

COLLEGE CATALOG 2021-2022

CENTRAL OREGON
community college



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ABOUT THE CATALOG

The catalog provides information about credit courses, programs, admissions requirements, registration procedures, student services, student policies, and general information about Central Oregon Community College. The College publishes a new catalog each year. Students are admitted under the current catalog's program requirements. The catalog course and program information is the source for the credit class schedule and GradTracks.

If catalog formatting makes the information difficult to access due to a disability, please contact the [Curriculum and Assessment Office \(emcarman@cocc.edu\)](mailto:emcarman@cocc.edu).

How to Read Course Information

Credit courses are grouped alphabetically by the subject prefix and then by number. It is important that students use course information to make informed decisions about enrolling in courses.

Courses and Sections

Courses

Course listings and outlines are the approved course description. The catalog lists all active credit courses, but not all courses are offered every term.

Sections

Courses sections are published in the [credit class schedule](#). Each section has a syllabus that describes its unique aspects, such as grading method and assignments.

Course Numbering

Courses numbered 100 to 299 (e.g., MTH 111 College Algebra) are college level and generally designed to either meet certificate or degree requirements or transfer to a four-year institution.

Courses numbered below 100 (e.g., MTH 060 Beginning Algebra) are below college level and usually do not transfer to four-year institutions.

Adult continuing education courses (offered through [Continuing Education](#)) and adult basic skills courses (offered through [Adult Basic Skills](#)) are non-credit, non-transferable classes focused on building skills.

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 title are listed first and 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.

Definitions

Prerequisites are courses or other requirements that must be met prior to enrollment. Note that if students are 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 C grade or higher in the prerequisite course, 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 registered into and completed while enrolling in the selected course.

Recommended preparation is similar to 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** summarizes the course content.

Course Outline

The course outline includes instructional contact hours (lecture, lab, or other), topics, grading methods, and required materials. This information applies to all sections of the course.

How to Read Program Information

Information about credit programs listed in the catalog includes:

Overview

The overview provides a brief description of the program and program learning outcomes.

Entrance Requirements

Entrance requirements may include academic (required and recommended) and other (required and recommended). Program costs lists reflect costs that are in addition to the standard tuition, fees, and textbook expenses.

Program Requirements

This lists courses required to complete the program and is followed by advising notes.

Sample Plan and Time to Completion

The sample plan is a recommended schedule for students who attend full time and require no preparatory skills courses. Students should work with their academic advisor to develop an individualized plan.

Program time to completion varies according to many factors, such as continuous enrollment, Summer term registration, full-time/part-time status, course availability, course sequencing, and placement. Additionally, some programs have prerequisites that must be completed before progressing to core classes; this might extend time to completion. 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 term), 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. 6). Note that PDF files downloaded from a page will always include any changes, but previously printed copies of the catalog may not.

Catalog Production

COCC's catalog was produced by the Curriculum and Assessment Office using Leapfrog 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; the College reserves the right to make any necessary changes.

With the exception of course outlines, changes listed in the addendum appear in the relevant online catalog pages and downloaded page PDFs. However, changes do not appear when downloading the full catalog as a PDF.

The following changes have been approved for the 2022-2022 catalog after the publication date of May 14, 2021.

December 2021

Published December 16, 2021

- Health Information Technology AAS
 - Added HIM 265 Health Information Management Community Service Learning Project which was removed in error in October 2021.
- Manufacturing Technology Courses
 - Reactivated MFG 109, MFG 115, MFG 116, MFG 118, MFG 160, and MFG 203.
- Nursing Assistant Material Costs
 - Updated electronic fingerprinting cost from \$65 to \$70.50.

March 2022

Published March 31, 2022

- Health and Human Performance Courses
 - Minor changes to course descriptions for HHP 252 First Aid & AHA Basic Life Support Provider CPR and HHP 252A Fitness/First Aid.

June 2022

Published June 9, 2022

- Updated language on the tuition and fees page. Course fee changes go into effect Fall term and not Summer term.

Archives

- [2020-2021 College Catalog \(PDF\)](#), [2020-2021 College Catalog \(HTML\)](#)
- [2019-2020 College Catalog \(PDF\)](#), [2019-2020 College Catalog \(HTML\)](#)
- [2018-2019 College Catalog](#)
- [2017-2018 College Catalog](#)
- [2016-2017 College Catalog](#)
- [2015-2016 College Catalog](#)
- [2014-2015 College Catalog](#)
- [2013-2014 College Catalog](#)
- [2012-2013 College Catalog](#)
- [2011-2012 College Catalog](#)
- [2010-2011 College Catalog](#)
- [2009-2010 College Catalog](#)
- [2008-2009 College Catalog](#)
- [2007-2008 College Catalog](#)

ABOUT COCC

Since 1949, Central Oregon Community College has served the citizens of its District, students from within the District, elsewhere in Oregon and throughout the United States 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. 7)
- [Board of Directors](#) (p. 7)
- [Faculty, Administration, and Staff](#) (p. 7)
- [General Information](#) (p. 25)
- [Learning Options](#) (p. 26)
- [Mission and Vision](#) (p. 28)

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 the institution 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 necessary resources available 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 of 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

The College's accreditation was most recently reaffirmed in 2020. A copy of official accreditation documentation is on reserve and available for review in Barber Library during business hours. Questions regarding accreditation should be addressed to the vice president for instruction.

