cost	Fee
In-district	\$106 per credit hour
Non-resident Veteran	\$127.25 per credit hour
Out-of-district/In-state	\$148.50 per credit hour
Border state (CA, ID, NV and WA)	\$148.50 per credit hour

Out-of-state	\$309 per credit hour
International	\$309 per credit hour
Audit	same as for credit

(CA, ID, NV and WA residents are charged out-of-district tuition)

Check the COCC credit class schedule for courses that require additional fees. There are program fees in the following areas:

- automotive
- aviation
- career planning
- culinary
- dental assisting
- emergency medical services
- forestry
- health and human performance
- health information technology
- manufacturing
- massage therapy
- medical assisting
- nursing
- outdoor leadership
- pharmacy technician
- structural fire science
- veterinary technician
- all online courses

Full time: For the purposes of financial aid, veterans, social security and other benefit programs, 12 credits is considered full-time.

Fees for Students Enrolled in Credit Courses

Cost	Fee
Student Activities fee	\$1.50 per credit
Technology fee	\$12 per credit
College Support fee	\$3 per credit
Green Energy fee	25¢ per credit
Online Course fee (applies to online courses only)	\$10 per credit
Science Lab fee	\$12 per course
Optional Mazama Gym user fee	\$20 per term
Late registration (after the second week of class)	\$30 per transaction
Late-late registration (after exam rosters are run)	\$50 per transaction
Late tuition and fee payment - each week after deadline	\$30
up to three weeks maximum	\$90

Fees for Other Courses

Cost	Fee
English Language Learning (ELL) classes	\$30
Adult Basic Skills classes	\$30

Tuition Waiver for Students 65 Years of Age and Older

Students 65 years of age and older are eligible for a tuition waiver for COCC credit classes based on the following conditions:

- The student must be an Oregon resident.
- The student must be 65 years of age or older at the beginning of the term in which the course is offered.
- A current COCC application and application fee payment must be on file. For term specific application deadlines check the academic calendar - important dates by term (<https://www.cocc.edu/departments/admissions/degrees-and-classes/academic-calendar-important-dates-by-term.aspx>).
- The tuition waiver is valid for eight or fewer credits per term.
- The student is auditing the course(s).
- Space is available in the course(s). Student may add courses under this policy only during the first two weeks of the term; instructor permission is required.
- The student is responsible for all fees (application fee, student fees, course fees, etc.).
- No placement assessment is required for classes taken with the tuition waiver.
- Tuition Waiver forms will not be accepted after the tuition due date of the term.

Students requesting a tuition waiver must complete a tuition waiver and registration form (<https://www.cocc.edu/departments/admissions/tuition-fees-payment/>). At the time the form is submitted, students must show photo identification that includes date of birth and an Oregon address. All fees must be paid in full by the tuition deadline in order to avoid late payment fees.

Returned Checks

If a payment is made with a check that is returned to the College due to insufficient funds, the student's account will be charged a \$20 returned check fee. Additionally, the student will be prohibited from making payments using checks for one year.

Collections Policy

If a student fails to pay their tuition, fees, or other charges by the end of the term, the balance due amount may be turned over to the Oregon Department of Revenue (ODR) for collections. At that time, a collections fee will be applied to the student's account and the student may make payment(s) directly to the ODR or to the College. Once payment is received in full, the student will be allowed to register for courses and order official transcripts.

Tuition Refunds for Credit Courses

To qualify for a refund, the student is responsible for initiating a course drop in Admissions and Records by 5 p.m. on the published deadline; view COCC's academic calendar - important dates by term (<https://>

www.cocc.edu/departments/admissions/degrees-and-classes/academic-calendar-important-dates-by-term.aspx) for specific dates. Drop deadline dates are also posted on the student's "Student Detail Schedule," which is available by logging into the student's Bobcat Web Account. Any debt owed to the College will be processed against the refund first, with the net balance remitted to the student within a reasonable processing period.

Students may select a refund method via the Bobcat Web Account. Students select direct deposit into an existing bank account, direct deposit to a cashback Discover checking account, or paper check sent through postal mail to the mailing address on file at Central Oregon Community College. If a student does not select a refund method the refund will be processed by paper check.

Short-Term Course Refunds

To receive a tuition refund for courses which span two weeks or less in a term: the class must be dropped before the first day of class in order to be eligible for a 100% refund.

For courses which span more than two weeks but not more than seven weeks in the term: the class must be dropped no later than three days after the class start date in order to be eligible for a 100% refund. Some specially priced courses do not follow this policy.

To qualify for a refund the student must assure that a drop is processed either by visiting or calling the Enrollment Services office at any campus by the deadline. The drop must be submitted Monday-Friday, excluding holidays. See the short term class refund and drop schedule in the online academic calendar - important dates by term. (<https://www.cocc.edu/departments/admissions/degrees-and-classes/academic-calendar-important-dates-by-term.aspx>)

Full-Term Course Refunds

Tuition is refundable up to 5 p.m. on Friday of the second week of the term, (1 p.m. during Summer term). No portion of the tuition and fees is refundable after this date. Students who fail to drop a course by this deadline will be responsible for full payment.

Students with federal financial aid may owe a repayment if they completely withdraw from courses. See the Financial Aid section for details.

Petitions

In cases of extenuating circumstances, students can request an exception to a published academic policy by submitting the student petition form (<https://www.cocc.edu/departments/admissions/grades-and-student-records/petitions.aspx>). Such policies may include but are not limited to late drop or withdrawal, late add, refund/waiver of tuition/fees after the published deadline, refund/waiver of late payment or late registration fees, changing to or from an audit and course substitution and/or transfer policies. Students must submit the form and include documentary evidence to support the request. Each case is decided upon its own merits and the decision of the petition committee is final and not subject to appeal, unless there is information pertinent to the outcome which was not submitted at the time of the initial request. Convenience or lack of familiarity with published policy does not constitute sufficient justification for a petition. The student petition form (<https://www.cocc.edu/departments/admissions/grades-and-student-records/petitions.aspx>), including instructions on how to complete it, can be found online. Please call 541-383-7500 for more information.

Tuition and fees are due by the second Friday of the term. Payment may be made online with Visa, Discover or MasterCard; or in person with cash,

check, Visa, Discover or MasterCard. Students who cannot meet this deadline should apply for a tuition payment plan (<https://www.cocc.edu/departments/admissions/tuition-fees-payment/tuition-due-dates-and-payment.aspx>) through Admissions and Records by the tuition deadline. A tuition payment plan (<https://www.cocc.edu/departments/admissions/tuition-fees-payment/tuition-due-dates-and-payment.aspx>) does not relieve the student of an obligation to meet registration and/or withdrawal (drop) deadlines for refund purposes.

Payment of the stipulated tuition and fees entitles all registered credit students, full-time or part-time, to all services maintained by the College. These services include use of the Library, Tutoring Center, laboratories and equipment in connection with courses for which the students are registered, access to the student newspaper and admission to special events sponsored by the College. No reduction in tuition and fees is made for students who do not intend to use these services.

The College reserves the right to make changes in tuition and fees without notice; however, any changes made during a term will not become effective until the next term.

Tuition Payment Plan

A tuition payment plan (<https://www.cocc.edu/departments/admissions/tuition-fees-payment/tuition-due-dates-and-payment.aspx>) is available in Admissions and Records at Boyle Education Center, for students registered in six or more credits. To initiate a payment plan, students must complete a contract and pay \$30 plus one-third of tuition and fees by the tuition due date. The balance will be due by 5 p.m. on Friday of the seventh week of the term. A \$50 late fee is charged for payments made after the deadline.

Central Oregon Community College makes every effort to ensure that students with financial need have access to its programs and courses of study. Students with general questions may find their answers on the Financial Aid web page (<https://www.cocc.edu/departments/financial-aid/default.aspx>). For more specific questions, contact the Financial Aid office located in the Boyle Education Center. Students are encouraged to submit their Free Application for Federal Student Aid (FAFSA) (<https://studentaid.ed.gov/sa/fafsa/>) or Oregon Student Aid Application (ORSAA) (<https://oregonstudentaid.gov/orsaa-filter.aspx>) as soon after October 1 as possible to be considered for maximum eligibility. Students who are not eligible to complete the FAFSA may apply for the ORSAA. A completed ORSAA is required for the Oregon Opportunity Grant, Oregon Promise Grant and certain OSAC Scholarships. Apply for the ORSAA each year beginning October 1. The federal school code for COCC is 003188.

Who May Be Considered for Financial Aid?

In order to comply with general federal eligibility provisions at COCC, students must:

- be U.S. citizens or eligible non-citizens with appropriate documentation;
- have a high school diploma, a GED certificate or complete a home school program at a secondary level
- be enrolled as certificate-seeking or degree-seeking students with declared majors at COCC;
- maintain satisfactory academic progress;
- certify that they are not in default on a federal student loan and that they do not owe money on a federal student grant;
- and be registered with the Selective Service, if required.

In order to receive aid from COCC, students must complete the application materials, including the FAFSA or ORSAA each year, be eligible according to applicable criteria and be enrolled in and attend credit classes at COCC.

How Student Aid Is Distributed

On the second Friday of each term, referred to as the “census date,” enrollment is frozen and financial aid is applied to the student’s account based on enrollment level. Aid is applied first to tuition, fees, authorized bookstore charges and room/board for on-campus students. Any remaining funds are refunded to the student. Work-study earnings are paid each month through the College’s normal payroll process.

Satisfactory Academic Progress Financial Aid Academic Eligibility Standard

To maintain eligibility for financial aid, a student must comply with the following standards. Failure to meet any of the standard requirements may result in denial of federal financial aid at COCC.

Financial aid applicants must have a cumulative GPA of 2.0 and a cumulative completion rate of 66.67 percent of their calculated credits at the end of each term. The term “calculated credits” is defined as credits for which a student has received a financial aid disbursement and/or attempted hours if the student did not receive financial aid. It also includes transfer credit hours that are submitted for evaluation. If a student fails to meet these eligibility standards, an automatic WARNING status (see below) is enforced. Grades of A, B, C, D and P only will be evidence of successful completion of coursework for purposes of calculating institutional percentage completion rates.

Aid eligibility is limited to 150 percent of a student’s program credit length (approximately 135 credits for two-year degree and 75 for one-year certificate) even if a certificate/degree is not earned. As soon as it is clear that a student cannot graduate within this period, he/she becomes ineligible for aid. Change of major or program may not be sufficient reason to extend the credit limit. Students pursuing more than one program at COCC will need to submit an appeal and documentation of its necessity if the maximum limit is reached.

Measurement Point/Times Standard Applied

The financial aid academic eligibility standard will be evaluated at the end of each term for financial aid applicants. Eligibility for receipt of financial aid can be denied at any measurement point if the standard is not met.

Good Standing Status

Financial aid applicants who meet a cumulative GPA of 2.0 and a cumulative completion rate of 66.67 percent of their calculated credits at the time of evaluation are considered to be in GOOD STANDING and are otherwise eligible for aid.

Warning Status

When a student in GOOD STANDING fails to meet the eligibility standards for either completion rate and/or GPA, an automatic WARNING status is enforced. If a student in WARNING status fails to meet the cumulative minimum standards for another term, he/she becomes ineligible for aid.

Failed Status

A student in WARNING status who has failed to meet the cumulative minimums at the end of the next evaluation period will not be eligible for aid. This includes grants, work study, loans and institutional awards.

Reinstatement of Aid Eligibility

A student may apply for a redetermination of eligibility through the APPEAL process. A student may submit an appeal for reinstatement on the basis of mitigating circumstances or after successfully rehabilitating the cumulative 2.0 GPA or better and completion rate of 66.67 percent.

Appeal Procedures

Appeals are made through the Financial Aid office, on the official appeal form and will require the following: an explanation and documentation regarding why the student failed to make Satisfactory Academic Progress (SAP) and a statement and documentation as to what has changed in the student’s situation that would allow the student to meet SAP in future terms. Appeals are referred to an Appeal Committee. If an appeal is approved, aid eligibility will be restored beginning with the current term and not retroactively.

Current COCC students will typically be allowed to petition for one program change. If approved, the student will be given 1.5 times the amount of remaining credits to finish the requirements for the new program.

Returning students who are seeking a new certificate or degree or who are continuing work on the original course of study will be reviewed on a case by case basis, with consideration given to prior academic history.

Probation Status

Successful appeals will allow a student to be placed in PROBATION status. Students must meet the conditions outlined in the appeal decision. If a student is unable to meet these conditions, the student will be ineligible for aid until the cumulative GPA is at least 2.0 and the cumulative completion rate is at least 66.67 percent.

Transfer Student Requirements

Coursework taken at another institution will count toward the 150 percent maximum calculated credits as well as the cumulative completion rate. If the limit is exceeded, the student must submit an appeal to determine aid eligibility. GPAs from other schools are not considered in COCC’s financial aid satisfactory progress policy. Only credits that apply toward the program will count toward maximum calculated credits in the appeal process.

Consortium Agreements

Students enrolled in more than one institution under consortium agreements are subject to the home institution’s SAP and Title IV return policies.

Repeat Coursework

Repeat coursework will be allowed for courses designed to be repeated according to institutional academic policy and procedures. All other course work will be limited to one time payment for retaking previously passed coursework.

Developmental Coursework

Students will be allowed an additional 45 calculated credits of developmental coursework. Developmental coursework is defined as WR, MTH and CIS courses under 100 level. However, developmental credits at or above the level that meet program requirements for which a student is currently seeking will not be excluded from attempted credits.

Withdrawal Penalty/Repayment Requirements

Students who receive federal financial aid and who:

- subsequently completely withdraw, stop attending or are expelled, or
- are enrolled in a combination of module and full-term classes and drop or stop attending all full-term classes

may be subject to a repayment of unearned financial aid. A Title IV return calculation determines, based on withdrawal date, the amount of federal aid that the student has earned. The amount of federal aid earned, under the federal aid return policy, may be less than tuition and other charges. This means that upon withdrawal, a student may owe COCC tuition and other charges in excess of net student aid. The student is responsible for payment of charges not covered by student aid. Withdrawal from classes after the tuition due date may affect completion rates that are required for Satisfactory Academic Progress.

At the time of complete withdrawal, students can request an estimated Title IV refund/repayment calculation from the Financial Aid office.

Application Procedure

The Free Application for Federal Student Aid (FAFSA) (<https://studentaid.ed.gov/sa/fafsa/>) or Oregon Student Aid Application (ORSAA) (<https://oregonstudentaid.gov/orsaa-filter.aspx>) may be submitted as early as October 1 for the upcoming Summer, Fall, Winter and Spring award year. Students are encouraged to apply as soon as possible because some funding is limited. Students apply on the web at fafsa.gov. A paper FAFSA is available in pdf format at the same website.

The COCC Financial Aid office can provide additional and detailed information about various financial aid programs. For further information, students should:

- go to the Financial Aid website (<http://www.cocc.edu/financial-aid/>);
- send an email to: coccfinaid@cocc.edu;
- send a letter to: COCC Financial Aid, 2600 NW College Way, Bend, OR 97703; or
- telephone: 541-383-7260

Students should include their name and COCC ID number in all correspondence to the Financial Aid office.

What Types of Aid Are Available?

Financial aid is money awarded to students to help them pay for tuition, fees, books, room and board, and transportation while they are working on a certificate or degree. There are four types of financial aid programs available: scholarships, grants, loans and work-study. These funds come from various sources. Program details, including eligibility criteria and dollar amounts, may differ from the following descriptions if applicable laws or regulations governing such programs change after printing of this material.

Scholarships

COCC has three primary types of scholarship programs: COCC Foundation scholarships are based on financial need and other criteria. Merit scholarships and private scholarships encourage academic excellence and personal achievement.

Central Oregon Community College Foundation Scholarships

The Central Oregon Community College Foundation is comprised of a board of directors, administrative staff members and a group of interested and concerned private citizens from throughout the College District who donate their time and money to help COCC's students and to improve College programs. Each year, the COCC Foundation raises funds to finance a number of scholarships. A scholarship application is required. Applications are submitted online on the College's website beginning in mid-December for the upcoming academic year.

Eligibility is determined by the COCC Scholarship Selection Committee and may be based on need, academic achievement, residency or other donor-specific criteria. The COCC Foundation Scholarship is not available for Summer term.

Merit Scholarships

Merit scholarships are awarded on the basis of academic excellence to seniors graduating with a minimum 3.0 cumulative grade-point average from in-district high schools. This scholarship may be renewed at COCC for second-year students with a minimum 3.0 cumulative grade-point average and completion of 6 credits per term totaling 18 credits during their first year.

Private Scholarships

For a list of available scholarships and scholarship search engines visit the Financial Aid website (<http://www.cocc.edu/financial-aid/>) or contact the Financial Aid office. High school seniors are encouraged to explore scholarship opportunities with the help of their high school counselors.

Grants

Grants are awarded on the basis of financial need. Grants do not have to be repaid and are another type of gift aid. Student financial aid packages include grant funds whenever student eligibility and funding levels permit. Funding for the grant programs administered at COCC comes from the Department of Education and the state of Oregon.

Federal Pell Grant (limited to 18 quarters)

The Federal Pell Grant program was established to provide financial aid for eligible undergraduate students with financial need. Eligibility for other federal aid is determined after the Pell Grant is taken into consideration. Grant awards in 2018-2019 ranged from \$652 to \$6,095 annually depending on financial eligibility and enrollment. Students with a prior bachelor's degree are not eligible. Students may apply for the Federal Pell Grant by completing the FAFSA.

Federal Supplemental Education Opportunity Grant (FSEOG)

FSEOG awards are federally funded. COCC is responsible for selecting eligible students and determining the amount of the award. The FSEOG is for undergraduates with exceptional financial need and gives priority to students who receive Federal Pell Grants. Annual FSEOG awards were \$600 in 2018-2019 depending on federal funding allocations. Students may apply for the FSEOG award by completing the FAFSA.

Oregon Opportunity Grant (OOG)

The state of Oregon provides funds for this grant program. Eligibility is based on financial need as defined by the Oregon Student Access Commission using the FAFSA information and is limited to 12 cumulative quarters. Students must have a minimum of one-year legal residency in

Oregon and be enrolled in at least six credit hours each term. Students with a prior bachelor's degree are not eligible. Students enrolled in a course of study leading to a degree in theology, divinity or religious education are not eligible. Oregon Opportunity Grant awards are set by the state of Oregon. The Oregon Opportunity Grant is not available for Summer term. Annual OOG awards were \$2,600 in 2018-2019. Students may apply for the OOG by completing the FAFSA.

Oregon Promise Grant

This award provides funding for students who graduated (or the equivalent) from an Oregon high school no more than six months prior to attending and pursuing a certificate or degree at one of Oregon's 17 community colleges. The bill funds grants at a minimum of \$1,000 for each full time community college student awarded, and it is to be administered by the Office of Student Access and Completion (OSAC) under the Oregon Higher Education Coordinating Commission (HECC). Annual Oregon Promise maximum (pre-\$50 per-term copay) awards were \$3,564. Students may apply for the Oregon Promise by completing the application at oregonstudentaid.gov (<http://oregonstudentaid.gov>) and submitting the FAFSA.

Loans

Note: Students are encouraged to borrow only the amount needed to cover essential educational expenses. Loan entrance and exit counseling are required for student loan borrowers.

Federal Direct Loan Programs (DL)

To be eligible for a federal Direct Loan, students must be enrolled in at least six credit hours and must not be in default on a prior loan or owe a grant repayment. All loans must be repaid. Students must sign a promissory note (a legal agreement to repay) with the Department of Education before any loan money can be disbursed. The promissory note contains detailed information about the terms, responsibilities and repayment of the loan. Because students must repay educational loans, this kind of assistance is generally referred to as self-help aid. Federal Direct loans are accessed through the normal financial aid process. Please visit the Financial Aid website (<http://www.cocc.edu/financial-aid/>) for more information.

Three specific types of Federal Direct Loans are available:

- **Federal Direct Subsidized Loan Program**
The Direct Subsidized Loan provides fixed interest (currently 5.05%) federal loans through the Department of Education. Maximum annual loan limits are based on financial need, but cannot exceed \$3,500 for freshmen and students in certificate programs and \$4,500 for sophomores. Effective July 1, 2013, new Direct Subsidized Loan borrowers are limited to borrowing up to 150 percent of the length of their current academic program. Loan repayment begins six months after a student ceases to be enrolled at least half time. Monthly payment amount and length of repayment depend on the cumulative amount borrowed, but will be set up with an initial 10-year repayment.
- **Federal Direct Unsubsidized Loan Program**
The Direct Unsubsidized Loan provides fixed interest (currently 5.05%) federal loans through the Department of Education. The Direct Unsubsidized Loan is available to students who do not qualify for some or all of the need-based Direct Subsidized Loan. Awards cannot exceed \$3,500 for freshmen and students in certificate programs and \$4,500 for sophomores for an academic year. In addition, dependent students as defined by the Department of Education are eligible to borrow up to \$2,000 in Direct Unsubsidized Loans and independent

students, up to an additional \$6,000. Student borrowers will be responsible for payment of the interest that accrues on these loans while they are in school and during periods of deferment. Loan repayment begins six months after a student ceases to be enrolled at least half time. Monthly payment amount and length of repayment depend on the cumulative amount borrowed, but will be set up with an initial 10-year repayment.

- **Federal Direct PLUS Loan**

The Direct PLUS Loan is a non-need based, loan to parents. Loans may range up to the published cost of attendance for the institution minus other student aid. A loan origination fee of 4.248% is deducted at the time of disbursement. The annual interest rate is currently fixed at 7.6%. Parent borrowers will also be evaluated for adverse credit history. For more information on the Direct PLUS visit studentaid.gov (<http://studentaid.gov>).