Board of Directors

The seven-member Board of Directors governs the College with board members elected from geographic zones in the District. The District covers a 10,000-square-mile area, making it bigger than eight U.S. states. For more information, see the [Board of Directors](#) page.

Member	Zone	Area	Term
Joe Krenowicz	1	Madras	Expires 2025
Laura Craska Cooper	2	Prineville	Expires 2025
Alan Unger (Board Chair)	3	Redmond	Expires 2025
Erica Skatvold	4	Bend	Expires 2025
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

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B.A. English, University of Oregon; M.A. English, University of Oregon. At COCC since 2008.

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MIKE ARTUS

Assistant Professor II of Speech

B.S. Speech Communication, Oregon State University; M.A. Interdisciplinary Studies, Oregon State University. At COCC since 2010.

B

KARL BALDESSARI

Associate Professor and Program Director of Aviation

B.S. Government, U.S. Coast Guard Academy. At COCC since 2011.

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Assistant Professor I of Public Health

B.A. Latin American Studies, Tulane University; M.P.H. Human Communication & Education, Tulane University; Ed.D Educational Leadership, California State University Fresno. At COCC since 2019.

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Professor of Sociology

B.A. Communication Studies, University of Kansas; M.A. Speech Communication, California State University Fullerton; M.S.W Social

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Instructor of ABS Math and Transition

A.A.O.T., Central Oregon Community College; B.S. General Social Science, University of Oregon; M.A.T High School Education, Western Oregon University. At COCC since 2013.

RON BOLDENOW

Professor of Forest Technology

B.S. Biology, Calvin College; M.S. Forestry, Humboldt State University; Ph.D. Wildland Resource Science, University of California Berkeley. At COCC since 1999.

JUSTIN BOROWSKY

Associate Professor of Speech

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JON BOUKNIGHT

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C

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Associate Professor of Biology

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MONTE CHENEY

Associate Professor of Mathematics

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ANGIE COLE

Associate Professor of Education and Early Childhood Education

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ELIZABETH COLEMAN

Associate Professor of Mathematics

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LEW COUSINEAU

Professor of Computer and Information Systems

B.S. Industrial & Management Engineering, Montana State University; M.B.A. Business Administration, Seattle University. At COCC since 2002.

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Associate Professor of Fine Arts 3D

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Associate Professor of Health and Human Performance

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D

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Professor of English

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E

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F

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G

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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.

V

VICKERY VILES

Director of Curriculum and Assessment

Began at COCC in 1989, awarded Emeritus in 2021.

W

REBECCA WALKER-SANDS

Professor of Psychology

Began at COCC in 1995, awarded Emeritus in 2021.

KATHY WALSH

Vice President for Instruction

Began at COCC in 1990, awarded Emeritus in 2010.

SUSAN WOOD

Administrative Assistant

Began at COCC in 1997, awarded Emeritus in 2020.

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.

Central Oregon Community College prides itself on the outstanding faculty and staff who help our students and communities thrive. This section includes individuals awarded Emeritus status and our active faculty, administrators and staff anticipated to be offered 2021-2022 part or full-time contracts as of April 1, 2021. Education includes degrees awarded, majors and conferring institutions. Please direct any questions to the [Office of Human Resources \(hr@cocc.edu\)](mailto:hr@cocc.edu).

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 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. Dr. Laurie Chesley began her tenure as the College's sixth president in July 2019.

The 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.

Central Oregon Community College would like to acknowledge that the beautiful land our campuses reside on are the original homelands of the Wasq'u (Wasco) and Tana'nma (Warm Springs) people. The Wasq'u (Wasco) and Tana'nma (Warm Springs) people ceded this land to the U.S. government in the treaty of Middle Oregon of 1855 while retaining regular and customary hunting, fishing, and gathering rights. As a result of this treaty, the Warm Springs Indian Reservation was created.