Work-Study and Student Employment

Many students help finance their education by securing part-time employment either on or off campus. Since students work in order to receive funds from employment, this kind of assistance is considered a form of self-help aid.

COCC Career Services maintains a list of off-campus job opportunities for students seeking employment outside the Federal Work-Study program. Search "student employment" at [cocc.edu](http://www.cocc.edu) (<http://www.cocc.edu>) for more information.

Federal Work-Study (FWS)

This program provides employment opportunities to students who apply for financial aid and are eligible for the Federal Work-Study program. Availability is based on federal fund limits. In addition to providing income, students may acquire work experience in jobs related to their academic interests. Annual FWS awards were \$4,200 in 2018-2019.

Students cannot apply for a work-study position until they receive a financial aid award that includes work-study. Students will not receive any Federal Work-Study funds until they are actually hired and working in a work-study job. Due to the need to match job requirements with student skills, the College cannot guarantee employment to all eligible FWS recipients.

At COCC, work-study jobs provide experience in a variety of fields including physical education, library work, the sciences, health service and office work. Community service jobs are also available. Please visit the Financial Aid website (<http://www.cocc.edu/financial-aid/>) for more information.

Veterans Education Benefits

Students who believe they may be eligible for veterans educational benefits, such as a veteran or a widow or dependent of a 100% disabled or deceased veteran, should contact a veterans certifying official at 541-383-7264.

All veteran students at COCC must meet the same academic standards as other students to remain in good standing. However, to remain eligible for educational benefits, veterans and other students eligible for these benefits must comply with the following additional requirements:

Notification of Enrollment Changes

It is the responsibility of the registered veteran to notify the veterans certifying official when any changes are made to their schedule (add or

drop classes). Failure to do so may result in incorrect payments to the student. Overpayments must be repaid.

Program of Study

To be eligible for veterans educational benefits, students must be enrolled in a degree or certificate program offered by COCC and approved by the state approving agency. Only courses required for that degree or certificate program may be certified for benefit payment.

Transfer of Credits

Veterans who enter as transfer students, or who have completed any college-level coursework, are required to have all official transcripts forwarded to Admissions and Records for evaluation. Certification will not continue past the first term if transcripts from all other sources (including military transcripts) have not been received by COCC.

Credit Hour Requirements

To receive full-time pay, students must take a minimum of 12 credit hours per term; for three-quarter time pay, students must take nine to 11 credit hours per term; and to receive half-time pay, students must take six to eight credit hours per term. Chapter 33 students have different requirements.

Satisfactory Academic Progress

Students using VA educational benefits at COCC must earn at least a 2.0 GPA each term to maintain good standing. The terms of COCC's Academic Warning Policy for all students, including those using VA educational benefits, are outlined in the catalog. Academic warnings are reported to the VA each term. If a student using VA educational benefits receives a Fourth Academic Warning, their benefits will be terminated at COCC and they will not be eligible for reinstatement for one calendar year, in accordance with the Academic Warning Policy. *Please note: students receiving federal financial aid are also bound by the Satisfactory Academic Progress (SAP) policy upheld by COCC's Financial Aid office.*

Institutional Responsibility

COCC is responsible for reporting to the VA if the student is no longer pursuing his or her educational objectives as certified.

Veteran Tuition Rates

In accordance with Section 417 of Public Law 114-315, and 38 U.S.C. 3679(c) as amended, the qualifying students shall be charged a non-resident rate as outlined in the Residency Policy. This rate complies with Oregon legislation and the U.S. Department of Veterans Affairs requirements of 38 U.S.C. 3679(c) as amended. Qualifying students include:

- A Veteran using educational assistance under either chapter 30 (Montgomery GI Bill® – Active Duty Program) or chapter 33 (Post-9/11 GI Bill®), of title 38, United States Code, who lives in Oregon while attending a school located in Oregon (regardless of his/her formal state of residence) and enrolls in the school within three years of discharge or release from a period of active duty service of 90 days or more.
- (GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). For more information see the GI Bill Trademark terms of use.)
- Anyone using transferred Post-9/11 GI Bill® benefits (38 U.S.C. § 3319) who lives in Oregon while attending a school located in Oregon (regardless of his/her formal state of residence) and enrolls in the

school within three years of the transferor's discharge or release from a period of active duty service of 90 days or more.

- Anyone described above while he or she remains continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same school. The person so described must have enrolled in the school prior to the expiration of the three year period following discharge or release as described above and must be using educational benefits under either chapter 30 or chapter 33, of title 38, United States Code.
- Anyone using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in Oregon while attending a school located in Oregon (regardless of his/her formal state of residence).
- Anyone using transferred Post-9/11 GI Bill® benefits (38 U.S.C. § 3319) who lives in Oregon while attending a school located in Oregon (regardless of his/her formal state of residence) and the transferor is a member of the uniformed service who is serving on active duty.
- Anyone who is eligible for and using educational assistance under chapter 35 (Dependents' Educational Assistance Program).

Registration

Bobcat Welcome

Bobcat Welcome is an online introduction to COCC that all certificate- and degree-seeking students are required to complete prior to advising and registration. Visit the COCC website (<https://www.cocc.edu/>) for more information about Bobcat Welcome.

Placement

All COCC students taking credit classes must provide writing and math placement information to COCC before they can register for classes. Students may meet the placement requirement in one of the following ways:

- Placement assessment: The placement assessment evaluates academic skills and helps place the student into the right level of courses and may meet a program/course prerequisite. Placement scores are valid for two years.
- Complete a college level reading, writing and math course with a "C" or better at another regionally accredited college and have submitted transcripts prior to advising and registration.
- Provide placement scores/placement from another college within the last two years and have submitted a copy of the placement prior to advising and registration.
- Completed the Smarter Balanced Assessment within the last two years and scored a 3 or 4 in writing and/or math.
- Have an associate, bachelor's or higher-level college degree.

Students are not required to show placement if they are planning to take only HD 110 Career Planning, HD 190 OLI Leadership Skills I, studio art, world language, computer skills, music performance or HHPA activity courses.

Students auditing courses using the 65+ tuition waiver are not required to take the placement assessment.

Visit the COCC website (<https://www.cocc.edu/>) for more information about the placement process, how to prepare, how to schedule a

placement assessment appointment and other important placement information.

Advising

Once placement is provided, all certificate- and degree-seeking students meet with an academic advisor. For new students, dates and times of group advising options are available on the COCC website. Current students should contact their advisor directly to schedule an advising appointment. Students can confirm the name of their advisor by contacting CAP Services (located in Cascades Hall) or by logging in to their Bobcat Web Account. All students who participate in group advising sessions will be emailed the name of an individual academic advisor, based on the major stated on their admission application, shortly after the start of each term. Students can change their advisor by contacting CAP Services at 541-383-7200.

Current students may choose to be self-advised, which means that the advising requirement is waived and students are responsible for choosing their courses and making sure that those courses fit their degree goal. To apply for and review the requirements for receiving self-advising status, visit the COCC advising website (<https://www.cocc.edu/departments/cap/advising/default.aspx>).

Registration

After submitting an application for admission, completing Bobcat Welcome, providing placement and meeting with an advisor (if degree-seeking), students may register for courses based on the dates and times listed on the COCC website. The registration schedule for credit students is based on enrollment status and number of credits earned at COCC. Degree-seeking students who have attended credit classes at COCC in Fall, Winter or Spring terms are eligible for priority registration. Transfer credits may meet some program requirements but are not counted toward “earned credits” for registration purposes. For more details, view the priority registration schedule (<https://www.cocc.edu/departments/admissions/register-for-classes/>). Students wishing to pursue a cohort program without a selection process must meet the basic prerequisite competencies and will be placed in the program according to seat availability on a first-come, first-served basis according to the priority registration schedule.

Student registrations are complete only when courses are entered into COCC’s online student information system. A student may not register if a debt is owed to the College. Students must be registered in order to attend class. Students may not take more than 19 credit hours per term without permission from Admissions and Records.

Students will be withdrawn from a course if they have not completed the prerequisite course(s) with a “C” grade or better from a prior term.

Adding and Auditing Courses/Wait Lists

Courses may be added until 7 a.m. on the first day of the first class session. After this time, permission from the instructor is required to add a course. Students may add courses via their Bobcat Web Account (with electronic instructor approval) or in person at the Boyle Education Center, or at the Redmond, Madras and Prineville Campuses.

Students may not begin attendance in a new class after the first week of the term.

Note that students may not register for two sections of the same course. If students wish to register for courses that overlap in time, they must receive permission from both course instructors.

Auditing Courses

Full-term courses may be changed to/from audit through the seventh week of the term. Such changes must be done in person or by contacting Admissions and Records. Audited courses do not apply toward financial aid. *Note: different deadlines exist for short-term courses; contact Admissions and Records at 541-383-7500 or welcome@cocc.edu, for details.*

Wait Lists

Students who are on a wait list for a course will automatically be registered into the course if a seat becomes available. The automated wait list registration process turns off at 5 p.m. the Friday prior to term start. (For information on short term classes, please contact Admissions and Records.) Students will receive a message in their COCC email account notifying them they have been registered for the course and are now responsible for applicable tuition/fees. Students who are not automatically registered in the course and remain on the wait list can request permission from the instructor to add the course, if a seat is available. The instructor can submit electronic permission to allow the student to add the class via their Bobcat Web Account or by signing a registration form. Permission expires after two business days.

Attendance/Administrative Withdrawal

In order to assure that all available class seats are filled with students, both registered students and students from the wait list, COCC enforces an attendance policy during the first week of the term.

To maintain enrollment in each class, the student must attend the first class meeting and 100 percent of the first week’s class and lab meetings. Students in online classes must complete the attendance requirement outlined in the syllabus. For classes that do not span the entire term the student must attend the first class session. Students who do not meet attendance requirements will be administratively withdrawn from that class by the instructor at the time class roll is taken. If this results in a tuition refund, the refund will be processed within three weeks. If students are unable to attend a session within the first week due to extenuating circumstances, they must contact the instructor prior to the first class meeting if they wish to avoid administrative withdrawal. Allowing students to remain in the course is solely at the discretion of the instructor.

The College is not responsible for liabilities associated with the administrative withdrawal of students.

The administrative withdrawal policy does not relieve students from full responsibility for officially dropping a course within the given deadline to not incur tuition charges and to not receive a grade for the course.

Dropping Courses/Complete Withdrawal

Students registered in courses are considered to be in attendance. Students who stop attending class but do not drop the class will receive a grade for that course and will owe all tuition and fees. This grade will be a permanent part of the student’s academic record.

For full term classes, students may drop online through their Bobcat Web Account during the first two weeks of the term. Students may also complete the drop section on a registration form and submit it in person at the Boyle Education Center or at the Redmond, Madras or Prineville Campuses. After week two, students must submit a registration form or

contact Admissions and Records, 541-383-7500, to drop a course over the phone.

Short-Term Courses

- For a refund or credit for courses which span two weeks or less in a term: the class must be dropped before the first day of class.
- For a refund or credit for courses which span more than two weeks but not more than seven weeks in a term: the class must be dropped no later than three days after the class start date.

Full-Term Courses

Students may drop a course during the first two weeks of the term and receive a full refund, and no grade will appear on the student's transcript. Between the third week and the end of the seventh week of the term, students can drop a course; no refund is available, but no grade will appear on the transcript. Students may request to withdraw from a full-term course between the eighth week of the term and the Wednesday before finals week with electronic instructor permission. Withdrawing will result in a "W" on the transcript and no refund is available. Students should communicate with the instructor and refer to the course syllabus to determine the conditions under which a "W" can be granted. See the academic calendar - important dates by term (<https://www.cocc.edu/departments/admissions/degrees-and-classes/academic-calendar-important-dates-by-term.aspx>) for specific dates.

Complete Withdrawal

Students receiving federal financial aid may owe a repayment if they completely withdraw from courses. See the Financial Aid section for details.

Withdrawing Due to Active Military Duty

Active duty, guard and reserve military personnel (Army, Navy, Air Force, Marines and Coast Guard) who are enrolled at Central Oregon Community College and whose academic progress is interrupted due to deployment or activation mid-term may withdraw without tuition penalty. A student currently in a course will not be charged for the course and the registration will be voided with no indication on the transcript. Students must submit a copy of their military duty assignment orders verifying deployment or activation along with their request to withdraw from the course to Admissions & Records. Copies of the orders must also be submitted to the COCC VA Certifying Officer if any military benefits are being used. If the service member intends to return to school, the person will be readmitted with the same academic status as when last attended. This policy does not apply to retired military personnel or dependents.

Cancelled Classes

The College reserves the right to cancel or postpone a class. Students registered in classes that are cancelled will be notified via their COCC email account and issued a full refund. Every effort will be made to cancel the class well in advance of the intended start date allowing students to reschedule or make other arrangements.

Student Services

Central Oregon Community College offers a variety of academic and support services designed to foster student success.

Academic Advising (CAP Services)

Academic advising at COCC is provided by both CAP Services (Career services, Academic advising and Personal counseling) and by full time faculty members in each department. The purpose of academic advising

is to guide students toward achieving their educational goals and to help students become self-reliant in understanding College policies and practices. Various advising requirements are in place to support this purpose.

Prior to registering for classes, new certificate- and degree-seeking (CDS) students and students who have not attended for more than a year participate in small-group advising sessions. After the first advising session, students are assigned an advisor in their declared major and emailed the advisor's contact information. Students are required to meet with their advisor to develop academic and career plans before the next term's registration. All CDS students are required to meet with an advisor prior to registration if they participated in a group advising session the previous term, or as determined by the advisor and at least once a year.

COCC provides an online tool, GradTracks, to help students and their academic advisor track progress toward graduation. GradTracks allows students to see how completed courses are applied toward their certificate or degree and identifies requirements and courses still needed to graduate. Students can also explore other certificate and degree options. Students can access GradTracks by logging on to their Bobcat Web Account and selecting the Student Services and Financial Aid Tab, clicking on the GradTracks link and again on the GradTracks button. Students must be taking credit classes in order to view information in GradTracks.

Students are responsible for monitoring their advising requirement and for completing the advising steps in a timely manner. COCC recommends that students plan their advising appointments well prior to registration opening. Students who want to find their assigned advisor's name and contact information and see if they have an advising requirement for an upcoming term, should look in their Bobcat Web Account. To do so, go to cocc.edu (<http://cocc.edu>) and select "Student Login." After logging in, select "Student Services and Financial Aid," then "Registration," and then the "Can I Register for Credit Classes?" page.

Students may request a specific advisor or a change in advisors if they change their major. Students not seeking a certificate or degree are not required to meet with an advisor, but are welcome to meet with a CAP Services advisor. Contact CAP Services at 541-383-7200 in Cascades Hall for advising options.

Associated Students of COCC (ASCOCC)

ASCOCC provides students with numerous opportunities for governance, advocacy and social programming. The council is responsible for allocating student fees, appointing students to campus governing committees, advocating for the entire student body and providing diverse social and educational programs and services. The ASCOCC council offers a limited number of paid positions each year.

Contact ASCOCC at 541-383-7595 or visit the ASCOCC website (<http://cocc.edu/ascocc/>) to find out about current activities and how to get more involved with the student council.

Bobcat Web Account

COCC students will use their online Bobcat Web Account (<https://www.cocc.edu/home/student-login.aspx>) to access account information including balances, financial aid, registration, degree requirements, personal contact information, etc.

Bookstore

The Campus Bookstore, located in Newberry Hall on the Bend campus, sells textbooks, class materials, educational and personal supplies, gifts, convenience food and beverages. Textbooks can be ordered 24 hours a day from the bookstore website (<http://bookstore.cocc.edu>). For more information about the bookstore, call 541-383-7570 or visit the bookstore website (<http://bookstore.cocc.edu>).

Redmond Campus Bookstore (Building 1, Room 111) sells textbooks, class materials and educational supplies. Please call 541-504-2929 for hours.

The Broadside ONLINE

The Broadside Online is a student-run news source serving COCC and the larger community, providing online news as well as occasional print pieces. The Broadside Online serves as a campus communication link among students, faculty, staff and other readers; informs Central Oregon Community College community members of news, campus events and other topics of importance and general interest; provides a forum for free and open exchange of ideas and opinions; and provides an innovative learning experience in a laboratory environment which emulates that of a professional news source.

Each year The Broadside Online offers dozens of student employment opportunities in reporting, editing, design and layout, multi-media communications, photography and journalism leadership. All students are welcome to apply for the paid positions. For more information, call The Broadside Online advisor, 541-383-7252, or email The Broadside Online editor-in-chief at broadsidemail@cocc.edu.

Campus Public Safety

The COCC department of Campus Public Safety (CPS) provides 24/7 patrol and response services with state-certified public safety officers. Officers respond to calls for assistance, crime reports as Campus Security Authorities (CSA), traffic accidents, safety escorts, policy violations, medical emergencies and also enforce parking, traffic and policy regulations. The department provides information on crime prevention and personal safety. Crime statistics and annual reports are available on the campus public safety website (<http://cocc.edu/public-safety/>) or by calling the CPS office. Please report all incidents to the department at the numbers below. Active emergencies should be reported first to 9-1-1, then call the appropriate number: Campus Public Safety can be reached 24 hours each day, 7 days per week at 541-383-7272 or ext. 7272 from campus phones.

All students who park on campus must register their vehicles and display registration decals. Parking, traffic and other regulations may be found in the Parking and Traffic Regulations handbook available, along with registration decals, in the Boyle Education Center at either the Campus Public Safety office or in the Information Office. There is no charge for parking permits. Certain parking areas on campus are reserved for guests, carpool commuters, staff and vehicles displaying valid disabled parking decals.

Appropriate emergency preparedness and response to critical incidents on campus is a cornerstone of the College's safety program. Posted in classrooms are emergency incident response directions and phone numbers. Emergency assistance phones and towers are located throughout the campus and connect persons directly with the Campus Public Safety department 24/7.

Prevention training opportunities are offered throughout the year to provide students and staff with information on active violence, emergency preparedness, self-defense and more. These programs are advertised through email communications, ASCOCC and other media. The College's emergency preparedness and response plans and directions are located on the public safety webpage (<http://cocc.edu/public-safety/>).

CAP Services (Career Services, Academic Advising, Personal Counseling)

CAP Services offers a variety of student services to support COCC students in setting and meeting their educational goals. CAP Services is located in Cascades Hall on the Bend Campus. Various services are offered on all four COCC campuses. Call CAP Services for more information about each of these services, 541-383-7200, or visit the CAP Services website (<https://www.cocc.edu/departments/cap/>).

Career Services (CAP Services)

COCC Career Services assists students with career planning and exploration, developing job search skills and finding full-time and part-time employment (including work-study placement). Local employers can use these services to recruit students and graduates with the specialized knowledge and skills needed in today's workplace. Career Services is part of CAP Services, located in Cascades Hall and offers personal appointments, print-based and web-based resources, and workshops open to COCC students and alumni. Call CAP Services, 541-383-7200, or visit CAP Services website (<https://www.cocc.edu/departments/cap/>) for more information.

Club/Intramural SPORTS and Recreation Programs

The COCC Club/Intramural Sports and Recreation programs offer a wide range of traditional and nontraditional sports and recreational activities along with special events and tournaments for people of all interests and abilities. The spacious Mazama complex features top-flight sports and recreation facilities.

COCC Club Sports provide opportunities for competition, skill development, leadership and recreation. Clubs are organized by students with guidance from coaches, students, faculty, staff and community members. Current clubs include alpine ski racing, baseball, basketball, bowling, cycling, golf, Nordic skiing, rugby, soccer (indoor and outdoor), swimming, volleyball, running and triathlon.

Organized intramural activities are available at convenient times for COCC students, faculty and staff. The emphasis is on having fun, making friends and staying fit. Some activities feature friendly competition while others are purely recreational. Activities include basketball, bench-press tournaments, cycling (recreational and races), indoor soccer, day hikes, dodgeball tournaments, flag football, golf tournaments, running events, soccer (outdoor), softball (coed), swimming, table tennis, tennis and volleyball.

COCC promotes lifetime fitness for everyone. Facilities are available for drop-in use throughout the week for a small per-term user fee. Informal recreational activities and organized sports are available to all students. Passes for local recreation facilities are available to students at no cost (swimming, ice skating and bowling). Call 541-383-7794 or visit the Student Life website (<https://www.cocc.edu/departments/student-life/>) for more information.

Clubs

ASCOCC offers many opportunities for students to participate in campus clubs. Clubs must involve at least four current COCC students, have a faculty or staff advisor and create a budget. Those having questions or ideas about forming a student club or participating in an existing club can contact ASCOCC at 541-383-7595 or visit the ASCOCC website (<https://www.cocc.edu/departments/student-life/ascocc/default.aspx>) for more information.

Computer Labs

COCC offers a variety of computing resources to students registered in its credit classes or Community Learning classes.

Drop-in computer labs (<https://www.cocc.edu/departments/its/computer-labs/>) are located on the Bend campus in the Barber Library, Pioneer Hall, Boyle Education Center and on the Redmond Campus in Building 3 and the Redmond Technology Education Center. Additionally, the COCC Madras and Prineville Campuses have computer labs that are scheduled for classes and drop-in use. There are computer labs specific to Math, Networking, Computer-Aided Drafting and Design, Science and Geographic Information Systems on the Bend campus and additional computer classrooms located on all campuses. All drop-in computer labs are staffed by student workers who offer assistance logging into student accounts and answering general questions.

Computers at COCC use the Windows operating system and most Microsoft Office programs along with class-specific programs. Drop-in labs are equipped with black-and-white and color laser printers, flatbed scanners and adaptive workstations. All non-classroom printing has a pay-to-print fee. Payment is made by using a COCC student ID card or a COCC print card purchased in one of the computer labs.

Copy Center and Mail Services

The Copy Center, located in the Bookstore (Newberry Hall) on the Bend campus, is a full-service copy center. Services include black and white as well as color copies, binding and general mail services including UPS. For more information about the Copy Center and/or Mail Services, call 541-383-7706.

Counseling (CAP Services)

Professional counselors are available at no charge to help COCC students identify and resolve personal issues. Counselors can help with stress management, depression, test anxiety, eating disorders, substance abuse, relationship issues or any other problems that may affect college success. All students who are enrolled in at least one credit or in Adult Basic Skills/English Language Learning courses are eligible to receive short-term counseling at no charge. For more information about personal counseling, visit the CAP Services website (<https://www.cocc.edu/departments/cap/>). Counseling appointments are confidential and can be made through CAP Services (Career services, Academic advising and Personal counseling) in Cascades Hall or at 541-383-7200.

Email Account

COCC provides qualifying students with a COCC email account. COCC's primary means of communicating with students is through their COCC email account. This includes billing statements, communication from faculty, registration and wait list information and important announcements. Students should regularly check their COCC email account.

To access your COCC email account, visit the COCC homepage (<https://www.cocc.edu/>) and click the "Student Login" button in the upper right-hand corner. Next, click the "Web Email" icon.

Information about your COCC email account and instructions on how to activate your accounts are sent via mail and to your personal email listed on the COCC application within a few days after your application for admissions is received. Visit the student login webpage (<https://www.cocc.edu/home/student-login-help.aspx>) for more information.

Food Service and Catering

Quality food service is available across campus, with the Bend campus dining services available in Coats Campus Center. For details on locations, prices and options, visit the food service website (<https://www.cocc.edu/departments/student-life/campus-food-options.aspx>) or contact Chris Spears (Christopher.Spears@sodexo.com), the Food Service Director, at 541-330-4389.

Health Insurance

Central Oregon Community College does not offer student health insurance nor does the College require students to have health insurance coverage in order to enroll in courses or to participate in related activities and events.

Students are responsible for their own health insurance coverage. The College does not have a student health clinic on campus. Limited health services are available for free or at a reduced cost in the local community. Links to health resources in the community are available on the student health insurance webpage (<http://cocc.edu/student-life/>) by clicking on the student resources link at the bottom of the webpage.

Housing - On Campus

COCC's new Wickiup Residence Hall houses 330 students each year in a coed, academically focused, on-campus housing environment. Centrally located near Barber Library, Mazama Gym and the Coats Campus Center, Wickiup Residence Hall offers four-person suites with either two double bedrooms or four single bedrooms. Each suite includes a common living space, shower and bathroom shared by suitemates. Amenities include WiFi network access, laundry room, community kitchen, study lounges and recreational facilities along with a full meal plan. Contact the housing and residence life office at 541-383-7545, or visit the Housing and Residence Life website (<https://www.cocc.edu/departments/residence-life/>) for more information.

Space in the Wickiup Residence Hall is limited. Students seeking accommodations are encouraged to submit a housing application at their earliest convenience. All paperwork and deadline dates are available online. Upon completing a housing application, students must be prepared to pay a housing application fee. To guarantee a space in the hall, students will need to sign a housing agreement and pay a security deposit and down payment. The room and board rates for the 2019-20 academic year (Fall, Winter, Spring) are:

Room	Starter ¹	Basic ²	Standard ³	Preferred ⁴
Double Room per term	\$3,649	\$3,737	\$3,837	\$3,969
Total (Fall, Winter, Spring)	\$10,947	\$11,211	\$11,511	\$11,907
Single Room per term	\$4,627	\$4,685	\$4,818	\$4,947

Total (Fall, Winter, Spring)	\$13,881	\$14,055	\$14,455	\$14,841
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- ¹ 7 meals per week/\$500 flex cash per term
- ² 9 meals per week/\$400 flex cash per term
- ³ 14 meals per week/\$200 flex cash per term
- ⁴ 19 meals per week, \$100 flex cash per term

Housing - Off Campus

Availability of off-campus housing varies from season to season and year to year. The office of Student Life accepts postings electronically on its website from the community for off-campus housing opportunities. Available housing options include apartments for rent, rooms for rent in homes and homes for rent.

To view current submissions visit the off-campus housing website (<https://www.cocc.edu/departments/student-life/student-resources/off-campus-housing.aspx>). This website also provides other community resources that may be helpful in locating off-campus housing. The College provides this information as a service to students; however, it does not assume responsibility for screening rentals.

LatinX Programs

The Latinx program assists in the recruitment, retention and academic success of immigrant and native Latinx students. The program coordinator assists students to meet their educational goals and contribute to the campus community. The coordinator advises the Latinx club with planning and implementation of relevant educational programs and social activities.

For more information, in English or Spanish, contact the Latinx program coordinator at 541-318-3726 or visit the Latinx program website (<https://www.cocc.edu/departments/multicultural/latino/default.aspx>).

¡AVANZA! (Moving Forward!) Latino College Preparation Program: The goal of ¡AVANZA! is to encourage Latinx youth to graduate from high school and to pursue higher education, and ultimately, to obtain a rewarding career and contribute to their communities. The program offers a dynamic curriculum that integrates leadership, college preparation and culturally relevant themes for the Latinx students.

For more information, contact the ¡AVANZA! program coordinator at 541-318-3717 or visit the ¡AVANZA! program website (<https://www.cocc.edu/departments/multicultural/avanza/default.aspx>).

Library

COCC's three-story, 72,000-square-foot Barber Library (<https://www.cocc.edu/departments/library/default.aspx>) opened in March 1998 and serves the students, faculty and staff of all Central Oregon Community College campuses.

The Barber Library collection features hundreds of thousands of full text research articles from more than 100 scholarly electronic resources and databases, a local collection of about 70,000 print and AV materials, subscriptions to thousands of streaming videos and access to millions of items, including e-books, via the Orbis Cascades Alliance consortium. COCC students, faculty and staff are also able to check out technology like laptops, iPads, cameras and Kindles. The Library is a selective depository for U.S. federal documents.

Current, credit-enrolled COCC students, faculty and staff can access the Library's electronic resources 24/7 from off campus locations. Besides the rich collection of information resources, research help is available to all patrons in person, on the phone, by email and by chat. Barber Library has an active instructional program for the development of information literacy skills, including the offering of credit courses, information literacy sessions via other courses and research support services such as Book-A-Librarian.

COCC is a member in the Orbis Cascade Alliance, a consortium of academic libraries in the Northwest that provides services such as Summit borrowing and database licensing opportunities. Current, credit-enrolled students, faculty and staff of COCC may search for and place requests on more than 30 million Summit items accessible via the library's main webpage (<https://www.cocc.edu/departments/library/default.aspx>). Materials are delivered for pickup at the Library circulation desk or COCC campus of their choice within a few working days.

The Library's information commons has 40+ computers and wireless access is available throughout the building for students, faculty and staff, as well as community patrons and campus visitors. Group study rooms, designated quiet study areas and comfortable seating provide students plenty of options for the perfect study space.

Each year the Barber Library hosts art exhibitions in the Rotunda Gallery, as well as a few literary events.

DIVERSITY and INCLUSION

The office of Diversity and Inclusion promotes the development of a respectful and inclusive campus community by sponsoring cultural events, educational programs, and trainings.

The Multicultural Center, located in Room 217, Coats Campus Center, fosters cross-cultural understanding and respect by providing a welcoming setting for learning, sharing and connection. For more information, contact the director of diversity and inclusion at 541-383-7412 or visit the Diversity and Inclusion website (<https://www.cocc.edu/departments/multicultural/>).

Native American Program

The Native American program focuses on the recruitment and retention of Native American students. The program coordinator offers students individual support as they navigate academic and administrative aspects of student life. As the advisor to the First Nations Student Union, the coordinator supports club members as they volunteer in the community, plan educational and social events and organize the annual Salmon Bake.

For more information, contact the Native American program coordinator at 541-318-3782 or visit the Native American program website (<https://www.cocc.edu/departments/multicultural/native-american/default.aspx>).

The Good Road is a college preparation program for Native American high school students. The goal of The Good Road is to encourage Native American youth to graduate from high school and to pursue higher education, and ultimately, to obtain a rewarding career and contribute to their communities. The program offers a dynamic curriculum that integrates leadership, college preparation and culturally relevant themes for Native American students.

For more information, contact the The Good Road program coordinator at 541-330-4369 or visit the Native American program website (<https://www.cocc.edu/departments/multicultural/native-american/default.aspx>).

Network Account

The student network account is a free account that permits students to connect to the College's computer network system. Once logged on to COCC computers, users will find their personal folder (identified with their name) on the desktop. Each folder contains 200 MB of space students can use for storage. Students are responsible for reading and adhering to COCC's Acceptable Use of Technology Resources policy (<https://www.cocc.edu/policies/general-policy-manual/general/acceptable-use-of-information-technology-resources.aspx>).

Public Transportation

Cascades East Transit (CET) offers local transit service throughout the region for the general public. For more information visit the Cascades East Transit website (<http://cascadeseasttransit.com>).

COCC offers a discount bus pass program. Students can purchase a monthly regional or a monthly community connector pass at a discounted rate. Passes may be purchased at the Information Desk located in Boyle Education Center. Passes are also available at the Redmond, Madras and Prineville campuses. For more information about the discount program, please call Student Life at 541-383-7590.

Services for Students with Disabilities

COCC strives to make available to all students the opportunity for an excellent and rewarding education. The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 provide federal guidelines which help the College ensure equal access to students with qualifying, documented disabilities at all of its campuses and Community Learning locations. COCC is committed to making physical facilities and instructional programs accessible to all students. Awareness of students' needs and goals helps to create an atmosphere in which learning and growth can occur. Faculty and staff are encouraged to refer students for consultation and determination of eligibility. For more information, visit the Services for Students with Disabilities website (<https://www.cocc.edu/departments/disability-services/>) or visit the office in the lower level of the Barber Library.

Student Life

Participation in campus activities beyond the classroom is encouraged in order to complement college academic programs and to enhance the educational experiences of students. Through exposure to and participation in intellectual, vocational, cultural, recreational and social programs, students may explore their potential as individuals and develop meaningful relationships with others. For more information, contact the office of Student Life in the Coats Campus Center, 541-383-7590 or visit the student life website (<https://www.cocc.edu/departments/student-life/>).

Study Abroad

The College seeks to provide opportunities for students to study abroad while earning COCC transfer credit. Visit the study abroad website (<https://www.cocc.edu/programs/special-curriculum/study-abroad/default.aspx>) for specific offerings.

Current programs include:

- Fall Quarter in Barcelona. Students experience Spanish life, language and culture while living and studying in bilingual Barcelona, the heart of Catalonia. Students live in shared apartments among other

international students, while enjoying a seaside temperate climate in the home of Gaudi's fanciful art and architecture.

- Other programs may be announced, so please check the study abroad website (<https://www.cocc.edu/programs/special-curriculum/study-abroad/default.aspx>) for updates.

For questions about COCC's Study Abroad program, contact Sara Henson, 541-330-4357, shenson@cocc.edu.

Transcripts

COCC contracts with the National Student Clearinghouse for transcript orders. You can request official or unofficial transcripts through the National Student Clearinghouse (https://www.studentclearinghouse.org/secure_area/Transcript/login.asp?FICEcode=00318800/), or by submitting the COCC transcript request form (<https://www.cocc.edu/departments/admissions/files/transcript-request-form.pdf>) either by email, mail or fax to Admissions and Records. The National Student Clearing House link, the Transcript Request form, and additional information can be found on the transcript request webpage (<https://www.cocc.edu/departments/admissions/grades-and-student-records/request-a-transcript.aspx>).

Processing Fees

National Student Clearinghouse	\$7 per transcript
COCC Transcript Request Form	\$7 per transcript

Transcript Request Notices

- Transcripts may be requested in advance and held until after grades and/or degrees are posted.
- For OSU-Cascades Campus students, official transcripts will be available between COCC and OSU-Cascades at no charge to the student.
- Current students may view unofficial transcripts at no cost in their Bobcat Web Account (<https://www.cocc.edu/home/student-login.aspx>). Former students will need to use the National Student Clearinghouse (https://www.studentclearinghouse.org/secure_area/Transcript/login.asp?FICEcode=00318800/).
- Non-credit transcripts can only be requested using the Transcript Request Form.
- Transcripts will not be processed during the first week of term.
- COCC reserves the right to withhold transcripts from students who are in debt to the institution.

Tutoring and Testing Center

A popular student support service, the Tutoring and Testing Center (<https://www.cocc.edu/departments/tutoring-and-testing/>) is located in the lower level of the Barber Library. Math tutoring is in the Barber Library and on the northern campuses. Science tutoring occurs in the Science Hall in Bend and on the Redmond campus. The Writing Center is on the first floor of the Library, and writing tutors are located on all four campuses. World Languages tutoring is in Ochoco Hall. Tutoring schedules and hours of operation are on the tutoring and testing website (<https://www.cocc.edu/departments/tutoring-and-testing/>). Proctored testing is available at the Bend campus, and to a more limited degree on the Redmond, Madras and Prineville campuses.

Tutoring

Tutoring services are free to COCC students for the courses in which they are currently enrolled. Drop-in tutoring is available for math, writing, sciences, world languages, business administration, computer science

and the social sciences, as well as Career and Technical Education subjects. Tutoring is conducted on both an individual and a group basis. Tutor-led study groups are also an option for science and calculus classes. Resources include printed materials, textbooks, computers and graphing calculators. Science tutoring is held primarily in the Science building, room 130. The Writing Center encourages students to bring in their writing assignments for one-on-one help with any stage of the writing process. Online tutoring is available through the Western eTutoring Consortium and accessed via the department's website.

Testing

The COCC Testing Center is a regional testing center serving a diverse constituency of students and community members. A charter member of the Consortium of College Testing (<https://www.ncta-testing.org/cctc/>) and a certified PearsonVUE (<https://home.pearsonvue.com/>), Certiport and CLEP site, the Testing Center's mission is to provide opportunities for Central Oregonians to obtain academic, professional and standardized testing locally. GED testing for the region is also available via the PearsonVUE Testing Center on the Redmond campus in Building 1 and in the Bend campus testing center. For a current list of tests offered, visit the COCC Tutoring and Testing Center's website (<https://www.cocc.edu/departments/tutoring-and-testing/>). For more information about tutoring and testing services, contact the Tutoring and Testing Center at 541-383-7539.

Academic Calendar

Event	Fall term	Winter term	Spring term	Summer term
First day of classes	September 23	January 6	March 30	June 22
Tuition deadline and end 100% refund period ¹	October 4	January 17	April 10	July 2
Begin late registration (\$30 fee)	October 7	January 21	April 13	July 6
Last day to change from audit or drop classes with no grade on transcript ¹	November 8	February 21	May 15	August 7
Last day to drop classes, receive a "W" grade ¹	December 4	March 11	June 3	August 19
Holidays - (COCC closed)	November 11 - Veterans Day November 28-29 - Thanksgiving	Dec. 23-27 - Winter Break Jan. 1 - New Year's Day January 20 - Martin Luther King Day	May 25 - Memorial Day	July 3 - Independence Day
Final exams	December 9-13	March 16-20	June 8-12	Varies
Commencement			June 13	
Last day of term	December 15	March 22	June 14	August 30
Grades posted online	December 19	March 26	June 18	September 3

¹ These dates apply to full-term courses; proportional (or earlier) deadlines apply to part-term courses.

POLICIES

This section provides details concerning what each student needs to know about the College's academic expectations. For answers to specific questions about College policies, please contact Enrollment Services at welcome@cocc.edu or 541-383-7500.

Academic Warning Policy

Students are considered to be in good academic standing if they earn a minimum 2.0 GPA each term. Certificate- and degree-seeking students not meeting this requirement receive an academic warning. All students on academic warning will be sent an email to their COCC email address specific to their situation the day after grades are processed; it is the student's responsibility to monitor their academic standing and complete academic warning requirements in a timely manner.

Academic warning descriptions and requirements are as follows:

First Academic Warning

When students earn less than a 2.0 term GPA, they are placed on First Academic Warning. At this stage, students are strongly encouraged to meet with their advisor prior to registration.

Second Academic Warning

When students earn less than a 2.0 term GPA for two consecutive terms, they are placed on Second Academic Warning. At this stage, students are required to meet with an academic advisor and complete the Second Academic Warning worksheet. The worksheet must be submitted to Admissions and Records no later than 5 p.m., on Monday of the second week of the following term. If students are preregistered and fail to complete these steps, their registrations will be voided and a full tuition and fees refund issued. (Bookstore expenses may not be refundable.) Second academic warning students will be prevented from registering for one calendar year or until such time as they complete the Second Academic Warning worksheet.

Third Academic Warning

When students earn less than a 2.0 term GPA for three consecutive terms, they are placed on Third Academic Warning. In order to attend classes, students must complete the Academic Reinstatement petition with their advisor and submit the petition to Admissions and Records no later than 5 p.m., on Monday of the second week of the following term. The Academic Reinstatement Committee will review completed petitions no later than Wednesday of that week. The Committee has three options:

- Approve the petition as is: Students continue attending classes, following the requirements of the petition. If students fail to follow the academic plan or requirements, their registration in classes may be voided and their petition is considered "denied."
- Approve the petition with revisions: If students fail to follow the revised academic plan or requirements, their registration in classes may be voided and their petition is considered "denied."
- Deny the petition: If denied, students will not be allowed to continue or register for classes; any current registrations will be voided and a full-tuition/fee refund will be issued. (Bookstore expenses may not be refundable.) Students may petition for reinstatement the following term or cease to attend classes for one calendar year. After one year, students may re-enroll and begin classes as if no academic warnings existed (grades on students' transcripts remain the same).

All petitions are final and are not subject to appeal unless there is information pertinent to the outcome that was not submitted at the time of the initial request.

Note: All students on Third Academic Warning are required to participate in an activity (or activities) specifically chosen to address why they received three academic warnings. Depending on circumstances, this could be attending a study skills class or workshop; meeting with a personal counselor to talk about time management, stress management, depression or other personal situations; attending a career counseling workshop or class; or other option recommended by the advisor. If students do not follow through with this activity or activities, they will be dropped from that term's classes. Financial aid recipients will need to pay back a prorated amount of their funding. See the Financial Aid withdrawal penalty policy.

If students are preregistered and fail to complete the petition, their registrations will be voided and a full tuition and fees refund issued, except books. Third Academic Warning students will be prevented from registering for one calendar year or until such time as their Academic Reinstatement petition is approved.

Fourth Academic Warning

When students earn below a 2.0 term GPA for four consecutive terms, they receive a Fourth Academic Warning and are blocked from all registration in credit classes for one calendar year. After one year, students may re-enroll and start their academic record as if no academic warnings existed. The student transcript, however, will remain the same.

Note:

1. *Students who do not have an assigned advisor may request one through CAP Services or Admissions and Records.*
2. *Students on academic warning may not be self-advised, and students who were self-advised must meet with an advisor.*

Credit for Prior Learning

Credit for Prior Learning (CPL) is defined as credit obtained through evidence-based assessment of learning that occurs outside of traditional college-level coursework that includes these types of assessments at COCC:

- ACE Credit Recommendation (Military Service, noncollegiate learning)
- College Level Examination Program (CLEP)
- Credit for Prior Industry Certifications
- Course Challenge

ACE Credit Recommendations

The American Council on Education (ACE) is a college credit recommendation service that evaluates workforce training and makes suggestions for academic credit. In most cases COCC will accept the recommendations in the National Guide. To be considered for college credit students must submit official ACE transcripts.

The ACE guidelines will be used when considering military credit for courses (not occupations) documented on the DD-214 and/or other official training documents. Typically, credit is considered only when it is equivalent to regular course offerings at COCC, when it is not duplicated and when it is applicable to a student's degree requirements.

College Level Examination Program (CLEP)

Students may arrange to take the CLEP tests at the COCC Tutoring Center, 541-383-7539.

Subject	Course Equivalent at COCC
CLEP Accounting, score 70+	business elective
CLEP American Literature, score 50+	ENG 253, 254
CLEP Biology, score 50+	BI 101, 102, 103
CLEP Calculus with Elem. Function, score 50+	MTH 251
CLEP Calculus with Elem. Function, score 60+	MTH 251, 252
CLEP Chemistry, score 50+	CH 221, 222, 223
CLEP College Algebra, score 50+	MTH 111
CLEP College Mathematics, score 50+	MTH 105
CLEP English Composition	no credit
CLEP English Literature, score 50+	ENG 204, 205
CLEP Foreign Language, (no more than 12 credits per language)	
French: score 50+	FR 101, 102, 103
French: score 59+	FR 201, 202, 203
German: score 50+	GER 101, 102, 103
German: score 60+	GER 201, 202, 203
Spanish: score 50+	SPAN 101, 102, 103
Spanish: score 60+	SPAN 201, 202, 203
CLEP General Exam in Natural Sciences, score 50+	9 non-lab science credits for 9 non-lab science credits for "additional courses" or electives
CLEP General Math	no credit
CLEP Humanities, score 50+	8 credits, discipline studies arts and letters
CLEP Intro Business Law, score 70+	business elective
CLEP Macroeconomics, score 50+	EC 202
CLEP Microeconomics, score 50+	EC 201
CLEP Principles of Management, score 70+	business elective
CLEP Principles of Marketing, score 70+	business elective
CLEP Sociology, score 50+	SOC 201
CLEP US History I, score 50+	HST 201
CLEP US History II, score 50+	HST 202
CLEP Western Civ I, score 50+	HST 101
CLEP Western Civ II, score 50+	HST 103
CLEP both Western Civ I and II, scores of 50+	HST 101, 102, 103

Credit for Prior Certification (CPC)

Students in Career and Technical Education programs may receive credit for prior certification if they have completed a course, training or other program that is taught to state, national or other officially recognized standards. Credit is not awarded for other life experiences. Students interested in receiving credit for prior certification must submit official copies of prior certifications to the Program Director, along with a Credit for Prior Certification request form. Once approved, students will then

forward the documentation to the Transcript and Degree Evaluation department in Admissions and Records. The student must pay a \$40/ course fee prior to having credits awarded.