In 1879 a small group of Numu (Paiute) people were placed on the Warm Springs Reservation by the U.S. government. In the years following, more Numu (Paiute) people were forcibly moved to the reservation as well. It wasn't until 1937, in conjunction with the Indian Reorganization Act, that the three distinct tribes became known as the Confederated Tribes of Warm Springs. It is also important to note that the Klamath Trail ran north through this area to the great Celilo Falls trading grounds. Although the Klamath people did not reside in this territory, they claim the trail as their own. It is crucial to recognize that the descendants of these original people are still here today, and they are thriving members of our communities. We acknowledge and thank the original stewards of this land. It is our hope that students, staff, faculty, and guests continue to honor and care for the land that we use.

Campuses

Central Oregon Community College has [campuses in Bend, Redmond, Madras, and Prineville](#).

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 Cascade Range from nearly every point. 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 and houses state-of-the-art facilities and programs.

In 2011, the College opened campuses in Madras and Prineville. The Madras campus was funded by a 2009 bond measure and placed on land donated to COCC by the local Bean Foundation. The 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 necessary student services.

Faculty

The College has 125 full-time faculty members, 39 adjunct faculty (semi-permanent faculty on annual contracts), and approximately 232 part-time instructors. Faculty are committed, professional educators who provide stimulating and meaningful learning experiences. Faculty serve as advisors who assist students in planning academic programs and

schedules. Within the institution, there is strong motivation for continuing professional improvement by all faculty and administrators.

Students

More than 7,700 students enrolled in credit courses at the College last year. About 25 percent of students enroll in career and technical education programs and take career-oriented courses of study. Approximately 42 percent of students 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 remainder of students are non-degree seeking or exploratory majors. More information about COCC students can be found on the [Quick Facts page](#).

The COCC Foundation

Education changes lives. For 65 years, Central Oregon Community College Foundation scholarships have enabled students to learn new skills, to earn technical certificates, to complete two-year associate degrees, and to 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 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 \$25 million today. In addition to scholarship support, the Foundation also provides support in a variety of ways, from supporting departmental programs to providing support for the Nancy R. Chandler Visiting Scholar program. In 2019-2020, the Foundation offered more than \$1.7 million in scholarships and program funds. For more information, call 541-383-7225 or visit cocc.edu/foundation.

Learning Options

The College offers a wide range of credit courses and programs designed to build skills and prepare for transfer or direct employment. In addition, the College provides non-credit options through the Small Business Development Center and the 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, Developmental Courses)

Transfer

The College 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 provides students with several assurances when transferred to any Oregon public university. The Associate of Science degree prepares students to transfer either to a specific baccalaureate-granting institution, to a specific major, or both. The Oregon Transfer Module, 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

The College 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.

Developmental Courses

The College offers courses that prepare students for college-level courses in computers/technology, math, and writing.

Continuing Education

The College's Continuing Education department offers innovative, high-quality, community-driven, affordable, non-credit classes and events throughout the District. Classes provide opportunities to stay current with job skills, engage in new interests, and explore a range of activities. Please visit the [Continuing Education website](#) or call 541-383-7270 for more information.

Personal Enrichment

Enrichment courses encourage students to explore personal interests and learn new skills. Students can take classes for fun, business, health, recreation, or personal growth. A complete up-to-date schedule and registration options are available on the [Continuing Education website](#).

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, construction, 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. 57) section of the catalog.

The College 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](#) for more information.

Small Business Development Center

The Small Business Development Center (SBDC) at Central Oregon Community College is focused on helping to 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
- The year-long Small Business Management program
- SCALE Oregon services for larger traded-sector companies
- Capital access assistance
- Strategic market research

The SBDC's goal is to positively impact the growth and sustainability of central Oregon businesses. Please visit the [Small Business Development Center website](#) or call 541-383-7290 for more information.

Youth Programs and YouthCamp@COCC

The College's Continuing Education department offers a number of classes and camps for youth under age 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 to 14. Additionally, classes are offered throughout the year for youth or for youth and parents/guardians to enjoy together. With an eye toward the future, youth can explore potential career and college options by attending classes and camps on COCC campuses.

Adult Basic Skills

Adult Basic Skills 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 ELL program is designed for adults who need to learn English. Classes focus on speaking, understanding, reading, and writing skill development. ELL classes are offered in Bend, Redmond, and Madras. Remote classes may be offered, as well.

The ABE/ASE program provides instruction in basic communication, math, study skills, and computer skills to prepare students for a variety of purposes, including college and GED[®] test preparation and employment. Classes include Essentials of Communication and Essentials of Math. Communication and math classes are offered in Bend, Redmond, Prineville, Madras, and Warm Springs. Remote classes may be offered, as well.

Students may attend day or evening sessions, depending on the location. Required orientation sessions are held during the first week of each term. Please visit the [Adult Basics Skills website](#) or call 541-504-2950 for exact times and locations.