Credits will be posted at the top of the student's transcript in a section titled "Credit for Prior Certification" so as to not be confused with regular COCC coursework. COCC's awarding of credit does not guarantee that the credit will be accepted by another higher education institution. Each institution establishes its own credit for prior certification policy and will evaluate prior certification based on that policy.

Credit for prior certification may not be used to acquire full-time status or to meet eligibility requirements for any other purpose, such as financial aid, veteran benefits or scholarships. Credit for prior certification does not apply toward meeting residency requirements for a COCC certificate or degree.

Challenge Courses

Students that have knowledge and experience similar to a particular course may challenge a course and receive credit for that course. Course challenges are subject to the following:

- Students cannot challenge courses at a lower level than ones in which they have already demonstrated competency, nor at a lower level than ones in which the student has already registered.
- Students may not challenge courses which they have already taken.
- Students may not challenge courses in which experiencing the course itself is essential.
- Challenged courses do not apply toward meeting residency requirements for a certificate or degree.
- Challenged courses do not count in determining financial aid eligibility.

In order to assess whether or not the student has a reasonable chance of successfully challenging a course, a student must receive permission from a faculty member in the subject area and the department chair prior to challenging a course. If approved, the student and department complete the Challenge Petition form. This must be completed by the end of the second week of the term. The challenge paper or final must be completed prior to the end of the term.

Challenged courses are charged the regular tuition rate payable at the time the completed petition is processed through Enrollment Services in Admissions and Records. It is the student's responsibility to schedule challenge examinations with the instructor. The exam may be rescheduled, only at the instructor's discretion, in extraordinary circumstances. A grade of Pass or No Pass is assigned, where a Pass is earned for performance equivalent to a grade of "B-" or better. Students may not rechallenge a course if they do not pass the first attempt. View the Course Challenge policy (<https://www.cocc.edu/policies/general-policy-manual/academic/course-challenge.aspx>) for complete details.

Computer Competency Requirement

Some COCC associate degrees (AS, AAS and AGS) require students to demonstrate basic computer skills prior to graduation. To meet this requirement, students must successfully complete CIS 120 Computer Concepts, or pass Key Applications and either LivingOnLine or Computer Fundamentals of the IC3 exams.

The IC3 exams may be taken at the COCC Tutoring and Testing Center or any authorized Certiport Testing Center. Locally, appointments can be made through the Tutoring and Testing Center located in the lower level

of the Barber Library. A \$35 fee is charged for each test; one free retake is included in the \$35 fee. If a student needs to retake the exam a third time, another \$35 fee is charged.

Passing two of three exams does not provide students with course credit; instead, a notation is placed on the student's record so that the testing may be used to meet degree requirements. By successfully passing all three exams students are eligible to receive 4 credits for CIS 120 Computer Concepts. To have the 4 credits applied to certificate degree requirements, students must present proof that they have received certification by passing all three exams and follow the Credit for Prior Certification procedures. Students will be charged \$40 to have the credits awarded.

Note: CIS courses may be required in some AS or AAS programs and the competency test will not substitute for that requirement. See individual program descriptions for details.

Dean's List

Students enrolled in 12 or more graded credits who receive a term GPA of 3.60 or better will have a Dean's List notation on their official transcript each term that the GPA is earned. The Dean's List will also be published each term.

Grade Changes

The responsibility of assigning grades at COCC is entirely the instructor's. A student who disputes the final grade (A–F, P, NP) in a course should meet with the instructor to review the grade. If not satisfied, the student may meet with the department chair, who can further review the grade with the instructor. If the student believes that the grade is arbitrary or capricious, the student has recourse through the College's grade appeal procedure found in the Academic Procedures Manual on the COCC website.

Students who wish a change of grade to or from "W" or "X" must submit a petition directly to Admissions and Records. Requests for grade changes are considered only within one year of the grade being awarded.

Grading on Attendance

With the exception of the College's administrative withdrawal policy, the individual instructor or department determines grading on attendance in class and/or participation. Instructors requiring attendance in class and/or participation toward the overall grade will outline expectations and procedures in their respective syllabi.

Grading Policy

End-of-term grades are available via the student's Bobcat Web Account only and will not be mailed or given out over the phone.

Only the grades in the following list may be assigned. All courses graded with a P, NP, W, X, I and IP do not apply to GPA.

To calculate GPA, multiply the number of credits for each course by the grade points for the grade received in that course (grade points listed below). Add these numbers together and divide by the total number of graded credits for that term (include "F" grades and exclude P, NP, W, X, I and IP grades).

Grade	Points	Description
A	4.0	outstanding performance

A-	3.7	superior
B+	3.3	excellent
B	3.0	very good
B-	2.7	good
C+	2.3	better than satisfactory
C	2.0	satisfactory
D	1.0	passing ¹
F	0	not passing
P		pass: not computed in GPA, applies toward percentage of credits completed, may be awarded only in authorized classes
NP		no pass: not computed in GPA, may be awarded only in authorized classes
W		withdraw: not computed in GPA, must be assigned by Records office
IP		course in progress
I		incomplete: not computed in GPA, will convert to "F" if requirements of the Incomplete Grade Contract are not met by the end of the following term
X		audit: not computed in GPA, does not meet graduation requirements; not eligible for financial aid

¹ Note: Courses in which "D" grades are earned may not be used in the AAOT and may have limitations in specific certificate or degree programs. "D" grades are not considered passing for prerequisite courses.

Pass (P)/No Pass (NP)

"Pass" is interpreted as a "C" or higher. The "pass/no pass" option is used for certain courses where it is deemed inappropriate to use the regular grading system. Credits are awarded but not calculated in GPA.

Challenge Course Pass/No Pass

All challenge examinations will be graded on the "pass/no pass" basis. The standard for a "P" in challenge courses is performance at the level of a grade of "B-" or higher. Credits are awarded but not calculated in GPA.

Withdrawal (W)

Students who withdraw from full-term courses between the eighth week of the term and the Wednesday before finals week will receive a "W" on their transcript. For short-term courses, proportional times will be used. Note: Permission of the instructor is required to withdraw from the course. A "W" is not computed in a student's GPA.

In Progress (IP)

This notation is made on a transcript if the course ends after the normal grading period. At the end of the course, a grade will be entered.

Incomplete (I)

Incomplete grades are assigned at the discretion of the instructor when non-academic extenuating circumstances prevented a student from completing, but there is a reasonable expectation that the student can successfully complete the course. An incomplete is not a substitution for a failing grade. A contract detailing the conditions for completion of work is required and must be completed prior to the end of the term. An incomplete grade will not count towards academic warning, but may affect Satisfactory Academic Progress and financial aid eligibility.

The default deadline for incomplete work to be submitted is automatically set to the end of the following term (excluding summer). If the requirements of the contract have been met, the instructor will assign the appropriate grade; if the requirements of the contract are not fulfilled by the deadline, the "I" grade will convert to a "F" or "NP" (based on the course setup). The instructor may extend the incomplete up to four terms following the original term of enrollment.

Students and instructors are expected to complete an Incomplete Grade Contract in order to outline remaining requirements.

Audit (X)

Students who want the experience of taking a particular credit class but do not want to receive college credit may register as audit students in any of the College's courses. Audit students are not required to meet specific course requirements but should participate fully in class activities. If students wish to audit a class, they must indicate so at the time of registration and note the following:

- "X" appears on the transcript.
- "X" is not calculated into a student's GPA.
- Tuition is the same as classes taken for credit.
- Audited courses do not meet graduation or transfer requirements and are not eligible for financial aid.
- A student may convert "audit" status to "regular" status, and vice versa, before the end of the seventh week of the term for full-term classes.

Graduation

COCC will automatically award certificates or degrees upon completion of the requirements in the student's declared program. No application is necessary. Students will be notified of their progress as they approach completion and again after the certificate or degree has been awarded. Students use GradTracks, an online degree evaluation tool, to track their progress to completion and must be sure their academic record accurately represents the catalog year and certificate or degree they are pursuing.

Students who wish to be awarded a certificate or degree that is not their declared program must complete the online application for degree or certificate (<https://www.cocc.edu/departments/admissions/graduation-and-honors/>) no earlier than their final term.

COCC provides advising toward its certificates and degrees; however, students are ultimately responsible for being informed about degree requirements and for selecting appropriate classes.

Graduation Requirements

A certificate or degree is awarded when it meets the appropriate course requirements listed in this catalog and the student has met the following guidelines:

- Complete the minimum number of credits required for the degree.
- Earn a minimum 2.0 cumulative grade-point average at COCC.
- Owe no debt to the College.
- Complete at least 24 degree applicable residency credits for an associate's degree; 18 certificate applicable residency credits for a two year certificate; 9 certificate applicable residency credits for a one year certificate or career pathway certificate.
- Meet at least one of the following criteria:
 - a. Students have three years to complete their program under the catalog in which they began or any subsequent catalog.
 - i. The student's default catalog year is the year the student is admitted to COCC and the student may graduate under that default catalog year or either of the next two catalog years.
 - ii. If the student has a break in enrollment for four consecutive terms, the student must reapply to COCC and the default catalog year will now be the year the student is readmitted.
 - iii. The student's choice of catalog years is limited to two catalog years prior to the student's year of graduation. If the student does not graduate within three catalog years of student's admittance, the default catalog year will be updated yearly to the subsequent catalog year.
 - b. The student transfers back to COCC other college credit and meets degree requirements listed in the current college catalog or the previous two catalog years.

When a student's completion of degree requirements coincides with the last term attended, the degree will be posted in that term. When the student uses transfer credit after an absence from the College, the degree will be posted in the term in which the degree evaluation is successfully completed and when it has been determined that all degree requirements have been met.

Multiple/Concurrent Degrees

Students applying for multiple or concurrent degrees must meet the degree requirements outlined above and as listed for each degree on the following pages. For each additional degree, students must complete at least 15 COCC credits that are different from those used for the other degree(s) and are applicable to the additional degree requested and must complete the Application for Degree no earlier than their final term.

Graduation Honor Roll

Honors will be listed on the transcripts of COCC graduates based on the following cumulative GPA from the end of the term prior to the student's graduation:

GPA	Honor
3.60–3.74	honors
3.75–3.89	high honors
3.90–4.00	highest honors

Graduates participating in commencement exercises will receive honor cords. Graduates with a 4.00 cumulative GPA will have an asterisk by their name in the annual commencement program.

Commencement

A commencement ceremony is held once each year in June, following the end of spring term. All students who have met requirements for an associate degree, two year certificate of completion, or a one-year certificate of completion are eligible to participate in commencement if they have earned or will earn that certificate or degree in the past fall, winter or spring, or the coming summer. (Only candidates for summer graduation who demonstrate a realistic plan to complete all requirements by the end of summer term are eligible). Students wishing to participate in the commencement ceremony must submit participation confirmation in their Bobcat Web Account when made available.

International Credentials

International credentials will be evaluated using the following principles:

- Coursework must be completed at a nationally recognized, university-level institution and must be at a level of achievement comparable to COCC's A, B, C and D grades. Note that a "D" will not be accepted for the AAOT degree, foundational requirements and for some programs. See individual program descriptions. The applicability of such transfer credit will be evaluated as is credit from U.S. institutions.
- Association of International Educators (NAFSA) and American Association of College Registrars and Admissions Officers (AACRAO) guidelines will be used in evaluating the credentials.
- The student will pay for costs associated with international transcript evaluations.

It is the responsibility of each student with transcripts from foreign universities to have the transcript translated (if necessary) and evaluated for acceptance toward a COCC certificate or degree. The student must use a member of the National Association of Credential Evaluation Services (NACES). Details on foreign transcript evaluation are available at the COCC Admissions and Records office, Boyle Education Center. English taught outside the United States may not meet COCC's English composition requirement. Degrees from foreign countries do not waive the general education or writing competency requirements.

Midterm Grade Reports

Midway through each term, instructors have the option to file grades of "D" and "F" or "NP" for those students whose performance indicates it, including those who are not regularly attending class. It is entirely at the instructor's discretion to submit or not submit a midterm grade report. If an instructor submits a midterm grade, the student will be sent an email at their college email address.

Students must take responsibility for withdrawing if they do not wish to continue in a class.

Repeat Grade Policy

As a general rule if a student takes the same course twice, whether at COCC or another institution, only one course may be used to satisfy certificate or degree requirements.

Institutional Repeat Policy

If a student repeats a course and both courses were taken at COCC, the most recent course will be calculated in the cumulative GPA and applied toward degree requirements. The original course and grade will remain on the transcript, with an "R" indicating it was later repeated. The original course grade will not be used in the GPA calculation for that term or the cumulative GPA calculation. Students may repeat a course as many

times as they wish; however, only the original/first course's grade will be excluded from the term and cumulative GPA and only the most recent course will be used toward graduation requirements. There is no limit to the number of courses a student may repeat, unless otherwise stated in specific program requirements.

Courses in music or theater performance, studio art, Cooperative Work Experience and HHP activity classes may be repeated for credit. The grades and credits for such courses will be recorded on the transcript and totaled cumulatively. In some cases, there may be a limit to the number of total credits allowed from those courses when used toward a certificate or degree. There is no limit to the number of courses a student may repeat. If students wish to use the grade repeat policy for music or theater performance, studio art, Cooperative Work Experience and HHP activity classes, they must complete a student petition and submit it to the Admissions and Records office; the course repeat policy will automatically happen for all other coursework.

Transfer Repeat Policy

If a student has repeat courses transferred from another institution, the College will use the following criteria to determine which course applies to needed requirements:

- The most recent COCC course with a grade "C" or better.
- If both courses came from other institutions, the transfer course with the best grade will be selected.
- Some degrees and certificates have specific policies on permissible age of transfer courses. Please refer to the applicable program description.

Transfer Credit Articulation

In keeping with the philosophy that college-level knowledge can be validated and documented in various ways, Central Oregon Community College recognizes many educational experiences for credit. A guiding principle of our transfer credit practice is that acceptable transfer credit is applied in the same manner as is COCC credit.

Transfer credits earned at another regionally accredited institution generally will be accepted as they apply to COCC degree requirements. Students who wish to use previous college credits toward a COCC degree should order official transcripts from the previous college. COCC will articulate the transcript toward the certificate or degree listed on the student's admission application. The articulation will be viewable on GradTracks, COCC's online degree audit tool.

Limits on college credit transfer are:

- Subject matter may not duplicate that for which credit has previously been awarded in transfer or at COCC.
- Credit awarded by another institution for life experience is not transferrable to COCC.
- Courses which espouse a particular religious view normally do not equate to COCC courses.
- In some cases, science credits more than five years old may not be applicable to specific programs.
- Transfer credit is only considered for courses where a grade (of A, B, C, D, pass, satisfactory) and credit has been awarded. Note that a "D" will not be accepted for the AAOT degree, foundational requirements and for some programs. (See individual program requirements.)
- Students working toward a COCC degree or certificate must meet residency credit requirements for the degree or certificate. Challenge,

Advanced Placement (AP), College Level Examination Program (CLEP) and Credit for Prior Certification (CPC) credits do not meet residency requirements.

Noncollegiate and Nonaccredited Institutions

COCC will evaluate records for Career and Technical Education students from noncollegiate and nonaccredited institutions (such as business and trade schools) under the following guidelines:

- Only coursework that is technical in nature and certificate–or degree–applicable will be evaluated.
- Coursework will be evaluated by the appropriate Career and Technical Education program director.
- Sufficient documentation (transcripts, certificates, course descriptions, etc.) must be submitted to enable an informed review. Documentation must be received directly from the originating institution or program. The American Council on Education (ACE) guides will assist in evaluating the credentials. In some cases, COCC faculty will be consulted for evaluation of a particular credential.
- Material must be equivalent to regular credit courses offered at COCC. Credit is not considered based on what the student “knows,” but on the content of, and recorded achievement in, the course itself.
- Material may not duplicate that for which credit has previously been awarded in transfer or at COCC.

Advanced Placement Exams (AP)

Credit will normally be awarded following approved guidelines from COCC academic departments. Typically, credit is considered only when it is equivalent to regular course offerings at COCC and when it is not duplicated.

Advanced Placement (AP) will be evaluated at COCC as listed below.

Subject	Course Equivalent at COCC
AP Biology, score 4+	BI 101, 102 and 103
AP Calculus AB, score 3	MTH 251
AP Calculus AB, score 4+	MTH 251, 252
AP Calculus BC, score 3	MTH 251, 252
AP Calculus BC, score 4+	MTH 251, 252, 253
AP Chemistry, score 4+	CH 221, 222, 223
AP Comparative Government score 4+	PS 204
AP Comp Science A, score 4+	CS 161
AP Comp Science AB, score 3	CS 161
AP Comp Science AB, score 4+	CS 161, 162
AP Drawing score 4+	4 credits, discipline studies arts and letters
AP Environmental Science score 3+	4 credits, discipline studies, lab science
AP European History, score 3+	HST 101, 102
AP French Language, score 3	FR 101, 102, 103
AP French Language, score 4	FR 103, 201, 202
AP French Language, score 5	FR 201, 202, 203
AP German Language, score 3	GER 101, 102, 103
AP German Language, score 4	GER 103, 201, 202
AP German Language, score 5	GER 201, 202, 203
AP Human Geography score 3+	GEOG 107

AP Comparative Government score 4+	PS 204
AP Language and Composition, score 3+	WR 121
AP Lit and Comp, score 3+	4 credits in one of: ENG 104, 105, 106, 107, 108, 109 ¹
AP Microeconomics, score 3+	EC 201
AP Macroeconomics, score 3+	EC 202
AP Physics 1: Algebra Based, score of 4+	4 credits, PH 201
AP Physics 2: Algebra Based, score of 4+	4 credits, PH 202
BOTH AP Physics 1 & AP Physics 2: Algebra Based, score of 4+	12 credits, PH 201, 202, 203
AP Psych, score 3+	4 credits, psychology prefix, discipline studies list
AP Spanish Language, score 3	SPAN 101, 102, 103
AP Spanish Language, score 4	SPAN 103, 201, 202
AP Spanish Language, score 5	SPAN 201, 202, 203
AP Statistics, score 4+	MTH 243
AP Studio Art 2D score 4+	4 credits, discipline studies arts and letters
AP Studio Art 3D score 4+	4 credits, discipline studies arts and letters
AP US Government, score 3-5	PS 201
AP US History, score 4+	HST 201
AP World History, score 4+	8 credits, history electives (not discipline studies)

¹ No writing credits earned with Literature and Comp tests

International Baccalaureate (IB)

COCC recognizes International Baccalaureate (IB) achievement by awarding credit to students who score 5 or above on Standard or High-level IB exams. An IB equivalency table (<https://www.cocc.edu/departments/admissions/grades-and-student-records/non-traditional-credit.aspx>) outlining how credit will be awarded is maintained on the COCC website. Credit is applied to a student's record after the student has been admitted to COCC and official transcripts or score reports have been received by the Admissions and Records office.

Transferring Credits to a Four-Year University

As a general rule, Oregon public universities will accept up to 124 lower-division quarter hours of transferrable college credit. It is ultimately the responsibility of the students to know and meet the course requirements of the four-year college or university to which they wish to transfer. Students may obtain assistance from academic advisors.

Grades of A, B or C earned in transfer courses (numbered 100- 299) are generally accepted by other colleges; other grades may have limited transferability. COCC has also made arrangements with select programs at four-year colleges and universities for the transfer of certain Career and Technical Education (CTE) courses.

Students seeking a Bachelor of Arts or a Bachelor of Science degree should be aware of world language and other degree or major-specific requirements.

Alcohol and Drug Policy

In compliance with the Drug-Free Workplace Act of 1988 (Public Law 100-690, Title V, Subtitle D) and the Drug-Free Schools and Communities Act Amendment of 1989 (Public Law 101-226), it shall be the policy of Central Oregon Community College to maintain a drug-free campus for all employees and students. It is the responsibility of the College to notify students and staff of college policy. In accordance with this intent, the following policy is in effect:

Drug-Free Campus

The unlawful possession, use or distribution of illicit drugs and alcohol is prohibited on the College campus, in all College facilities or as part of any College-sponsored activity. Violators of this policy will be prosecuted to the full extent of state and federal law and, in addition, there are specific consequences for employees and for students which are stated in the College Drug-Free Campus Procedures.

Employees and students can find assistance, abuse prevention resources and health risks information associated with the use of illicit drugs and the abuse of alcohol and warning signals, online at cocc.edu/student-life (<http://cocc.edu/student-life/>).

Concerns Regarding Gender Discrimination, Sexual Harassment, or Misconduct, Dating Violence, Domestic Violence and Stalking

Students or employees who believe they have experienced or witnessed discrimination, sexual harassment, or misconduct, dating violence, domestic violence, or stalking are encouraged to report this information to the College's EEO/Title IX Officer, 541-383-7216 or the Director of Student Life, 541-383-7592. These staff can provide assistance and resources and discuss possible responses for the situation. Do not wait to report concerns until the situation becomes too serious (i.e. severe, pervasive or persistent). Off-campus harassment, misconduct or violence by members of the College community should be brought promptly to the attention of the College staff listed above.

No Retaliation Statement

No one at the College may reprimand, discriminate or otherwise retaliate against an individual for initiating an inquiry or complaint in good faith, nor against other individuals who share information related to the complaint.

Title IX Statement

Title IX protects people from discrimination based on sex in education programs and activities. This includes conduct such as: gender discrimination (includes males, females, transgender, gender identity, etc.), sexual harassment, sexual assault, stalking, intimate partner/relationship violence, bullying and cyberbullying, retaliation, the failure to provide equal opportunity in athletics and discrimination based on pregnancy. Persons having questions about Title IX should contact the Title IX Officer at 541-383-7218.

Directory/Release of Information

The College does not publish a student directory. Requests for directory information must clearly state the student's name.

Central Oregon Community College considers the following information to be directory information and may release it if requested on an individual basis:

- student's full name
- terms of attendance (not daily attendance)
- major field of study
- full- or part-time enrollment status
- degrees, certificates and honors awarded
- address and telephone number
- email address
- participation in officially recognized activities and sports
- most recent previous school attended
- class standing (freshman or sophomore status)

Students who do not wish the above information to be released by the College must submit a signed statement requesting that this information be withheld. Contact Admissions and Records for the necessary form and additional information. The request to withhold information remains in effect until the student submits a signed statement indicating that directory information may be released. Students should keep the College notified of current addresses and telephone numbers. Students can update this information through their Bobcat Web Account.

Information such as grades, progress in coursework, financial aid status and class schedule will not be released, except as authorized by law. If students wish to have this information released to parent/guardians, employers or other non-college entities, students must submit a Release of Information form to Admissions and Records in the Boyle Education Center. The release is valid until the student requests in writing to have it revoked.

Nondiscrimination Policy

The goal of Central Oregon Community College is to provide an atmosphere that encourages our faculty, staff and students to realize their full potential. In support of this goal, it is the policy of Central Oregon Community College that there will be no discrimination or harassment on the basis of age, disability, sex, marital status, national origin, ethnicity, color, race, religion, sexual orientation, gender identity, genetic information, citizenship status, veteran status or any other classes protected under Federal and State statutes in any education program, activities or employment. Persons having questions about equal opportunity and non-discrimination should contact the Equal Employment Officer c/o COCC's Human Resources office at 541-383-7216.

Faculty, staff and students are protected from discrimination and harassment under Title VII of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972. Persons attending classes or events who need accommodation for a specific disability should contact the office of Services for Students with Disabilities at 541-383-7583. Persons needing physical accommodation for a College special event should contact the ADA Coordinator at 541-383-7775. Further inquiries may be directed to the Affirmative Action Officer, c/o COCC's Human Resources office at 541-383-7216.

Photo/Video Consent

COCC assumes consent of students and staff to use their likeness in photos and/or videos, unless otherwise requested.

Release of Directory Information for Military Recruiting Purposes

Under the Solomon Amendment Interim Rule to implement the National Defense Authorization Act of 1995 and of 1996, and the Omnibus Consolidated Appropriations Act, 1997, schools receiving Title IV funding must provide military access to directory information for students 17 years of age or older. For purposes of the act, directory information is defined as name, address, telephone listing, date and place of birth, level of education, degrees received and the educational institution in which the student was most recently enrolled. Students who have formally requested COCC to withhold all directory information from third parties will not be included.

Smoking Policy

Smoking is banned in all of the buildings of Central Oregon Community College. Smoking or the use of smokeless tobacco is limited to campus parking lots unless otherwise noted. Use in parking lots adjacent to buildings must be 25 feet away from any portion of the building. During high fire danger periods, smoking will be banned completely.

Social Security Number/Information Consent

The College adheres to the following policy statement:

“Providing your social security number is voluntary. If you provide it, the College will use your social security number for keeping records, doing research, aggregate reporting, extending credit and collecting debts. Your social security number will not be given to the general public. If you choose not to provide your social security number, you will not be denied any rights as a student. Providing your social security number means that you consent to use of the number in the manner described.”

Oregon Administrative Rules (OAR) 589-004-0400 authorizes Central Oregon Community College to ask students to provide their social security numbers. The numbers will be used by the college for reporting, research and record keeping. The numbers will also be provided by the college to D4A (Data for Analysis), which gathers information about students and programs to meet state and federal reporting requirements. It also helps colleges plan, research and develop programs. This information helps the College to support the progress of students and their success in the workplace and other education programs.

D4A or the College may provide a student's social security number to the following agencies or match it with records from the following systems:

- State and private universities, colleges and vocational schools, to find out how many community college students go on with their education and to find out whether community college courses are a good basis for further education.
- The Oregon Employment Department, which gathers information, including employment and earnings, to help state and local agencies plan education and training services to help Oregon citizens get the best jobs available.
- The Oregon Department of Education, to provide reports to local, state and federal governments. The information is used to learn

about education, training and job market trends for planning, research and program improvement.

- The Oregon Department of Revenue and collection agencies only for purposes of processing debts and only if credit is extended to the student by the College.

State and federal law protects the privacy of student records. The social security number will be used only for the purposes listed above. However, there may be times when solicitation and disclosure of a student's social security number is mandated by federal law.

Student Concerns Process

COCC has a college concerns procedure designed to provide employees, students and community members a way to appeal decisions made within the College. Contact Student Life at 541-383-7590 for a copy of the procedure, or view it online at cocc.edu/student-life (<http://cocc.edu/student-life/>) and clicking on the Student Policies link.

Student Educational Records and Directory Information

Admissions & Records maintains all official academic records of enrolled students including, but not limited to, transcripts, registration forms, transfer credits and degree evaluations. For record-keeping purposes, the College considers web registration as part of a student's official record. Financial Aid maintains all student aid and scholarship records.

Central Oregon Community College follows the Federal Health Education and Welfare Guidelines for the Family Education Rights and Privacy Act of 1974–Pell-Buckley Amendment (FERPA), which gives students attending post-secondary institutions the right to inspect their educational records.

Those rights are:

1. The right to inspect and review their education records within 45 days of the day COCC receives a request for access.

Students must contact the registrar at 541-383-7500 or welcome@cocc.edu and submit a written request that specifies the specific records they wish to inspect. The registrar will make arrangements and notify the student of the time and place where the records may be inspected.

The College reserves the right to withhold transcripts from students who are in debt to the institution. Students have the right to discuss the matter with a representative empowered to resolve such disputes.

2. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading. Students should write the registrar, clearly identify the part of the record they want changed and specify why it is inaccurate or misleading. If the College decides not to amend the record as requested by the student, COCC will notify and advise the student of the decision and of his or her right to a hearing regarding the request for amendment. The College also will provide additional information regarding the hearing procedures.
3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by COCC in an administrative, supervisory, academic, research or support staff position (including law enforcement unit personnel and health staff); a person or company with whom COCC has contracted (such as an attorney, auditor or collection agent); a person serving on the Board of Directors; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has legitimate educational interest if the official needs to review an educational record in order to fulfill his or her professional responsibility.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by COCC to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue SW
Washington, DC 20202-5901

- Academic information: academic warning standards, accreditation, articulation agreements, degree options, academic programs, adult basic skills programs, campus academic facilities, faculty and staff contact information, transfer credit policy, international baccalaureate credit and out-of-state academic student complaint procedure.
- Health and Safety Information: campus crime report/safety, alcohol/drug policy, drug and alcohol abuse prevention information, emergency procedures, sex offender information, vaccination policies, mandatory reporting-child protection policy.
- Student outcomes: graduation and transfer rates, retention rates, graduate employment status.

Student Right-To-Know information is available on the College's website at cocc.edu/srtk (<http://cocc.edu/srtk/>).

Student Rights and Responsibilities

In order to provide for the maximum safety, convenience and well-being of the total College community, certain standards of behavior have been established at COCC. Upon admission to the College, all students accept an unqualified commitment to adhere to such standards and to conduct themselves in a manner appropriate to an educational environment, one which reflects respect for themselves and the College. Such actions as academic dishonesty, abuse of property, harassment, any violation of federal or state law, possession of alcoholic beverages and possession of illegal drugs are in violation of the College's standards and are cause for disciplinary action. The disciplinary action taken by the College covers a range of possibilities up to and including dismissal from college. A comprehensive Student Rights and Responsibilities guide is available online at cocc.edu/student-life and clicking on the Student Policies link.

Student Right-to-Know Act

In order for students to make more informed decisions about attending college, Central Oregon Community College makes the following information available in accordance with the federal Student Right-to-Know Act and related regulations:

- General Institutional Information: services for disabled students, cost of attendance and additional program costs, student diversity, students' rights under the Family Education Rights and Privacy Act (FERPA), student concerns procedure, copyright infringement, net price calculator, non-discrimination policy and annual student demographic information.
- Financial Aid Information: withdrawal and refund policy and associated financial aid implications, return of financial aid due to withdrawal, types of aid, how to apply for aid, how aid is disbursed, rights and responsibilities of students receiving aid, financial aid penalties for drug law violations, work-study terms and conditions, satisfactory academic progress criteria, study abroad financial aid opportunities and loan repayment options.
- Student loan information: initial loan counseling for students, exit loan counseling for students, deferment options for Peace Corp and related service organizations.

ABOUT COCC

For nearly 70 years, Central Oregon Community College has served students from within the District, elsewhere in Oregon and throughout the United States, along with citizens of the COCC District, by offering a wide range of learning opportunities.

One of the principal attributes of COCC is its emphasis on quality instruction. This is complemented by small classes and the opportunity for all students to enjoy close, caring relationships with the College's faculty and staff.

- Accreditation (p. 436)
- Board of Directors (p. 436)
- Faculty, Administration, and Staff (p. 436)
- General Information (p. 455)
- Learning Options (p. 456)
- Mission and Vision (p. 458)

Accreditation

Central Oregon Community College is accredited by the Northwest Commission on Colleges and Universities.

Accreditation of an institution of higher education by the Northwest Commission on Colleges and Universities indicates that it meets or exceeds criteria for the assessment of institutional quality evaluated through a peer review process. An accredited college or university is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the Northwest Commission on Colleges and Universities is not partial but applies to the institution as a whole. As such, it is not a guarantee of every course or program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding an institution's accredited status by the Northwest Commission on Colleges and Universities should be directed to the administrative staff of the institution. Individuals may also contact:

Northwest Commission on Colleges and Universities
8060 165th Avenue N.E., Suite 100
Redmond, WA 98052
425.558.4224
nwccu.org (<http://nwccu.org>)

Accreditation was most recently reaffirmed in 2012. A copy of COCC's official accreditation documentation is on reserve and available for review in the Barber Library during regular library hours. Questions regarding accreditation should be addressed to the vice president for instruction.

Board of Directors

A seven-member Board of Directors governs the College, with members of that Board elected from geographic zones in the District. The District covers a 10,000-square-mile area, making it bigger than eight of the U.S.

states. For more information, see the COCC Board of Directors web page (<https://www.cocc.edu/about/board-of-directors/default.aspx>).

Member	Zone	Area	Term
Joe Krenowicz	1	Madras	Expires 2021
Laura Craska Cooper (Board Chair)	2	Prineville	Expires 2021
Alan Unger	3	Redmond	Expires 2021
Erica Skatvold	4	Bend	Expires 2021
Jim Clinton	5	Bend	Expires 2023
Bruce Abernethy	6	Bend	Expires 2023
Oliver Tatom	7	Bend	Expires 2023

Faculty, Administration, and Staff

FACULTY-FULL TIME

A

JACOB AGATUCCI

Associate Professor of English

B.A. in English, University of Oregon; M.A. in English, University of Oregon.
At COCC since 2008.

MICHELLE AISTEAR

Assistant Professor I of Health Information Technology

A.A.S. in Health and Information Technology, Central Oregon Community College. At COCC since 2018.

DAN ALBERGHETTI

Associate Professor of Computer and Information Systems

B.A. in Art, University of California; M.F.A. in Art, California State University. At COCC since 2013.

STEPHANIE ANDRE

Associate Professor of Composition

B.A. in English, University of Notre Dame; M.A. in English, Rutgers University. At COCC since 2011.

MIKE ARTUS

Assistant Professor I of Speech

B.A. in Speech Communication, Oregon State University; M.A. in Speech Communication, Geography and History, Oregon State University. At COCC since 2010.

B

KARL BALDESSARI

Assistant Professor II of Aviation/Program Director

B.S. in Government, U.S. Coast Guard Academy. At COCC since 2011.

THOMAS BARRY

Professor of Sociology

B.A. in Communication Studies, University of Kansas; M.A. in Speech Communication, California State University Fullerton; M.S.W., University of Kansas; Ph.D. in Sociology, Kansas State University. At COCC since 2004.

CHRISTOPHER BAUGHMAN

Assistant Professor II of Manufacturing Technology

A.A.S. in Occupational Studies of HVAC/R, Westwood College of Technology. At COCC since 2015.

LISA BOHARD

Adult Basic Skills Instructor

B.S. in Science, Oregon State University; M.A.T with Mathematics Endorsement, Western Oregon University. At COCC since 2013.

RON BOLDENOW

Professor of Forest Resources Technology

B.S. in Biology, Calvin College; M.S. in Forestry, Humboldt State University; Ph.D. in Wildland Resource Science, University of California Berkeley. At COCC since 1999.

JUSTIN BOROWSKY

Associate Professor of Speech

A.A. in Liberal Arts, Communication, Raritan Valley Community College; B.A. in Communication, Rutgers University; Masters of Communication and Information Studies, Rutgers University; Ph.D. in Interpersonal and Family Communication, University of Denver. At COCC since 2010.

JON BOUKNIGHT

Professor of Speech and Writing

B.A. in English, University of California Berkeley; M.A. in English, University of New Mexico; Ph.D. in Speech Communication, University of Washington. At COCC since 1998.

STEPHINA BREWER

ABS Reading/Writing Transitions Instructor

B.A. in Art History and Latin, Arizona State University; M.A. in Applied Linguistics and Teaching of English to Speakers of Other Languages (TSOL), Arizona State University. At COCC since 2019.

VAUGHAN BRIGGS

Assistant Professor II of Business

B.A. in Business Administration, University of Washington; M.B.A, Finance and Marketing, University of California Los Angeles; M.A. in Teaching, Eastern Oregon University. At COCC since 2015.

CIERRA BUER

Assistant Professor I of Veterinary Technology Education

B.A. in Biology, College of Idaho; D.V.M., University of Guelph. At COCC since 2018.

C

DONNA CASEY

Associate Professor of Mathematics

B.S. in Economics and Math, University of Hartford; M.S. in Statistics, University of Cambridge; M.A. in Statistics, University of New Mexico. At COCC since 2007.

PETER CASEY

Professor of Computer and Information Systems

A.A., Central Oregon Community College; B.A. in Secondary Education, University of Arizona; M.S. in Computer Science Education, University of Oregon. At COCC since 1983.

EMMA CHAPUT

Associate Professor of Biology

B.A. in Biology, Johns Hopkins University; M.P.H. in Epidemiology of Microbial Diseases, Yale University. At COCC since 2011.

MONTE CHENEY

Associate Professor of Mathematics

B.S. in Mathematics, Walla Walla University; M.S. in Mathematics, Washington State University; M.S. in Statistics, Washington State University. At COCC since 2010.

JACQUELYN COE

Assistant Professor II of Mathematics

B.S. in Mathematics, Trinity Western University; M.S.T. in Mathematics, Portland State University. At COCC since 2011.

ANGIE COLE

Assistant Professor II of Education and Early Childhood Education

B.A. in Humanities, Western Oregon State College; M.A. in Teaching, Lewis & Clark College. At COCC since 2008.

ELIZABETH COLEMAN

Assistant Professor II of Mathematics

B.A. in Mathematics, Humboldt State University; M.S. in Environmental Systems: Math Modeling, Humboldt State University. At COCC since 2009.

LEW COUSINEAU

Professor of Computer and Information Systems

B.S. in Industrial and Management Engineering, Montana State University; M.B.A. in Business, Seattle University. At COCC since 2002.

BILL CRAVIS

Associate Professor of Fine Arts - Sculpture and 3D Design

B.F.A. in Ceramics, California College of the Arts; M.F.A., Carnegie Mellon University. At COCC since 2012.

JENNIFER CRUICKSHANK

Associate Professor, Health and Human Performance

B.S. in Exercise Sport Science, Colorado State University; M.S. in Human Movement, A.T. Still University. At COCC since 2008.

D

TERESA DE SITTER

Assistant Professor of Human Biology

B.A. in Spanish, Western Washington University; B.A. Cellular and Molecular Biology, Western Washington University; M.A. Biology: Microbiology, Cellular and Molecular Biology, Western Washington University. At COCC since 2019.

MICHELE DECKER

Professor of Nursing/Program Director

B.S. in Community Health Education, Oregon State University; B.S. in Nursing, Oregon Health Sciences University; M.S. in Nursing Education and Administration, Oregon Health Sciences University; M.Ed. in Adult Education, Oregon State University. At COCC since 2005.

JANE DENISON-FURNESS

Assistant Professor I of English, Developmental Literacy

A.A. in Liberal Arts, Rock Valley College; B.A. in English, Northern Illinois University; M.A. in English, Northern Illinois University. At COCC since 2015.

STACEY DONOHUE

Professor of English

B.A. in English, University Center at Binghamton, State University of New York; Ph.D. in English, City University of New York. At COCC since 1995.

KRISTIN DORSEY

Assistant Professor II of English

B.A. in English Literature, Reed College; M.A. in Children's Literature, Simmons College; M.A. in English Literature, Portland State University. At COCC since 2014.

E

WENDY EARTHSONG

Assistant Professor II of Health Information Technology

B.A. in Healthcare Administration, Ashford University. At COCC since 2015.

JAMES ELLIS

Professor of Accounting/General Business

A.A. in Accounting, Salt Lake City Community College; B.S. in Behavioral Science, Westminster College; B.S. in Accounting and M.B.A. in Business, Westminster College; M.S. in International Business, Southern New Hampshire University. At COCC since 2006.

BRUCE EMERSON

Professor of Physics

B.S. in Physics, Montana State University; Ph.D. in Physics, University of Utah. At COCC since 1992.

THOR ERICKSON

Assistant Professor II of Culinary Arts

A.A. in Hospitality Management, Columbia Community College. At COCC since 2011.

JOSHUA EVANS

Associate Professor of Spanish

B.A. in International Studies, Bowling Green State University; M.A. in Spanish, Bowling Green State University. At COCC since 2010.

F

JOHN FAILLA

Instructor of Structural Fire

At COCC since 2018.

CAT FINNEY

Collections Development Acquisitions Librarian

B.A. in English, Carleton College; M.L.S., University of Washington. At COCC since 1992.

REBECCA FRANKLIN

Assistant Professor II of Forest Resources Technology

B.S. in Forestry, Humboldt State University; Ph.D. in Geosciences, University of Arizona. At COCC since 2013.

THERESA FREIHOEFER

Associate Professor of Business

B.A. in Business Economics, University of California Los Angeles; M.B.A. in Business, Pepperdine University. At COCC since 2007.

SARAH FULLER

Associate Professor of Biology

A.A. in Math/Science, Bryn Athyn College; B.S. in Botany, University of Maryland; M.S. in Ecology, Evolution and Behavior, University of Minnesota. At COCC since 2011.

G

MICHAEL GESME

Professor of Music

B.A. in Music, Luther College; M.M. in Orchestral Conducting, University of Missouri-Columbia. At COCC since 1996.

JESSICA GIGLIO

Assistant Professor II Mathematics

B.A. in Mathematics, Lake Forest College; M.S. in Mathematics, Oregon State University. At COCC since 2013.

MURRAY GODFREY

Associate Professor of History

A.A.S. in Intelligence Operations, Cochise College; B.A. in History, Texas State University; M.A. in History, Texas State University. At COCC since 2012.

ANITA GOODWIN

Adult Basic Skills Instructor

B.A. in German and Geology, University of North Alabama; B.S. in Elementary Education, University of North Alabama; M.S. in Elementary Education, Jacksonville State University. At COCC since 2014.

KEVIN GROVE

Associate Professor of Physical Science/Physics

B.S. in Civil Engineering, Montana State University; M.S. in Chemical Engineering, Montana State University. At COCC since 2008.

H

LAURA HAGEN

Assistant Professor I of Baking and Pastry Arts

B.A. in English, Western Washington University. At COCC since 2013.

JESSICA HAMMERMAN

Assistant Professor II of History

B.A. in History and Comparative Literature, Washington University in St. Louis; M.A. in Philosophy, Modern European History and Jewish History, City University of New York; Ph.D. in Modern European History and Jewish History, City University of New York. At COCC since 2013.

MICHAEL HANSEN

Assistant Professor II of Business

B.S. in Business Administration, California State University Sacramento; M.B.A. in Business, California State University Sacramento. At COCC since 2014.

AMY HARPER

Professor of Anthropology

B.A. in Anthropology and Germanic Languages and Literature, University of Montana; M.A. in Anthropology, University of Massachusetts; Ph.D. in Anthropology, University of Massachusetts. At COCC since 2002.

CARSON HAURY

Professor of Computer and Information Systems

B.A. in Biology, State University of New York; M.S. in Information Systems, Naval Postgraduate School. At COCC since 1998.

SCOTT HAYS

Professor of Business Administration

A.A. in Business Administration, Bakersfield Community College; B.S. in Business Administration/Accounting, California State University Chico; M.B.A., California State University Bakersfield; Ph.D. in Education, University of Idaho. At COCC since 2002.