Partnerships

For mission achievement, the College routinely develops and supports partnerships with local, regional, statewide, and industry organizations. Examples are listed below.

Oregon State University - Cascades

Central Oregon Community College and Oregon State University 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:

- Combined financial aid and scholarship benefits
- 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
- Lower overall tuition

The program works well for students intending to earn a bachelor's degree through OSU-Cascades, but it also applies to programs at any

OSU campus, including eCampus programs. For general information about the partnership, visit [OSU's](#) or [OSU-Cascades' information](#) 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. Students pay a \$25 fee per credit.

Expanded Options

Expanded options is an Oregon program that allows, under specific circumstances, high school students to enroll in 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

The College enters into articulation agreements about specific majors to assist students in transferring. A list of current articulation agreements is available on the [COCC website](#).

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.

Our Values

- Student Focused in All That We Do
- Caliber of Faculty and Staff
- Open Door Philosophy
- Reputation
- Diversity
- Campus Traditions
- Work/Life Balance
- Comprehensive Services
- Internal Connections
- External Connections
- Innovation

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.

STUDENT RESOURCES

The following links provide information on Central Oregon Community College's admission criteria, financial aid, registration dates, student support services, and more. These programs and services are designed to help students succeed. Please explore the information and contact any of the offices listed for more information.

- [Admissions](#) (p. 29)
- [Payment & Financial Aid](#) (p. 30)
- [Registration](#) (p. 36)
- [Student Services](#) (p. 38)
- [Academic Calendar](#) (p. 43)

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, veteran benefits, transcript evaluation, degree/certificate evaluation, student records, grades, and transcript requests. Most services are also available on the Redmond, Madras, and Prineville campuses.

Admission Criteria

New Students

To qualify for admission, students must be at least 18 years of age or possess a high school diploma or GED. Applications are available [online](#) or at any campus. All new students (those who have never taken credit courses at Central Oregon Community College) are required to submit a \$25 non-refundable application fee when applying.

Students Returning After an Absence

Students who have attended Central Oregon Community College but have been absent for four quarters or more must submit a new application. No application fee is required.

Transfer Students

First-time Central Oregon Community College students transferring from another college or university must submit an application for admission and a \$25 application fee. All official transcripts from previous institutions must be submitted before advising and/or registration.

Students Not Seeking a Certificate or Degree

Some students take credit courses at the College but do not plan to earn a certificate or degree. These students apply through the usual application process and are required to take the placement assessment before registration. Some students may be exempt from placement assessment; see [this page](#) for exemption criteria. Students who are not degree seeking are not required to participate in advising.

Application Dates

The College accepts applications continuously. For term specific application deadlines, check the [academic calendar - important dates by term](#). The College reserves the right to close admission before 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. Nursing program applicants must satisfy in-district residency requirements as outlined in the program application packet.

In-District Residency

An individual is classified as an in-district resident if, for one full year before beginning taking credit classes, the individual has either:

1. Owned property (or, if under the age of 24, whose parent/guardian has owned property); or
2. Maintained a permanent and continuous residence in the district.

The Central Oregon Community College 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 will be classified as an out-of-district resident if, for one full year before beginning taking credit classes, the individual 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 District).

The student will remain an out-of-district student for two calendar years after the term the student began courses; at the end of the two calendar years, the student will convert to in-district residency.

Out-of-State Residency

An individual who has not maintained a permanent and continuous residence in the state of Oregon during the year before 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; after two calendar years, the student will convert to in-district residency. See exemptions below.

Exemption to Out-of-State Residency

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 credit courses is determined by information provided when applying. 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 before military service will be charged the in-district tuition rate.
- Students who were in-state/out-of-district/border state residents before military service will be charged the non-resident veteran tuition rate.
- Students who were not Oregon residents before 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 the 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 the College's 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 the College's [residency policy](#). Note that out-of-state students must provide a copy of tribal enrollment documents before receiving in-state/out-of-district tuition.

Residency Appeals

Students may appeal their residency status by completing a residency petition, which is available in [Admissions and Records](#). Residency petitions and supporting documentation must be submitted within 30 days of receipt of letter of admission or the Friday before 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 Central Oregon Community College, have the following options:

Concurrent Enrollment

High school students 15 years and older are eligible to register in up to 19 credits. High school students who register at Central Oregon Community College are fully responsible for complying with all the College's policies and procedures as outlined in the [high school student information sheet](#) 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 the student's written permission. Although 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

The College 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 high 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 the College's certificate or degree requirements as well as for transfer to most Oregon community colleges and universities. Students should check with all potential institutions 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 or the [College Now](#) office.