CHRISTOPHER HAZLETT

Assistant Professor II of English

B.A. in English, Western Illinois University; M.A. in English, Western Illinois University; Ph.D. in English, University of Florida. At COCC since 2015.

SARA HENSON

Associate Professor of Human Development/Program Director

B.A. in Asian & International Studies, University of Oregon; M.Ed. in Higher Education & Student Affairs Administration, University of Vermont. At COCC since 2010.

CAROL HIGGINBOTHAM

Professor of Chemistry

B.A. in Chemistry, Central College; Ph.D. in Biochemistry, Montana State University. At COCC since 1999.

MATTHEW HIGGINS

Assistant Professor I of Human Biology

B.S. in Biochemistry, Western Washington University; Ph.D. in Pharmacology, University of North Carolina Chapel Hill. At COCC since 2018.

LIN HONG

Associate Professor of Chinese

B.A. in Chinese Language and Literature, Mudanjiang Normal College; M.A. in Chinese Linguistics, Liaoning Normal University. At COCC since 2015.

WILLIAM HOPPE

Professor of Art

B.A. in Art, St. John's University; M.F.A. in Art/Painting, University of Washington. At COCC since 2000.

KIRSTEN HOSTETLER

Instruction and Outreach Librarian

B.A. in English, University of Evansville; M.L.I.S., University of Washington. At COCC since 2014.

LESLIE HOUSTON

Assistant Professor I of Dental Assisting

Cert. in Dental Assisting, Central Oregon Community College; A.A., Central Oregon Community College; B.A. in Professional Technical Education and Instructional Design, South Seattle College. At COCC since 2018.

AMY HOWELL

Professor of Education/Early Childhood Education Program Director

B.A. in Psychology, Willamette University; Ph.D. in Educational Psychological Studies, University of Colorado. At COCC since 2004.

JOSEPH HUDDLESTON

Asst Prof II of MATC

A.A.S. in Machine Manufacturing Technology, Portland Community College; B.S. in Manufacturing Engineering, Oregon Institute of Technology. At COCC since 2018.

MERIDETH HUMPHRIES

Assistant Professor II of Biology

B.S. in Zoology, Oregon State University; M.S. in Entomology, University of California Davis; Ph.D. in Biochemistry, University of Queensland. At COCC since 2014.

CHUCK HUTCHINGS

Professor of Spanish

B.A. in Spanish, California State University Stanislaus; M.A. in Spanish, California State University Fresno. At COCC since 1992.

ELIZABETH HYLTON

Assistant Professor II of Mathematics

B.S. in Mathematics, Portland State University; M.Ed. and M.S.T. in Mathematics, Portland State University. At COCC since 2016.

J

JENNIFER JUDD

Adult Basic Skills Instructor

B.A. in Anthropology, Whitman College; M.Ed. in Adult Education and Training – Adult Basic Education, Seattle University. At COCC since 2013.

K

JULIE KEENER

Professor of Mathematics

B.S. in Elementary Education, Oregon College of Education; M.S.T. in Mathematics, Portland State University. At COCC since 1990.

JAMES KNOX

Associate Professor of Music

B.S. in Music, Portland State University; M.M. in Choral Conducting, Portland State University. At COCC since 2003.

L

SAMUEL LA DUCA

Assistant Professor I of Hospitality Management

A.S. in Hospitality Management, Valencia College; B.S. in Business Management, Western Governors University. At COCC since 2013.

JASON LAMB

Assistant Professor II of Art History

B.F.A. in Painting, University of Illinois Urbana-Champaign; B.F.A. in Art History, University of Illinois Urbana-Champaign; M.A. in Art History, Northern Illinois University. At COCC since 2013.

KRISTIN LAMBERT

Assistant Professor I of Nursing

B.S. in Nursing, Texas A&M University Corpus Christi; M.S.N. in Nurse Educator, Texas Women's University. At COCC since 2018.

AMANDA LAYTON

Assistant Professor II of Biology

B.A. in Exercise Science, Willamette University; M.S. in Exercise Science, Central Washington University. At COCC since 2015.

JOHN LICCARDO

Associate Professor of Health and Human Performance

B.S. in Exercise Physiology, University of Utah; M.S. in Exercise Physiology and Anthropology, University of Utah. At COCC since 2012.

LILLI ANN LINFORD-FOREMAN

Professor of Speech/Theatre

A.B. in Drama, Stanford University; M.F.A. in Theatre, Pennsylvania State University. At COCC since 1987.

DAVID LIU

Associate Professor of Mathematics

B.A. in Chinese Language and Literature, Beijing Normal University; M.A. in Teaching, Pacific University. At COCC since 2005.

M

ERIC MAGIDSON

Associate Professor of Computer Information Systems

A.A.S. in Computer and Information Systems, Central Oregon Community College; B.S. in Information Technology, Oregon Institute of Technology; M.B.A., Concordia University. At COCC since 2008.

KIMBER MATTOX

Assistant Professor I of Nutrition and Biology

B.A. in Exercise Science, Willamette University; M.A. in Human Physiology, University of Oregon. At COCC since 2018.

KEN MAYS

Professor of Automotive Technology/Program Director

A.S. in Automotive Technology, Southwestern College. At COCC since 1990.

KATHLEEN MCCABE

Professor of Criminal Justice/Program Director

B.A. in Criminal Justice, Michigan State University; M.A. in Guidance and Counseling, Oakland University. At COCC since 2004.

MICK MCCANN

Assistant Professor II of Geography

B.A. in Foreign Language, Berry College; M.A. in Geography, Georgia State University. At COCC since 2007.

KARI MCDANIEL

Assistant Professor I of Nursing/Nurse Administrator (CNA)

B.S. in Nursing, Oregon Health Sciences University. At COCC since 2016.

BRET MICHALSKI

Professor of Forest Resource Technology/Program Director

B.S. in Wildlife Management, Humboldt State University; M.S. in Wildlife Science, Oregon State University. At COCC since 1994.

SUSAN MILLER

Assistant Professor II of Nursing

B.S. in Nursing, Medical College of Georgia; M.S. in Nursing, Emory University. At COCC since 2013.

JIM MOODIE

Professor of General Biology

B.S. in Biology, Saint John's University; M.S. in Zoology, University of Idaho; Ph.D. in Zoology, University of Oklahoma Norman. At COCC since 2001.

JANE MORROW

Professor of Nursing

B.A. in Nursing, Augustana College; M.N. and F.N.P., Washington State University. At COCC since 2003.

OWEN MURPHY

Assistant Professor II of Health & Human Performance

B.S. in Exercise Physiology, California State University Chico; M.S. in Health & Human Development, Montana State University Bozeman. At COCC since 2011.

LYNN MURRAY

Professor of Dental Assisting

B.S. in Applied Health Studies, Pennsylvania College of Technology; M.Ed. in Educational Leadership, Concordia University. At COCC since 2005.

N

DOUG NELSON

Professor of Mathematics

B.S. in Wood Science and Technology, Colorado State University; M.S. in Pure Mathematics, Northern Arizona University. At COCC since 1998.

MATTHEW NOVAK

Associate Professor of Psychology

B.S. in Psychology, University of Washington; Ph.D. in Developmental Psychology, University of Washington. At COCC since 2011.

ALAN NUNES

Assistant Professor II of Licensed Massage Therapy

A.A.S. in Massage Therapy, Central Oregon Community College. At COCC since 2009.

O

STEPHANIE O'BRYAN

Adjunct Instructor of Pharmacy Technician

A.G.S., Central Oregon Community College; Cert. in Pharmacy Technician, Central Oregon Community College. At COCC since 2018.

P

SEAN PALAGYI

Professor of Computer and Information Systems

B.S. in Political Science, University of Oregon. At COCC since 1999.

BETH PALMER

Assistant Professor II of Veterinary Technology/Program Director

"A.A.S. in Veterinary Technology, Portland Community College. At COCC since 2013.

PAUL PELLY

Assistant Professor II of Automotive Technology

A.S. in Automotive Technology, Portland Community College. At COCC since 2008.

TIM PETERSON

Associate Professor of Outdoor Leadership/ Health and Human Performance

Cert. in Outdoor Leadership, Greenfield Community College; B.A. in History, Bucknell University; M.A. in Adventure Education, Prescott College. At COCC since 2008.

RALPH PHILLIPS

Professor of Computer and Information Systems

B.A. in Finance and M.A. in Business/Office Education, University of South Florida. At COCC since 2005.

REBECCA PLASSMANN

Professor of Mathematics

A.B. in Mathematics, Bryn Mawr College; M.A. in Mathematics, Bryn Mawr College; M.A. in Education in Mathematics Science and Technology, University of California Berkeley. At COCC since 1995.

FLEUR PRADE

Assistant Professor II of French

B.A. in French Studies and Italian Studies, University of Delaware; M.A. in French, Middlebury College; Ph.D. in French and Italian Language and Literature, Ecole Supérieure Robert de Sorbon. At COCC since 2013.

ANGELINA PTOMEY

Adult Basic Skills Instructor

B.S. in Human Development and Family Science, Oregon State University; M.S. in Higher Education Leadership and Administration, Capella University. At COCC since 2012.

R

CHRIS RUBIO

Associate Professor of English/Composition

B.A. in Journalism, California State University; M.A. in English, California State University. At COCC since 2009.

KEN RUETTIGERS

Assistant Professor II of Sociology

B.S. in Business Administration, University of Southern California; M.B.A., California State University Bakersfield; D.Phil., Oxford Graduate School. At COCC since 2011.

SEAN RULE

Professor of Mathematics

B.A. in Mathematics Education, University of Delaware; M.Ed. in Mathematics Education, University of Delaware. At COCC since 2004.

JESSICA RUSSELL

Associate Professor of Outdoor Leadership

B.S. in Therapeutic Recreation, Middle Tennessee University; M.A. in Environmental Studies, Prescott College. At COCC since 2011.

TONY RUSSELL

Associate Professor of English

A.A. in French, Ricks College; A.A. in English, Ricks College; B.A. in English, Northern Kentucky University; M.A. in English, Purdue University; Ph.D. in English, Purdue University. At COCC since 2010.

S

MARY SATHER

Instructor of English

B.A. in Writing-Intensive English, Marquette University; M.F.A. in Creative Writing, Minnesota State University. At COCC since 2017.

DAVID SCHAPPE

Assistant Professor II Paramedicine

B.A. in Economics, State University of New York. At COCC since 2018.

LISA SHIPMAN

Assistant Professor I and Program Director of Aviation

B.S. in Business Administration, University of Nevada Reno. At COCC since 2017.

KIRI SIMNING

Professor of Nursing

B.S. in Nursing, University of North Carolina Chapel Hill; M.S. in Nursing, Loma Linda University. At COCC since 1998.

PAULA SIMONE

Assistant Professor II of Wildland Fire Science/Program Director

A.A., Central Oregon Community College; B.S. in General Science, University of Oregon; M.S. in Safety, Security and Emergency Management, Eastern Kentucky University. At COCC since 1999.

KATHY SMITH

Professor of Mathematics

B.A.S. in Mathematics and Philosophy, University of California Davis; M.S. in Mathematics, Oregon State University; Ph.D. in Mathematics, Oregon State University. At COCC since 2001.

AMY STANCLIFF

Adult Basic Skills Instructor

B.A. in English, Brigham Young University; M.Ed., University of Alberta. At COCC since 2005.

AMY STINARD

Adult Basic Skills Instructor

B.S. in Business/Marketing, Ball State University. At COCC since 1997.

ELEANOR SUMPTER LATHAM

Professor of Developmental Writing and Composition

B.A. in English, University of British Columbia; M.A. in English, University of British Columbia; M.A. in English, University of Victoria; Ph.D. in English, University of Washington. At COCC since 1994.

KEN SWARTWOUT

Associate Professor of Computer & Information Systems

B.S. in Computer & Information Science, University of Oregon; M.E., University of Oregon. At COCC since 2011.

T

FORREST TOWNE

Associate Professor of Chemistry

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V

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Director of Curriculum and Assessment

B.A. in Art History, Mt. Holyoke College; Ed.M. in Adult Education, Oregon State University. At COCC since 1989.

JOE VIOLA

Director of Campus Services

B.S. in Business, University of Connecticut. At COCC since 2008.

W

CHRISTINE WALKER

Latino College Preparation Program Coordinator

B.S. in Tourism and Outdoor Leadership, Oregon State University. At COCC since 2015.

ERIC WELLER

Administrative Assistant to the Vice President for Instruction

B.S. in General Science, Oregon State University. At COCC since 2013.

JIM WILCOX

Small Business Development Center Management Program Counselor

A.A., West Shore Community College; B.S. in Business Administration, Portland State University; M.B.A. in Business, Portland State University. At COCC since 1998.

BETH WRIGHT

Placement Test Coordinator, CAP Services

A.A., Central Oregon Community College. At COCC since 2008.

STAFF

A

LINDSEY AAVANG
Enrollment Specialist
At COCC since 2015.

DARIN ADAMS
Campus Custodian
At COCC since 2019.

B

OTIS BASS
Library Specialist
At COCC since 2010.

BARBARA BELLINGER
Administrative Assistant
At COCC since 2016.

JENNIFER BELTIS
Enrollment Associate
At COCC since 2014.

LINNEA BERG
Academic Lab Specialist Senior
At COCC since 2017.

SARAH BJORNSON
Financial Aid Associate
At COCC since 2017.

NANCY BLAIR-MADISON
Administrative Clerk Senior
At COCC since 2013.

TERRI BOTTS
Collections & Acquisitions Specialist
At COCC since 2007.

DAURA BOWMAN
Administrative Assistant
At COCC since 2004.

RENEE BRAZEAU-ASHER
Administrative Assistant
At COCC since 1993.

CHERYL BRITTON
Administrative Clerk Senior
At COCC since 2013.

ALBERT BROOKS
Campus Custodian
At COCC since 2001.

BILL BRYAN
Maintenance Specialist
At COCC since 2013.

SCOTT BURGE
Audio Visual Engineer
At COCC since 2017.

HARLEY BURNETT

Campus Custodian
At COCC since 2012.

MATTHEW BURTON
Mail Clerk Senior
At COCC since 2018.

C

LAURA CAIN
Administrative Clerk
At COCC since 2018.

LISA CAMP
Purchasing Specialist
At COCC since 2016.

WILLIAM CAMPBELL
Grounds & Landscape Associate
At COCC since 2017.

ERIKA CARMAN
Instructional Systems Specialist
At COCC since 2013.

LISA CHITWOOD
Retail Assistant Senior
At COCC since 2011.

DANA CHRISTENSEN
Instructional Deans Assistant
At COCC since 2017.

KATHARINE CONDON
Administrative Assistant
At COCC since 2004.

DEENA COOK
Administrative Assistant
At COCC since 2012.

SALINA COOK
Payroll Technician
At COCC since 2018.

STEPHEN CRAIG
Public Safety Officer
At COCC since 2015.

TRACY CROCKETT
Administrative Assistant
At COCC since 2012.

MORGAN CYRUS
Technical Support Senior
At COCC since 2017.

D

KEN DAVIS
Maintenance Specialist Senior-Plumber
At COCC since 2017.

ALEXANDER DEAN
Public Safety Officer
At COCC since 2018.

KATE DONAHUE
Administrative Clerk Senior
At COCC since 2017.

JULIA DUMAS
Bookstore Buyer
At COCC since 2011.

KRISTI DUNLAP
Administrative Assistant
At COCC since 2010.

F

ANDREW FEGETTE
Test Proctor Senior
At COCC since 2016.

JO FIEF
Information Office Coordinator
At COCC since 2009.

ANGELA FILENER
Enrollment Associate
At COCC since 2018.

ANGELA FILLER
Administrative Assistant
At COCC since 2018.

JAN FISHER
Accounting Technician
At COCC since 1984.

KRISTINA FISHER
Test Coordinator
At COCC since 2017.

EMILY FITCH
Information Office Assistant
At COCC since 2017.

JENNIFER FLANARY
Accounting Technician
At COCC since 2014.

BRIAN FLENER
Maintenance Specialist Senior-Electrial
At COCC since 2008.

JEFFERY FORTENBERRY
Campus Custodian
At COCC since 2017.

G

SUSAN GALECKI
Research Specialist
At COCC since 2014.

CAITLYN GARDNER
Campus Custodian
At COCC since 2012.

PATRICIA GIVENS
Library Specialist Senior

At COCC since 2007.

JUDITH GONZALEZ
Administrative Assistant
At COCC since 2015.

RYAN GOOLD
Academic Lab Specialist Senior
At COCC since 2017.

MIU GREEN
Student Services Specialist Sr
At COCC since 2012.

MATTHEW GREENLEAF
Intramural & Club Sports Fac
At COCC since 2010.

H

MARY BETH HAMILTON
Library Specialist Senior
At COCC since 2006.

DERWYN HANNEY
GroundsLandscape Specialist Senior
At COCC since 2013.

COLETTE HANSEN
Administrative Assistant
At COCC since 2008.

DENISE HATCH
Enrollment Technical Specialist Senior
At COCC since 2013.

KARL HEEREN
Maintenance Specialist Senrio-Electrical
At COCC since 1986.

SHAWN HOXIE
Custodian
At COCC since 2017.

ANTHONY HUSSEY
Public Safety Officer
At COCC since 2016.

J

YASUKO JACKSON
Instructional Design Specialist
At COCC since 2014.

ALEX JENNER
Transcript Evaluator
At COCC since 2019.

MARK JOHNSON
Staff Writer
At COCC since 2017.

LLOYD JOHNSTON
Campus Custodian
At COCC since 2017.

JENNIFER JORDAN

Administrative Assistant

At COCC since 2013.

WENDY JOSLIN

Administrative Assistant

At COCC since 2019.

STEVEN JULIAN

Campus Custodian

At COCC since 2007.

K

LAUREL KENT

Technical Services Administrative Assisstant

At COCC since 2011.

JULIE KOHL

Financial Aid Specialist

At COCC since 2008.

CADY-MAE KOON

Computer Lab Coordinator

At COCC since 2012.

JUSTIN KOON

Hardware Software Engineer

At COCC since 2015.

MELINDA KRUSE

Accounting Assistant Senior

At COCC since 2016.

L

MARY LARSON

Computer Lab Specialist

At COCC since 2015.

KRISTA LEADERS

Instructional Deans Assistant

At COCC since 2017.

DEBORAH LEHTO

Financial Aid Specialist Senior

At COCC since 2000.

TINA LESLIE

Assessment Center Technician

At COCC since 2010.

SAMANTHA LOZA

Administrative Assistant

At COCC since 2008.

JOHN LUTJE

Maintenance Specialist -HVAC

At COCC since 2017.

M

STELLA MACKEY

Enrollment Specialist Senior

At COCC since 2002.

LISA MACLELLAN

Academic Lab Specialist Senior

At COCC since 2017.

SONYA MADRID-SOTELO

Campus Custodian

At COCC since 2017.

MARCIE MASOOD

Administrative Clerk Senior

At COCC since 2014.

JENNA MATTOX

Enrollment Technical Spec

At COCC since 2016.

SAMANTHA MCGRAUGH

Textbook Inventory Specialist

At COCC since 2017.

TRINA MCLAUGHLIN

Administrative Assistant

At COCC since 2017.

ANNA MEWES

Student Services Specialist Senior

At COCC since 2017.

RAQUEL MEYERS

Administrative Assistant

At COCC since 2009.

GALIT MILLER

Administrative Assistant

At COCC since 2016.

KEVIN MILLER

Toolroom Coordinator

At COCC since 2011.

MELISSA MONETTE

Transcript Evaluator

At COCC since 2014.

N

KELLI NAKATO

Campus Custodian

At COCC since 2018.

BRIAN NELSON

Maintenance Custodian

At COCC since 2015.

COURTNEY NOLTA

Enrollment Specialist

At COCC since 2016.

LISA NORDELL-DETRES

Student Services Specialist

At COCC since 2018.

O

REBECCA OPRISH

Human Resources Specialist

At COCC since 2015.

P

STEPHANIE PEDRO
Public Safety Services Coordinator
At COCC since 2018.

ALEX PELAYO
Enrollment Associate
At COCC since 2018.

MINDALAY PEREZ
Information Office Assistant
At COCC since 2016.

MICHAEL PERRY
Academic Lab Specialist Senior
At COCC since 2016.

KAYLA PIERCE
Grounds & Landscape Associate
At COCC since 2018.

SUSAN PIERCE
Financial Aid Specialist-Vets
At COCC since 2016.

JOSEPH PRESSLER
Grounds & Landscape Specialist
At COCC since 2019.

Q

KEVIN QUICK
Campus Custodian
At COCC since 2008.

R

TOM REED
Campus Custodian
At COCC since 2010.

VALLARD REED
Campus Custodian
At COCC since 2016.

JASON REEVES
Hardware Software Engineer
At COCC since 2017.

DARRIN REYNOLDS
Grounds & Landscape Associate
At COCC since 2014.

AUSTIN RIEGER
Administrative Assistant
At COCC since 2019.

LINDA ROBSON
Administrative Clerk
At COCC since 2016.

VIRGIL JOE ROMERO
Campus Custodian
At COCC since 2017.

J C ROOT

IT Technical Specialist Senior
At COCC since 2006.

MICHELLE RUEBUSH
Administrative Assistant
At COCC since 2014.

S

CHRISTIN SANDS
Project Manager Assistant
At COCC since 2015.

CAROLYN SCHMIDT
Administrative Assistant
At COCC since 2018.

MATTHEW SCHULZ
Public Safety Officer
At COCC since 2018.

JOANN SEELEY
Document Publishing Assistant
At COCC since 2011.

JOHN SHIMMEL
Campus Custodian
At COCC since 2019.