Expanded Options

High school students have the opportunity to take credit courses with no charge to them for tuition and fees. Supplies and books may be covered. Check with the high school counselor 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 before 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 when registering. See the [concurrent enrollment page](#) for more information.

Students under age 15 who register are fully responsible for complying with all college policies and procedures. Parents cannot access student records (grades, class schedule, attendance, etc.) without the student's written permission. Although college staff can provide academic advising, they cannot interpret high school requirements or act in a supervisory role.

Payment & Financial Aid

Tuition for Credit Courses for 2021-22

Tuition and student fees are reviewed annually and set by the Board. Additionally, courses with high operating costs may include additional course fees. Note: the 2021-22 tuition, and student fee rates will go into effect beginning Summer term 2021. Course fee changes go into effect in Fall 2022. Check the [Tuition and Fees](#) page for more information.

Cost	Fee
In-district	\$109 per credit hour
Non-resident veteran	\$131 per credit hour
Out-of-district/in-state	\$153 per credit hour
Border state (CA, ID, NV, and WA)	\$153 per credit hour
Out-of-state	\$318 per credit hour
International	\$318 per credit hour
Audit	same as for credit

Check the credit class schedule for courses requiring 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 Management
- Manufacturing
- Massage Therapy
- Medical Assisting
- Nursing
- Outdoor Leadership
- Pharmacy Technician
- Fire Science
- Veterinary Technician

Fees for Students Enrolled in Credit Courses

Cost	Fee
Student activities fee	\$1.50 per credit
Technology fee	\$15 per credit
Green energy fee	25¢ 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 Age 65 and Up

Students age 65 and up are eligible for a tuition waiver for credit classes based on the following conditions:

- The student must be an Oregon resident.
- The student must be age 65 and up at the beginning of the term in which the course is offered.
- A current application and application fee payment must be on file; for term specific application deadlines, see the [academic calendar - important dates by term](#).
- 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). The 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](#). 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 the published deadline; view the [academic calendar](#) for specific dates. Drop deadline dates are also posted on the student detail schedule, which is available in 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 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 ensure that a drop is processed either online via their Bobcat Web Account or by visiting or calling the Enrollment Services office at any campus by the deadline. The drop must be submitted Monday through Friday, excluding holidays. See the short-

term class refund and drop schedule in the online [academic calendar - important dates by term](#).

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](#). 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](#), 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](#) through Admissions and Records by the tuition deadline. A [tuition payment plan](#) 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, 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 following term.

Tuition Payment Plan

A [tuition payment plan](#) is available in Admissions and Records 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. Students with general questions may find their answers on the [Financial Aid](#) page. 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 \(FAFSA®\)](#) or [Oregon Student Aid Application \(ORSAA\)](#) 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 the College, 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 in an eligible certificate or degree program 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, students must complete application materials (including the FAFSA® or ORSAA) each year, be eligible according to applicable criteria, and be enrolled in and attend credit classes at the College.

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 the College.

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 students cannot graduate within this period, they become 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 students in WARNING status fails to meet the cumulative minimum standards for another term, they become 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 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 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 the College'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.gov) at <https://studentaid.gov> or [Oregon Student Aid Application \(ORSAA\)](https://oregonstudentaid.gov) at <https://oregonstudentaid.gov> 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 studentaid.gov. A paper FAFSA® is available in a PDF at the same website.

The Financial Aid office can provide additional detailed information about various financial aid processing requirements and programs. For further information, students should:

- go to the [Financial Aid website](#);
- send an email to: coccfinaid@cocc.edu;
- send a letter to: COCC Financial Aid, 2600 NW College Way, Bend, OR 97703; or
- call 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 publication of this material.

Scholarships

The College 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 District who donate their time and money to help students and to improve college programs. Each year, the 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 February for the upcoming academic year.

Eligibility is determined by the Scholarship Selection Committee and may be based on need, academic achievement, or other donor-specific criteria. The 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 six 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](#) 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 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 2021-2022 ranged from \$672 to \$6,495 annually

depending on financial eligibility and enrollment. Students with a prior bachelor's degree are not eligible. Students may apply for the Pell Grant by completing the FAFSA®.

Federal Supplemental Education Opportunity Grant (FSEOG)

FSEOG awards are federally funded. The College 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 Pell Grants. Annual FSEOG awards were \$600 in 2021-2022 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 \$2,778 in 2020-2021. 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 under the Oregon Higher Education Coordinating Commission. Annual Oregon Promise maximum awards (pre-\$50 per-term copay) for the 2020-2021 year were \$4,005. Students may apply for the Oregon Promise by completing the application at 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 loan terms, responsibilities, and repayment. 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](#) for more information.