LINDA SKLADAL
Library Specialist
At COCC since 2000.

ARIN STARNES
Campus Custodian
At COCC since 2017.

CRAIG STARNES
Campus Custodian Lead
At COCC since 2011.

CRISTI STEIERT
Administrative Clerk Senior
At COCC since 2007.

JAMES STOUT
Retail Assistant
At COCC since 2018.

LANI SYKES
Instructional Deans Assistant
At COCC since 1996.

LORA SZARANIEC
Graphic Designer
At COCC since 2014.

T

GAIL TAGUE
Accounting Technician Senior
At COCC since 1988.

TRACY THILLE
Academic Lab Specialist Senior
At COCC since 2014.

BRUCE THOMPSON
IT Technical Specialist
At COCC since 1993.

ROGER THORSVOLD
Public Safety Officer
At COCC since 2018.

CHRIS TIPPETS
Campus Custodian
At COCC since 2017.

U

GEORGE ULLRICH BERRY
Campus Custodian
At COCC since 2017.

V

MOISES VIRAMONTES
Grounds & Landscape Specialist
At COCC since 2013.

LIBBY VOIGT
Financial Aid Specialist
At COCC since 2017.

HEINRICH EUGEN VON HELMBRECHT
Digital Production Specialist
At COCC since 2007.

W

ERICA WALDBILLIG
Administrative Assistant
At COCC since 2010.

HEIDI WEAVER
Human Resources Specialist
At COCC since 2016.

KIRSTEEN WOLF
Facilities Scheduling Specialist
At COCC since 2015.

SUSAN WOOD
Administrative Assistant
At COCC since 1997.

EMERITUS

A

CORA AGATUCCI
Professor of English
Began at COCC in 1988, awarded Emeritus in 2018.

GLORIA AHERN
Professor of Health Information Technology
Began at COCC in 1980, awarded Emeritus in 2002.

B

BOB BARBER
President

Began at COCC in 1990, awarded Emeritus in 2004.

ART BENEFIEL
Professor of Forest Technology/Program Director, GIS
Began at COCC in 1988, awarded Emeritus in 2018.

DAVID BILYEU
College Librarian
Began at COCC in 1993, awarded Emeritus in 2013.

BOB BROOKOVER
Professor of Business Equipment Service Technology
Began at COCC in 1972, awarded Emeritus in 1997.

BILL BUCK
Professor of English
Began at COCC in 1989, awarded Emeritus in 2004.

ERIC BUCKLES
Director of Human Resources
Began at COCC in 1998, awarded Emeritus in 2013.

ROXANNE BURGER-WILSON
Textbook Buyer
Began at COCC in 1992, awarded Emeritus in 2019.

C

TOM CARROLL
Professor of Economics
Began at COCC in 1980, awarded Emeritus in 2014.

D

FORREST DANIEL
Professor of Music
Began at COCC in 1978, awarded Emeritus in 1995.

DEBORAH DAVIES
Professor of Dental Assisting
Began at COCC in 1997, awarded Emeritus in 2018.

E

DANIEL EARLY
Professor of Anthropology and Sociology
Began at COCC in 1978, awarded Emeritus in 2002.

MARK EBERLE
Professor of Biological Sciences
Began at COCC in 1988, awarded Emeritus in 2018.

ALLEN EHL
Associate Professor of Automotive Technology
Began at COCC in 1969, awarded Emeritus in 1990.

WAYNE ESHELMAN
Professor of Biological Sciences
Began at COCC in 1965, awarded Emeritus in 1994.

G

DON GALLAGHER
Professor of Mathematics
Began at COCC in 1969, awarded Emeritus in 1994.

DIANA GLENN

Instructional Dean

Began at COCC in 1986, awarded Emeritus in 2011.

H

DEBBIE HAGAN

Interim Instructional Dean

Began at COCC in 1989, awarded Emeritus in 2019.

CHARLES HEIDEN

Professor of Music

Began at COCC in 1981, awarded Emeritus in 1994.

FRANZ HELFENSTEIN

Professor of Mathematics

Began at COCC in 1990, awarded Emeritus in 2016.

JULIE HOOD-GONSALVES

Professor of Human Biology

Began at COCC in 1988, awarded Emeritus in 2016.

DUANE HOUGHT

Associate Professor of Business and Accounting

Began at COCC in 1979, awarded Emeritus in 2002.

ELLEN HOWE

Associate Professor of Nursing

Began at COCC in 1981, awarded Emeritus in 2002.

MARJ HOYE

Professor of Composition and Technical Writing

Began at COCC in 1991, awarded Emeritus in 2013.

KAREN HUCK

Professor of Speech

Began at COCC in 1988, awarded Emeritus in 2014.

STEVE HUDDLESTON

Mail Clerk Senior

Began at COCC in 1999, awarded Emeritus in 2019.

J

BEVERLEE JACKSON

Professor of Health Information Technology

Began at COCC in 2002, awarded Emeritus in 2017.

JIM JONES

Vice President and Chief Financial Officer

Began at COCC in 1985, awarded Emeritus in 2009.

K

SUSAN KLEIN

Associate Professor of Health Information Technology

Began at COCC in 1985, awarded Emeritus in 2002.

RODNEY KOHLER

Professor of Mathematics

Began at COCC in 1966, awarded Emeritus in 1998.

SARA KREMPEL

Professor of Art

Began at COCC in 1990, awarded Emeritus in 2011.

JIM KRESS

Professor of Business

Began at COCC in 1988, awarded Emeritus in 2014.

DIANNE KRISTIANSEN

Administrative Assistant

Began at COCC in 2000, awarded Emeritus in 2019.

TERRY KRUEGER

Professor of English

Began at COCC in 1990, awarded Emeritus in 2015.

L

LOWELL LAMBERTON

Professor of Business

Began at COCC in 1981, awarded Emeritus in 2011.

DONALD LAWS

Instructional Dean

Began at COCC in 1972, awarded Emeritus in 1997.

GREG LYONS

Professor of English

Began at COCC in 1991, awarded Emeritus in 2011.

M

MILLIE MACKENZIE

Professor of Business

Began at COCC in 1978, awarded Emeritus in 1999.

BRUCE MCCLELLAND

Professor of Chemistry

Began at COCC in 1974, awarded Emeritus in 2003.

JACK MCCOWN

Professor of Mathematics

Began at COCC in 1976, awarded Emeritus in 2004.

SHIRLEY METCALF

President

Began at COCC in 2011, awarded Emeritus in 2019.

JIM MIDDLETON

President

Began at COCC in 2004, awarded Emeritus in 2014.

CAROL MOOREHEAD

Dean of Continuing Education and Extended Learning

Began at COCC in 1989, awarded Emeritus in 2011.

N

CHARLES NAFFZIGER

Professor of Mathematics

Began at COCC in 1995, awarded Emeritus in 2017.

RICHARD NIEDERHOF

Professor of Forestry

Began at COCC in 1972, awarded Emeritus in 1999.

BRUCE NOLF

Professor of Geology

Began at COCC in 1966, awarded Emeritus in 1993.

LORETTA NOLL

Professor of Nursing

Began at COCC in 1978, awarded Emeritus in 1999.

O

STEVE O'BRIEN

Professor/Counselor

Began at COCC in 1977, awarded Emeritus in 2003.

PATRICIA O'NEILL

Professor of History

Began at COCC in 1985, awarded Emeritus in 2013.

CHRISTINE OTT-HOPKINS

Professor of Plant Biology

Began at COCC in 1993, awarded Emeritus in 2015.

P

SARA PAULSON

Director of Information Technology

Began at COCC in 1983, awarded Emeritus in 2004.

MARGARET PETERSON

Professor of Allied Health/Health and Human Performance

Began at COCC in 1988, awarded Emeritus in 2015.

BOB POWELL

Professor of Physical Science and Chemistry

Began at COCC in 1967, awarded Emeritus in 1999.

HELEN PRUITT

Registrar

Began at COCC in 1998, awarded Emeritus in 2013.

Q

BART QUEARY

Vice President for Instruction

Began at COCC in 1979, awarded Emeritus in 2002.

DARLA QUESNELL

Professor of Psychology

Began at COCC in 1975, awarded Emeritus in 1995.

R

BOB REYNOLDS

Professor of Geology

Began at COCC in 1994, awarded Emeritus in 2018.

S

MIKE SEQUEIRA

Professor of Mathematics

Began at COCC in 1982, awarded Emeritus in 2004.

VIRGINIA SHRAUGER

Professor of Reading and Study Skills

Began at COCC in 1970, awarded Emeritus in 1988.

BILL SMITH

Professor of Machine Shop

Began at COCC in 1984, awarded Emeritus in 2003.

MIKE SMITH

Director of Student Life

Began at COCC in 1982, awarded Emeritus in 2007.

T

GENE TAYLOR

Professor of Computer and Information Systems

Began at COCC in 1984, awarded Emeritus in 2003.

TOM TEMPLE

Associate Professor of Art

Began at COCC in 1971, awarded Emeritus in 1990.

LYNELLE THOMAS

Began at COCC in 1971, awarded Emeritus in 1990.

RICHARD THOMPSON

Dean of Student and Enrollment Services

Began at COCC in 1984, awarded Emeritus in 2006.

WARD TONSFELDT

Professor of English

Began at COCC in 1975, awarded Emeritus in 2001.

W

KATHY WALSH

Vice President for Instruction

Began at COCC in 1990, awarded Emeritus in 2010.

BERN WISNER

Professor of Business

Began at COCC in 1982, awarded Emeritus in 2002.

Y

JERRY YAHNA

Professor of Music

Began at COCC in 1970, awarded Emeritus in 1993.

Z

NANCY ZENS

Professor of History

Began at COCC in 1989, awarded Emeritus in 2011.

GENE ZINKGRAF

Director of Campus Services

Began at COCC in 1987, awarded Emeritus in 2012.

COCC prides itself on the outstanding faculty and staff who help our students and communities thrive. This section includes faculty, administrators, staff and those awarded Emeritus status as of April 1, 2019. This includes those expected to be on 2019-20 contracts between half-time and full-time. Questions should be directed to the office of Human Resources.

General Information

History

Central Oregon Community College was founded in 1949 as part of the Bend School District. It is the longest standing community college in Oregon. The College District was formed in 1959 and officially established as the Central Oregon Area Education District by a vote of residents in 1962. The original Bend campus opened more than 50 years ago, in 1964.

Donald P. Pence served first as director of the College (from 1950 to 1957) and then as the first president (from 1957 to 1967). Dr. Frederick H. Boyle was president from 1967 through 1990. Dr. Robert L. Barber was the third president in the College's history and served through 2004. Dr. James E. Middleton served for 10 years, from 2004 to 2014. Dr. Shirley Metcalf became president in 2014 and served through June 30, 2019. On July 1, 2019 Dr. Laurie Chesley began her tenure as the College's sixth president.

Our District

The Central Oregon Community College District encompasses all of Crook, Deschutes and Jefferson counties, as well as the southern part of Wasco and northern portions of Klamath and Lake counties. A seven-member board of directors governs the College, with members of that board elected from geographic zones in the District. The District covers a 10,000-square-mile area, making it larger than eight of the U.S. states.

Our Campuses

Central Oregon Community College has campuses in Bend, Redmond, Madras and Prineville (<https://www.cocc.edu/about/our-campuses.aspx>).

The College's main campus is located on the western edge of Bend, a city known for its natural beauty and proximity to diverse recreational opportunities. The 200-acre Bend campus offers quiet, peaceful surroundings for study and reflection. With its location on the western slope of Awbrey Butte, students have a spectacular view of the Oregon Cascade mountain range from nearly every point on the grounds. The campus contains 26 buildings with a total of 575,000 square feet. The newest building is the 330-bed Wickiup Residence Hall, which opened in September 2015.

On the 25-acre Redmond Campus, there are four buildings, housing administration, classrooms and a computer lab. The Redmond Technology Education Center opened in Fall 2014, housing state-of-the-art facilities and programs.

In 2011, COCC opened campuses in Madras and Prineville. The Madras Campus was funded by the 2009 bond measure and placed on land donated to COCC by the local Bean Foundation. The COCC Crook County Open Campus was funded jointly by the bond measure and a grant to Crook County from the U.S. Department of Commerce Broadband Technology Opportunity Program, and is on land donated by the County.

All campuses offer credit and non-credit courses and the necessary student services to help assure student success.

Our Faculty

COCC has 130 full-time faculty members, 50 adjunct faculty (semi-permanent faculty on annual contracts) and approximately 150 part-time instructors per term. The College's faculty is a committed, professional group of educators, which provides stimulating and meaningful learning experiences for the College's students. Faculty members serve as advisors to individual students, assisting them in planning academic programs and schedules. All COCC faculty are required to have at least a master's degree or equivalent training. Within the institution, there is strong motivation for continuing professional improvement by all faculty and administrators. About 40 percent of the faculty have doctorates or a terminal degree in their discipline, which is a very high percentage for a community college.

Our Students

Nearly 9,000 students enrolled in credit classes at COCC last year. Each quarter, approximately 2,000 full-time and 3,000 part-time students are enrolled. While more than half of the students are under the age of 22, another quarter are 35 and older. About 25 percent of the students enroll in career and technical education programs and take career-oriented courses of study. The remainder enroll in courses that form the freshman and sophomore years of a four-year college program. Students in such a program usually intend to transfer to another college or university for their junior and senior years.

The COCC Foundation

Education changes lives. For more than 60 years, Central Oregon Community College Foundation scholarships have enabled students to learn new skills, earn technical certificates, complete two-year associate's degrees and be prepared to pursue the remainder of their undergraduate studies at a college or university. Students can apply for an annual scholarship for the next academic year from December 15 to July 15.

The COCC Foundation is the oldest community college foundation in Oregon. Its assets have grown significantly over the years, from the first gift of \$500 in 1955 to nearly \$23 million today. In addition to scholarship support, the COCC Foundation also provides support in a variety of ways, from supporting departmental programs to providing support for the Nancy R. Chandler Visiting Scholar Program. For 2017-2018, the COCC Foundation offered more than \$1.6 million in scholarships and program funds. For more information, call 541-383-7225, or visit cocc.edu/foundation (<http://cocc.edu/foundation/>).

Learning Options

COCC offers a wide range of credit courses and programs designed to build skills and prepare for transfer or direct employment. In addition, COCC provides non-credit options through Continuing Education and Adult Basic Skills departments. The College engages in a variety of partnerships to support students and the community.

Credit Options (Transfer, CTE, Individualized Study)

Transfer

COCC offers several options to support students who intend to transfer their credits to earn a bachelor's degree at another college or university. The Associate of Arts Oregon Transfer (AAOT) provides students with several assurances when transferred to any Oregon public university. The Associate of Science (AS) degree prepares students to transfer either to a specific baccalaureate-granting college, to a specific major, or both. The Oregon Transfer Module (OTM), while not a full certificate or degree, is designed to transfer to Oregon community colleges and public universities; all credits will be applied toward general education requirements.

Career and Technical Education

The Associate of Applied Science degree and certificates are designed to prepare students with technical skills so they can enter the workforce after graduation.

Individualized Study

COCC offers the Associate of General Studies for students who are not pursuing a specific transfer or career and technical program but wish to design a course of study to meet their individual needs.

Basic Skills/Developmental Classes

COCC offers courses that prepare students for college-level courses in computers/technology, math, and writing. These classes are frequently available in classrooms on the Bend, Madras, Prineville and Redmond campuses and some are offered online. Check the current credit class schedule for times and locations.

Continuing Education

COCC's Continuing Education department offers innovative, high-quality, community-driven, affordable non-credit classes and events to adults throughout the District. Classes provide opportunities to stay current with job skills, engage in new interests and explore a range of activities.

Continuing Education classes are easy to access. There are no applications, no transcripts and no special qualifications to register. Students sign up and pay the class fee to enroll. Please visit the Continuing Education website (<http://cocc.edu/continuinged/>) or call 541-383-7270 for more information.

Personal Enrichment

Enrichment courses encourage students to explore personal interests and learn new skills. Take classes for fun, business, health, recreation or personal growth—the choice is yours. Class schedules are mailed quarterly to households throughout the district. A complete up-to-date schedule and registration options are available on the Continuing Education website (<https://www.cocc.edu/departments/continuinged/>).

Professional Development

A variety of high-quality professional education options are available for those who want to stay competitive in their careers, study for industry certifications, meet continuing education requirements, or pursue entry-level career training. Professional development opportunities include accounting/bookkeeping, technology, project management, health care and wellness, landscaping, leadership and management. Continuing Education offers both individual courses as well as non-credit training certificates (more information on non-credit training certificates is located in the special curriculum (p. 396) section of the Catalog).

COCC can customize training so employees gain the specific knowledge they need to perform their job duties and contribute to a more productive and profitable business. Visit Continuing Education's professional development website (<https://www.cocc.edu/departments/continuinged/professional-development.aspx>) for more information.

Small Business Development Center

The Small Business Development Center (SBDC) at Central Oregon Community College is focused on helping build Oregon's best businesses. The SBDC offers no-cost one-to-one advising and business-related educational workshops. Experienced staff advisers are available to meet with businesses by appointment throughout the tri-county region. In addition, the SBDC offers:

- Practical workshops on business start-up, planning and growth
- A year-long Small Business Management program
- SCALE Oregon services for larger traded-sector companies

- Capital access assistance
- Strategic market research

The goal of the SBDC at COCC is to have a positive impact on the growth and sustainability of Central Oregon businesses. Please visit the Small Business Development Center website (<https://www.cocc.edu/departments/continuinged/small-business-development-center/default.aspx>) or call 541-383-7290 for more information.

Youth Programs and YouthCamp@COCC

COCC's Continuing Education department offers a number of classes and camps for youth under the age of 16. YouthCamp@COCC is the most recognized program offered with more than 30 camps per summer. Each of the four campuses hosts at least one camp for youth ages 10-14. In addition, classes are offered throughout the year for youth, or for youth and parents or guardians to enjoy together. With an eye toward the future, youth can explore potential career and college options by attending classes and camps on the COCC campuses.

Registration

Registration information is provided on the Continuing Education website (<http://cocc.edu/continuinged/>) and in the Continuing Education class schedule, which is published each term. Registrations are processed as received. Students may register by phone, mail, fax, online or in person.

Fees

Full payment of fees is required at the time of registration. Students may pay with Visa, MasterCard, Discover, check or cash.

Age Requirements

Anyone age 16 or older may attend Continuing Education classes or workshops. Youth under age 16 may attend classes and camps in the Youth Program as indicated in each course description.

Adult Basic Skills

Adult Basic Skills (ABS) Non-credit Classes

The Adult Basic Skills department is comprised of two programs, English Language Learning (ELL) and Adult Basic and Adult Secondary Education (ABE/ASE). The goal of these programs is that students will have academic achievements and basic skills necessary to participate effectively as engaged community, family members and employees, and to succeed in college.

The English Language Learning (ELL) program is designed for adults who need to learn the English language. Classes focus on speaking, understanding, reading and writing skill development.

The Adult Basic Education/Adult Secondary Education (ABE/ASE) program provides instruction in basic communication, math, study skills and basic computer skills to prepare students for a variety of purposes including college and GED Exam preparation and employment. Classes include Essentials of Communication and Essentials of Math.

Students may attend day or evening sessions, depending on the location. Required orientation and registration sessions are held during the first week of each term. Please visit the Adult Basics Skills website (<https://www.cocc.edu/departments/adult-basic-skills/>) or call 541-504-2950 for exact times and locations.

ELL classes are offered in Bend, Redmond and Madras. Communication and math classes are offered in Bend, Redmond, Prineville, Madras and Warm Springs.

Partnerships

COCC routinely develops and supports partnerships with local, regional, statewide and industry organizations in order to achieve the College's mission. Several examples of learning options are listed below.

Oregon State University - Cascades

COCC and Oregon State University (OSU) partner to offer students a Degree Partnership Program. As part of the program, students are admitted to and can take courses at both institutions. Benefits include:

- Financial aid and scholarship benefits are combined,
- Additional course offerings and choice of times through COCC,
- Guidance to stay on track toward an OSU degree while fulfilling lower division courses at COCC,
- A strong connection to COCC and OSU faculty,
- COCC courses are charged the COCC tuition rate, which results in lower tuition overall.

The program works well for students intending to earn their bachelor's degree through OSU-Cascades, but also applies to programs at any of the OSU campuses, including its eCampus programs. For general information about the partnership, visit OSU's (<https://partnerships.oregonstate.edu/students/>) or OSU-Cascades' information (<https://osucascades.edu/admissions/cocc-degree-partnership-program/>) pages.

Area High Schools

Dual Credit/College Now

This program offers high school students the opportunity to earn college credit for certain courses they complete in their schools. High school courses are aligned with collegiate career and technical education and transfer course curricula and are taught by qualified high school teachers. Courses offered vary by high school and by term; students must be enrolled in their high school but do not have to be admitted to COCC, and must pay a \$25/credit fee.

Expanded Options

Expanded options is an Oregon program that allows, under specific circumstances, high school students to enroll in COCC credit courses offered at a COCC campus at no charge to them for tuition, fees, supplies and books. Each high school determines eligibility and participation requirements. Students should consult their high school counselor or ASPIRE coordinator for more information.

Articulation Agreements

COCC enters into articulation agreements about specific majors to assist students in transferring. A list of current articulation agreements is available on the COCC website (<https://www.cocc.edu/departments/admissions/grades-and-student-records/articulation-and-partnership-agreements.aspx>).

Mission and Vision

Mission Statement

Central Oregon Community College promotes student success and community enrichment by providing quality, accessible, lifelong educational opportunities.