Three specific types of Direct Loans are available:

- **Federal Direct Subsidized Loan Program**

The Direct Subsidized Loan provides fixed interest (2020-21 year at 2.75%) 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 (2020-21 year at 2.75%) 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 4.228% is deducted at the time of disbursement. The annual fixed interest rate for the 2020-2021 year was 5.30%. Parent borrowers will be evaluated for adverse credit history. For more information on the Direct PLUS Loan, visit 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.

Career Services maintains a [list of off-campus job opportunities](#) for students seeking employment outside the Federal Work-Study program.

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 2021-2022.

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.

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](#) 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 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 student using veteran education benefits to notify the veterans certifying official when any changes are made to their schedule (add, drop, or change classes). Failure to do so may result in incorrect payments to the student. Overpayments must be repaid.

Program of Study

To be eligible for veteran educational benefits, students must be enrolled in a degree or certificate program offered by the College 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.

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 and should contact a veteran's certifying official at 541-383-7264 for credit hour requirements.

Satisfactory Academic Progress

Students using VA educational benefits at the College must earn at least a 2.0 GPA each term to maintain good standing. Academic Warning Policy terms for all students, including those using VA educational benefits, are outlined in the catalog. 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.

Note: Students receiving federal financial aid are also bound by the satisfactory academic progress policy enforced by the Financial Aid office.

Institutional Responsibility

The College is responsible for reporting to the VA if students is no longer pursuing his or her educational objectives as certified.

Veteran Tuition Rates

In accordance with Section 702 of the Choice Act, Section 301 of Public Law 115-251, 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 veteran rate as outlined in the COCC 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 and Section 702 of the

Choice Act and Section 301 of Public Law 115-251. 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 benefit).
- Anyone who is eligible for and using educational assistance under chapter 31 (Veteran Readiness & Employment benefit).

Registration

Bobcat Welcome

[Bobcat Welcome](#) is an online introduction to Central Oregon Community College that all certificate and degree seeking students are required to complete before advising and registration.

Placement

All students taking credit classes must provide writing and math placement information to the College 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.
- Completed college-level reading, writing, and math course(s) with a C or better at another regionally accredited college and have submitted official transcripts before advising and registration.

- Provide placement scores/placement from another college within the last two years and have submitted a copy of the placement before advising and registration.
- Completed the Smarter Balanced assessment within the last two years and scored a three or four in writing and/or math.
- Have an associate, bachelor's, or higher-level degree.

Students are not required to show placement if they plan 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.

See the [Bobcat Welcome](#) page for more information about the placement process, how to prepare, how to take the placement assessment, and other important placement information.

Advising

After placement is provided, all certificate and degree seeking students are required to meet with an academic advisor. For new students, dates and times of group advising options are available on the [Bobcat Welcome page](#). After the start of the term, all students who participate in group advising sessions will be emailed the name of an individual academic advisor based on the major stated on students' admission application. Students can change their advisor by contacting CAP Services at 541-383-7200.

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. Current students may choose to be self-advised, which means 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, see the [Academic Advising page](#).

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 [Academic Calendar page](#). 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 any of the past four 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](#). 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 the 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

Students may add courses via their Bobcat Web Account, by phone, or in person at any COCC campus. Courses may be added until 7 a.m. on the first day of the first class session. After this, online instructor approval is required to add a course.

Please note:

- Students may not begin attendance in a new class after the first week of the term.
- Students may not register for two sections of the same course.
- To register for courses that overlap in time, students 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. Changes can be made via Bobcat Web Account, by phone, or in person at any COCC campus. 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 course waitlist will automatically be registered for the course if a seat becomes available by 7 p.m. the Sunday before the term starts; for information on short-term courses, contact Admissions and Records. Students will receive a notification in their COCC email account to confirm they have been registered for the course and are now responsible for applicable tuition/fees. Students who are not automatically registered for the course and remain on the wait list can request online permission from the instructor to add the course if a seat is available. The instructor can submit online permission to allow the student to add the class via their Bobcat Web Account, by phone, or in person at any COCC campus. Permission expires after two business days.

Attendance/Administrative Withdrawal

To ensure all available class seats are filled, the College 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 by the instructor when 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 before 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 but do not drop the course will receive a grade and will owe all tuition and fees. This grade will be a permanent part of the student's academic record.

For full-term courses, students may drop through week seven of the term via their Bobcat Web Account, by phone, or in person at any COCC campus. Beginning week eight, students need online instructor approval to withdraw. Students may withdraw by phone or in person at any COCC campus.

Short-Term Courses

For a refund or credit for courses which span two weeks or less (14 calendar days) 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 (15 plus calendar days) but less than full 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 online 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](#) for specific dates.

Complete Withdrawal

Students receiving federal financial aid may owe a repayment if they completely withdraw from courses.

Withdrawing Due to Active Military Duty

Reserve and active duty and National Guard military personnel (Army, Navy, Air Force, Marines, and Coast Guard) who are enrolled at COCC 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 and Records. Copies of the orders must also be submitted to the school certifying official if any military benefits are being used. If service members intend to return to school, they will be readmitted with the same academic status as when they 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 published start date to allow 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)

CAP Services (Career, Academic, and Personal counseling) and full-time faculty provide academic advising, which helps students to achieve educational goals and to be self-reliant in understanding college policies and practices. Advising requirements exist to support this purpose.

Before registering for classes, new certificate- and degree-seeking students and students who have attended the College for less 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 certificate- and degree-seeking students are required to meet with their advisor at least once a year.

The College provides GradTracks, an online tool, 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 use GradTracks to explore other certificate and degree options. Students can access GradTracks by logging on to their [Bobcat Web Account](#), selecting *Student Services and Financial Aid*, and clicking on the GradTracks link. 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. Students should schedule advising appointments well in advance of registration. Students can find their assigned advisor's name and contact information and check advising requirements for an upcoming term by logging into their [Bobcat Web Account](#). After logging in to Bobcat Web Account, select *Student Services and Financial Aid, Registration*, and then *Can I Register for Credit Classes?*

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 or stop by Cascades Hall for advising options.

Associated Students of COCC (ASCOCC)

ASCOCC provides students with opportunities for governance, advocacy, and social programming. The council allocates student fees, appoints students to campus governing committees, advocates for the entire student body, and provides 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](#) to find out about current activities and how to get more involved with the student council.

Bobcat Web Account

Students use their online [Bobcat Web Account](#) to access account information, including balances, financial aid, registration, degree requirements, student ID, personal contact information, etc.

Bookstore

The campus bookstore, located in Newberry Hall on the Bend campus, sells textbooks and course materials, program-related clothing and supplies, art and ceramic materials, school supplies, and convenience food and beverages. Textbooks, merchandise, and digital materials can be ordered 24 hours a day from the [bookstore website](#) for both campus pickup or shipping. Online orders can be sent to the Redmond campus for pickup at no additional charge. For more information or to place an order, visit the [bookstore website](#) or call 541-383-7570.

The Broadside

[The Broadside](#) is a student-operated news source serving the College and the greater community and provides online news and 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 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 at 541-383-7252 or [send an email \(thebroadside.cocc@gmail.com\)](#).

Campus Public Safety

The department of Campus Public Safety 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, 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](#) or by calling the the Campus Public Safety office. Please report all incidents to the department at the numbers below. Active emergencies should be reported first to 911; then call the appropriate number. Campus Public Safety can be reached 24 hours a day, seven days per week at 541-383-7272; dial ext. 7272 from campus phones.

All students who park on campus must register their vehicles and display registration decals. Parking, traffic, and other regulations are detailed 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. Emergency incident response directions and phone numbers are posted in

classrooms. Emergency assistance phones and towers are located throughout campus and connect directly Campus Public Safety 24 hours a day, seven days a week.

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](#).

Career Services

[Career Services](#) assists students with career planning and exploration, developing job search skills, and finding employment, including Work-Study placement. Local employers can use these services to recruit students and graduates who have 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 for students and alumni. Call CAP Services at 541-383-7200 or visit the [CAP Services website](#) for more information.

Club, Intramural Sports, and Recreation Programs

[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.

Club sports provide opportunities for competition against other schools, skill development, leadership, and recreation. Students organize clubs with guidance from coaches, students, faculty, staff, and community members. Current clubs include baseball, rugby, soccer (indoor and outdoor), and individual sports.

Organized intramural activities are available at convenient times for 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 and volleyball leagues, running club, indoor soccer, outdoor soccer, day hikes, dodgeball tournaments, flag football, golf tournaments, spikeball, running events, softball (coed), kickball, whiffle ball, swimming, table tennis, tennis, and pickleball.

The College promotes lifetime fitness for everyone. Facilities are available for drop-in use throughout the week for a small per-term fee. Informal recreational activities and organized sports are available to all students. Passes for local recreation facilities (swimming, ice skating, and bowling) are available to students at no cost. Call 541-383-7794 or visit the [Student Life website](#) for more information.

Clubs

[ASCOCC](#) offers many opportunities for students to participate in campus clubs. Clubs must involve at least four current students, have a faculty or staff advisor, and create a budget. Contact ASCOCC at 541-383-7595 or visit the [ASCOCC website](#) for more information.

Computer Labs

The College offers computing resources to students registered in its credit or Continuing Education classes.

[Drop-in 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 Madras and Prineville campuses have drop-in and scheduled computer labs. 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. Student workers staff all drop-in computer labs and offer assistance.