Vision Statement

To achieve student success and community enrichment, COCC fosters student completion of academic goals, prepares students

for employment, assists regional employers and promotes equitable achievement for the diverse students and communities we serve.

Core Themes

The Board has adopted four core themes that manifest the essential elements of COCC's mission. The core themes are:

Transfer and Articulation

Workforce Development

Basic Skills

Lifelong Learning

2018-2023 Strategic plan goals

Student Success

Provide resources and support to facilitate increased student persistence and educational goal achievement.

Student Experience

Provide core academic offerings and student support at all campuses and online.

Community Enrichment

Engage as a collaborative and contributing partner with the community.

Institutional Efficiency

Strengthen systems, policies and procedures to create more proactive, responsive and effective internal processes.

ABOUT THE CATALOG

The catalog provides information about credit courses, programs, entry and registration procedures, student services, and student policies as well as general information about the College. COCC produces a new catalog every year. When students are admitted to the College, they are admitted under the requirements and rules articulated by the current catalog. The course and program information in the catalog is the source for the credit class schedule and GradTracks.

If you have a disability and the format of any material on our online catalog pages interferes with your ability to access the information, please contact the department associated with the content (or the Curriculum and Assessment Office (curriculumsubmissions@cocc.edu) for assistance).

How to Read Course Information

Credit courses are grouped alphabetically by the subject prefix and then by number. It is an important student responsibility to use the course information to make informed decisions about enrolling in courses.

Courses and Sections

Courses

The information provided in the catalog in both the course listing and the course outline represent the approved description of the course. The catalog lists all COCC credit courses but not all courses are offered every term.

Sections

Each term, various sections of courses are offered and advertised in the credit class schedule. Each section of a course offered will have a syllabus that describes the unique aspects (such as grading method and assignments) of the section.

Course Numbering

Courses numbered **100 – 299** (e.g., MTH 111 College Algebra) are designed to either meet COCC certificate or degree requirements or transfer to a bachelor's program.

Courses numbered **below 100** (e.g., MTH 065 Beginning Algebra II) do not normally transfer to four-year institutions.

Adult continuing education courses (offered through Continuing Education) (<https://www.cocc.edu/departments/continuinged/>) and **adult basic skills courses** (offered through Adult Basic Skills (<https://www.cocc.edu/departments/adult-basic-skills/>)) are non-credit, non-transferable classes.

Example Course Listing and Explanation

BA 220 Business Analysis and Budgeting (4 Credits)

Prerequisites: BA 104 Business Math; BA 112 Applied Accounting II; and CIS 131 Software Applications.

Recommended preparation: CIS 125E Excel.

This course is designed to develop mathematical analytical skills in performing the daily tasks of a manager or salesperson. The course has a threefold focus: strengthening understanding and use of business terminology in regards to financial information; development of spreadsheet skills in evaluating the costing, pricing and financing strategies of products and services; and development of skills in evaluating and making budgeting, financial and investment decisions. This is a hands-on, skills-oriented course.

The **course number** and the **title of the course** are listed first followed by the number of quarter credit hours in parentheses.

Prerequisites, corequisites, and recommended preparation are identified. Note that individual sections may have unique prerequisites that will be listed in the schedule.

- **Prerequisites** are courses or other requirements that must be met prior to a student enrolling. Note that if a student is enrolled in the current term in a prerequisite course, they will be able to register for the future course before a grade is posted. However, if they do not receive a passing grade in the prerequisite course then they will be automatically dropped from the future course after grades are posted.
- A **prerequisite with concurrency** is a course which must be completed prior to or while attending the selected course.
- A **corequisite** is a course which must be completed while attending the selected course.
- **Recommended preparation** is a course is the same as a prerequisite but not enforced in the registration process; students are encouraged to contact the section instructor if they have questions about enrolling in a course without having met the recommended preparation.

The **course description** briefly summarizes the course content.

Course Outline

The course outline provides more detail about the course such as types of instructional contact hours (lecture, lab, or other), topics included in the course, grading methods, and required materials.

How to Read Program Information

Information about credit programs listed in the catalog includes:

Overview

The overview provides a brief description of the program followed by the program learning outcomes.

Entrance Requirements

Entrance requirements may include academic (required and recommended) and other (required and recommended). Program costs lists reflect those costs that are in addition to the normal tuition, student fees, and standard textbook expenses.

Program Requirements

This is the list of courses required to complete the program, followed by any advising notes.

Sample plan (and time to completion)

The sample plan reflects a hypothetical schedule for a student who attends full time and requires no preparatory skills courses. Students should work with their academic advisor to develop their individualized plan.

The time to completion of COCC programs varies according to many factors such as: continuous enrollment, Summer term registration, full time/part time status, course availability, course sequencing and placement. In addition, some programs have prerequisites that must

be completed prior to progression into core classes which may extend time to completion, depending on the above factors. Students who have completed prerequisites, or are pursuing a program that does not have prerequisites, and attend full-time (averaging a minimum of 15 credits a term) can generally complete an associate degree in two years, a one year certificate of completion in one year (which may include summer), a two year certificate in two years, or a career pathway certificate of completion in less than one year. Sample plan information is based on this scenario. Students should work with their academic advisor and review their GradTracks plan to determine their estimated time to completion.

Assurance

The information included in this catalog reflects an accurate picture of Central Oregon Community College at the time of its publication. However, conditions can and do change. The College reserves the right to make any necessary changes in the information including the calendar, procedures, policies, services, curriculum, course content, and costs. In the event a correction or change is made, the college will publish this information on the catalog addendum (p. 460). Note that PDF files downloaded from a page will always include any changes, but previously printed copies of the catalog may not.

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This catalog was produced by the Curriculum and Assessment Office using Leepfrog Technologies CourseLeaf catalog management system.

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Addendum

Central Oregon Community College makes every effort to publish an accurate and comprehensive catalog. Occasionally, changes or additions need to be made to a published catalog; COCC reserves the right to make any necessary changes.

There are no addendum items to the current 2019-2020 catalog.

Archives

2018-2019 College Catalog (https://catalog.cocc.edu/about-catalog/archive/2018-2019_catalog.pdf)

2017-2018 College Catalog (https://catalog.cocc.edu/about-catalog/archive/2017-2018_with_addendum.pdf)

2016-2017 College Catalog (https://catalog.cocc.edu/about-catalog/archive/2016-2017_with_addendum.pdf)

2015-2016 College Catalog (https://catalog.cocc.edu/about-catalog/archive/2015-2016_with_addendum.pdf)

2014-2015 College Catalog (https://catalog.cocc.edu/about-catalog/archive/2014-2015_with_addendum.pdf)

2013-2014 College Catalog (https://catalog.cocc.edu/about-catalog/archive/2013-2014_with_addendum.pdf)

2012-2013 College Catalog (https://catalog.cocc.edu/about-catalog/archive/2012-2013_with_addendum.pdf)

2011-2012 College Catalog (https://catalog.cocc.edu/about-catalog/archive/2011-2012_with_addendum.pdf)

2010-2011 College Catalog (<https://catalog.cocc.edu/about-catalog/archive/2010-2011.pdf>)

2009-2010 College Catalog (https://catalog.cocc.edu/about-catalog/archive/2009-2010_with_addendum.pdf)

2008-2009 College Catalog (<https://catalog.cocc.edu/about-catalog/archive/2008-2009.pdf>)

2007-2008 College Catalog (<https://catalog.cocc.edu/about-catalog/archive/2007-2008.pdf>)

INDEX

A

About COCC	436	Automotive Engine Technician - Career Pathway Certificate of Completion (CPCC)	30
About the Catalog	459	Automotive Heating & Air Conditioning Technician - Career Pathway Certificate of Completion (CPCC)	30
Academic Calendar	426	Automotive Hybrid Electric Vehicles (HEV) Technician - Level 1 - Career Pathway Certificate of Completion (CPCC)	31
Accounting Clerk - One Year Certificate of Completion (CC1)	66	Automotive Hybrid Electric Vehicles (HEV) Technician - Level 2 - Career Pathway Certificate of Completion (CPCC)	32
Accreditation	436	Automotive Management - Associate of Applied Science (AAS)	34
Addendum	460	Automotive Technology	19
Addiction Studies and Human Services - Associate of Applied Science (AAS)	197	Automotive Technology in Electronics and Diagnostics - Associate of Applied Science (AAS)	35
Addiction Studies and Human Services - Two Year Certificate of Completion (CC2)	199	Aviation	41
Admissions	411	Aviation - Professional Pilot Airplane - Associate of Applied Science (AAS)	46
Advanced Forest Concepts - Career Pathway Certificate of Completion (CPCC)	156	Aviation - Professional Pilot Helicopter- Associate of Applied Science (AAS)	49
Agricultural Sciences (OSU Transfer) Emphasis - Associate of Science (AS)	157	Aviation (AV)	315
Allied Health (AH)	305	Aviation-Technology and Management (OIT Transfer) Emphasis - Associate of Science (AS)	53
Anthropology	9		
Anthropology - Associate of Arts Oregon Transfer (AAOT)	11	B	
Anthropology (ANTH)	305	Baking and Pastry Arts - Associate of Applied Science (AAS)	83
Apprenticeship (APR)	306	Baking and Pastry Arts - Two Year Certificate of Completion (CC2)	85
Archives	460	Baking and Pastry Arts (BAK)	320
Areas of Study	410	Biological Sciences - Associate of Arts Oregon Transfer (AAOT)	57
Art	12	Biology	56
Art - Associate of Arts Oregon Transfer (AAOT)	17	Biology (BI)	321
Art (ART)	308	Board of Directors	436
Art History (ARH)	312	Business - Associate of Science Oregon Transfer (ASOT)	67
Associate of General Studies - (AGS)	167	Business Administration	63
Automotive (AUT)	312	Business Administration - Associate of Applied Science (AAS)	69
Automotive Basic Skills with Basic Engine Performance - Career Pathway Certificate of Completion (CPCC)	22	Business Administration: Accounting - Associate of Applied Science Option (AASO)	70
Automotive Basic Skills with Welding - Career Pathway Certificate of Completion (CPCC)	23	Business Administration: Management - Associate of Applied Science Option (AASO)	71
Automotive Controller Systems Technician Level 1 - Career Pathway Certificate of Completion (CPCC)	24	Business Administration: Small Business and Entrepreneurship - Associate of Applied Science Option (AASO)	73
Automotive Controller Systems Technician Level 2 - Career Pathway Certificate of Completion (CPCC)	25	Business (BA)	323
Automotive Drive Train Technician - Career Pathway Certificate of Completion (CPCC)	26		
Automotive Electrical Technician (Advanced) - Career Pathway Certificate of Completion (CPCC)	27	C	
Automotive Electrical Technician (Basic) - Career Pathway Certificate of Completion (CPCC)	28	Career and Technical Education	394
Automotive Engine Performance Technician - Career Pathway Certificate of Completion (CPCC)	29	Cascade Culinary Institute	78
		Chemistry	91
		Chemistry - Associate of Arts Oregon Transfer (AAOT)	92
		Chemistry (CH)	325

Child, Family and Community Studies - Career Pathway Certificate of Completion (CPCC) 126

Chinese (CHN) 326

Clean Energy Diesel Technician (Advanced) - Career Pathway Certificate of Completion (CPCC) 37

CNC Machining - Two Year Certificate of Completion (CC2) 215

Coding Competency - Two Year Certificate of Completion (CC2) 185

Communication 93

Communication (COMM) 327

Communication/Journalism - Associate of Arts Oregon Transfer (AAOT) 95

Computer Aided Drafting (CAD) - One Year Certificate of Completion (CC1) 109

Computer & Information Systems 97

Computer & Information Systems - Associate of Applied Science (AAS) 101

Computer & Information Systems - One Year Certificate of Completion (CC1) 103

Computer & Information Systems (CIS) 327

Computer & Information Systems: Computer Aided Drafting (CAD) - Associate of Applied Science Option (AASO) 104

Computer & Information Systems: Networking - Associate of Applied Science Option (AASO) 106

Computer & Information Systems: Web Development - Associate of Applied Science Option (AASO) 107

Computer Science - Associate of Science Oregon Transfer (ASOT) 110

Computer Science (CS) 331

Conservation of Natural Resources - Career Pathway Certificate of Completion (CPCC) 159

Courses A-Z 304

Criminal Justice 113

Criminal Justice - Associate of Applied Science (AAS) 114

Criminal Justice - Associate of Arts Oregon Transfer (AAOT) 116

Criminal Justice (CJ) 332

CTE List 406

Culinary Arts - Associate of Applied Science (AAS) 86

Culinary Arts - Two Year Certificate of Completion (CC2) 87

Culinary Arts (CUL) 333

Cybersecurity - Career Pathway Certificate of Completion (CPCC) 112

D

Degree and Certificate Overview 393

Dental Assisting 117

Dental Assisting - One Year Certificate of Completion (CC1) 119

Dental Assisting (DA) 335

Dental Hygiene - Associate of Arts Oregon Transfer (AAOT) 59

Developmentally Appropriate Learning Environments - Career Pathway Certificate of Completion (CPCC) 127

E

Early Childhood Education - Associate of Applied Science (AAS) 127

Early Childhood Education - Associate of Arts Oregon Transfer (AAOT) 129

Economics 121

Economics - Associate of Arts Oregon Transfer (AAOT) 122

Economics (EC) 337

Education 123

Education - Elementary - Associate of Arts Oregon Transfer (AAOT) ... 131

Education - Secondary - Associate of Arts Oregon Transfer (AAOT) ... 133

Education (ED) 337

Emergency Medical Services 136

Emergency Medical Technician - One Year Certificate of Completion (CC1) - Pending Approval 138

Emergency Medicine (EMT) 339

Engineering & Physics 142

Engineering Emphasis - Associate of Science (AS) 144

Engineering (ENGR) 341

Engineering-General (GE) 342

English & Literature (ENG) 342

English/Literature - Associate of Arts Oregon Transfer (AAOT) 206

Entrepreneurship - One Year Certificate of Completion (CC1) 74

Equity in Education - One Year Certificate of Completion (CC1) - Pending Approval 135

Ethnic Studies (ES) 343

Exercise Science 147

Exercise Science/Kinesiology - Associate of Arts Oregon Transfer (AAOT) 150

Exploratory - Associate of Arts Oregon Transfer (AAOT) 169

F

Faculty, Administration, and Staff 436

Film Arts (FA) 344

Fire Service Administration (EOU Transfer) - Associate of Science (AS) 282

Fish & Wildlife (FW) 344

Foods & Nutrition (FN) 344

Forest Ecology - Career Pathway Certificate of Completion (CPCC) 159

Forest Measurements - Career Pathway Certificate of Completion (CPCC) 160

Forest Protection - Career Pathway Certificate of Completion (CPCC) .. 160

Forest Resources Technology - Associate of Applied Science (AAS) ... 161

Forest Resources Technology/Forestry 154

Forestry (FOR) 344

Forestry (OSU Transfer) Emphasis - Associate of Science (AS) 163

French (FR) 346

G

General Education List 397

General Information 455

General Science (GS) 347

General Transfer 167

General Transfer-OSU - Associate of Science (AS) 171

Geographic Information Systems 175

Geographic Information Systems - Associate of Applied Science (AAS) 175

Geographic Information Systems - One Year Certificate of Completion (CC1) 177

Geography 178

Geography - Associate of Arts Oregon Transfer (AAOT) 179

Geography / Geog Info Systems (GEOG) 347

Geology 181

Geology - Associate of Arts Oregon Transfer (AAOT) 181

Geology (G) 349

German (GER) 349

H

Health & Human Performance (HHP) 349

Health and Human Performance Activity (HHPA) 352

Health Information Management 183

Health Information Management - Associate of Applied Science (AAS) 187

Health Information Management (HIM) 354

History 191

History - Associate of Arts Oregon Transfer (AAOT) 193

History (HST) 356

Hospitality Management - Associate of Applied Science (AAS) 88

Hospitality Management - Two Year Certificate of Completion (CC2) 90

Hospitality Management (HM) 357

Human Development (HD) 358

Human Services 195

Human Services - Associate of Arts Oregon Transfer (AAOT) 200

Human Services/Addictions Stds (HS) 359

Humanities 202

Humanities - Associate of Arts Oregon Transfer (AAOT) 208

Humanities (HUM) 361

I

Individualized Study 396

Industrial Maintenance - Two Year Certificate of Completion (CC2) 217

Italian (IT) 362

J

Journalism (J) 363

K

Kiksht (KIK) 363

L

Learning Options 456

Liberal Arts/Liberal Studies - Associate of Arts Oregon Transfer (AAOT) 210

Library & Information Skills (LIB) 363

M

Manual Machining - Two Year Certificate of Completion (CC2) 218

Manufacturing (MFG) 364

Manufacturing Technician - Career Pathway Certificate of Completion (CPCC) - Pending Approval 219

Manufacturing Technology 211

Manufacturing Technology - Associate of Applied Science (AAS) 220

Manufacturing Technology I - One Year Certificate of Completion (CC1) 222

Manufacturing Technology II - Two Year Certificate of Completion (CC2) 223

Mapping/Cartography - Career Pathway Certificate of Completion (CPCC) 164

Marketing Communications - One Year Certificate of Completion (CC1) . 75

Massage Therapy 230

Massage Therapy - Associate of Applied Science (AAS) 232

Massage Therapy - Two Year Certificate of Completion (CC2) 234

Massage Therapy (LMT) 367

Master Automotive Technician - Two Year Certificate of Completion (CC2) 38

Mathematics 235

Mathematics - Associate of Arts Oregon Transfer (AAOT) 238

Mathematics (MTH) 369

Medical Assistant 239

Medical Assistant - One Year Certificate of Completion (CC1) 241

Medical Assistant (MA) 372

Medical Billing Specialist - Two Year Certificate of Completion (CC2) .. 188

Medical Office Specialist - One Year Certificate of Completion (CC1) ... 190

Military Science (MS) 373

Mission and Vision 458

Music 243

Music - Associate of Arts Oregon Transfer (AAOT) 246

Music -Small Ensembles/Lessons (MUP) 375

Music (MUS) 373

N

Natural Resources (OSU Transfer) Emphasis - Associate of Science (AS) 165

Nursing 248

Nursing - Associate of Arts Oregon Transfer (AAOT) 251
 Nursing Assistant 255
 Nursing Assistant - One Year Certificate of Completion (CC1) 255
 Nursing (NUR) 376
 Nursing (RN) - Associate of Applied Science (AAS) 249

O

Office Assistant - One Year Certificate of Completion (CC1) 76
 OSU Bacc Core List 407
 Outdoor Leadership 256
 Outdoor Leadership - Associate of Arts Oregon Transfer (AAOT) 261
 Outdoor Leadership (OL) 378
 Outdoor Leadership (OSU Transfer) Emphasis AS - Associate of Science (AS) 259

P

Paramedicine - Associate of Applied Science (AAS) 140
 Payment & Financial Aid 412
 Pharmacy Technician 263
 Pharmacy Technician - One Year Certificate of Completion (CC1) 264
 Pharmacy Technician (PHM) 380
 Philosophy (PHL) 381
 Physics - Associate of Arts Oregon Transfer (AAOT) 145
 Physics (PH) 381
 Policies 427
 Political Science 266
 Political Science - Associate of Arts Oregon Transfer (AAOT) 267
 Political Science (PS) 382
 Practical Nursing - Two Year Certificate of Completion (CC2) 253
 Pre-Dentistry, Pre-Medicine, Pre-Veterinary - Associate of Arts Oregon Transfer (AAOT) 61
 Pre-Law - Associate of Arts Oregon Transfer (AAOT) 277
 Pre-Physical Therapy - Associate of Arts Oregon Transfer (AAOT) 152
 Programs 6
 Psychology 269
 Psychology - Associate of Arts Oregon Transfer (AAOT) 270
 Psychology (PSY) 383
 Public Health 272
 Public Health - Associate of Arts Oregon Transfer (AAOT) 274

Q

Quality Assurance - Two Year Certificate of Completion (CC2) 224

R

Reading (RD) 384
 Registration 418

Related Instruction List 406
 Retail Management - One Year Certificate of Completion (CC1) 77

S

Sociology 276
 Sociology - Associate of Arts Oregon Transfer (AAOT) 279
 Sociology (SOC) 384
 Spanish (SPAN) 385
 Special Curriculum 396
 Structural Fire Science 281
 Structural Fire Science - Associate of Applied Science (AAS) 285
 Structural Fire Science (SFS) 386
 Student Resources 411
 Student Services 420

T

Theater Arts (TA) 387
 Transfer Preparation 393

U

Undeclared Transfer Major - Associate of Arts Oregon Transfer (AAOT) 173
 Undercar Technician - Career Pathway Certificate of Completion (CPCC) 40
 Unmanned Aerial Systems (UAS) Operations - Associate of Applied Science (AAS) 55

V

Veterinary Technician 288
 Veterinary Technician - Associate of Applied Science (AAS) 290
 Veterinary Technician (VT) 387

W

Welding - Associate of Applied Science (AAS) - Pending Approval 226
 Welding - One Year Certificate of Completion (CC1) - Pending Approval . 228
 Welding Technician- Career Pathway Certificate of Completion (CPCC) - Pending Approval 229
 Wildland Fire Suppression - One Year Certificate of Completion (CC1) .. 294
 Wildland Fire (WF) 389
 Wildland Fire/Fuels Management 292
 Wildland Fire/Fuels Management - Associate of Applied Science (AAS) 295
 Wildland Firefighter Type II - Career Pathway Certificate of Completion (CPCC) 297
 Women's Studies (WS) 391
 World Languages 298
 World Languages - Associate of Arts Oregon Transfer (AAOT) 302
 Writing (WR) 391