Computers use the Windows operating system, most Microsoft Office programs, and course-specific programs. Drop-in labs are equipped with black-and-white and color laser printers, flatbed scanners, and adaptive workstations. All non-classroom printing requires a pay-to-print fee. Payment is made with a student ID card or a print card purchased in computer labs.

Copy Center and Mail Services

The Copy Center, located in the bookstore in Newberry Hall on the Bend campus, is a limited-service copy center. Services include standard black-and-white and color copies as well as general mail services, including UPS. For more information about the Copy Center or mail services, call 541-383-7706.

Counseling

[Professional counselors](#) are available at no charge to help 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 affect college success. All students 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, visit the [CAP Services website](#). Counseling appointments are confidential and can be made through CAP Services in Cascades Hall or by calling 541-383-7200.

Email Account

The College provides qualifying students with an email account and [Microsoft Office 365](#). The College communicating with students primarily through COCC email. 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 a COCC student email account, click the Web Email icon on the [student login page](#).

Information about COCC email accounts, including and instructions for activation, are emailed to students' personal email address listed on the college application.

Food Service and Catering

Quality food service is available on the Bend campus in Coats Campus Center. For details on prices and options, visit the [food service website](#) or contact the Sodexo general manager 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](#).

Housing - On Campus

[Wickiup Residence Hall](#) houses 330 students each year in a co-ed, academically focused, on-campus housing environment. It is centrally located near Barber Library, Mazama Gym, and the Coats Campus Center and 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, laundry room, community kitchen, study lounges, recreational facilities, and a full meal plan. Contact [Housing and Residence Life](#) at 541-383-7545 for more information.

Space in Wickiup Residence Hall is limited. Students seeking accommodations are encouraged to submit a housing application at their earliest convenience. All paperwork and deadlines 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 need to sign a housing agreement and pay a security deposit and down payment. The room and board rates for the 2021-22 academic year (Fall, Winter, Spring terms) are:

Room	Starter ¹	Basic ²	Standard ³	Preferred ⁴
Double room (per term)	\$3,853	\$3,914	\$4,053	\$4,193
Total (Fall, Winter, Spring terms)	\$11,559	\$11,742	\$12,159	\$12,579
Single room (per term)	\$4,880	\$4,941	\$5,080	\$5,220
Total (Fall, Winter, Spring terms)	\$14,640	\$14,823	\$15,240	\$15,660

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 Student Life office 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](#), which 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 Program

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 to 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](#).

¡AVANZA! (Moving Forward!) Latinx college preparation program encourages Latinx youth to graduate from high school, 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 Latinx students.

For more information, contact the ¡AVANZA! program coordinator at 541-318-3717 or visit the [¡AVANZA! program website](#).

Library

The three-story, 72,000-square-foot [Barber Library](#) opened in March 1998 and serves 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 audiovisual materials, subscriptions to thousands of streaming videos, and access to millions of items, including e-books, via the Orbis Cascades Alliance consortium. Students, faculty, and staff can check out technology, including hotspots, laptops, tablets, cameras, and e-book readers. The library is a selective depository for U.S. federal documents.

Current, credit-enrolled students, faculty, and staff can access the library's electronic resources off campus 24 hours a day, seven days a week. In addition to the rich collection of information resources, research help is available to all patrons in person, on the phone, by email, and through 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.

The College is a member of 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 may search for and place requests on more than 30 million Summit items accessible via the [library webpage](#). Materials are delivered for pickup at the library circulation desk and all COCC campuses within a few business days.

The library's information commons has more than 40 computers, and WiFi is available throughout the building for students, faculty, staff, community patrons, and campus visitors. Group study rooms, quiet study areas, and comfortable seating are available for study space.

Each year the Barber Library hosts art exhibitions and literary events in the Rotunda Gallery.

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](#).

Native American Program

The Native American program focuses on recruitment and retention of Native American and Alaska Native students. The program coordinator offers students individual support as they navigate aspects of college. As the advisor to the First Nations Student Union club, the coordinator supports club members by assisting with scholarships, helping to plan Native American Heritage Month activities, and organizing the annual salmon bake.

The [Good Road](#) is a college preparation program for Native American high school students that encourages Native American youth to graduate from high school, 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 program coordinator at 541-330-4369 or visit the [Native American program website](#).

Network Account

The student network account is a free account that permits students to connect to the College's computer network. Once logged on to college computers, users find their personal folder (identified with their name) on the desktop. Each personal folder contains 200 MB of space students can use for storage when on COCC's campuses. Additionally, students have document storage and resources available through [Microsoft Office 365](#). Students are responsible for reading and adhering to the [Acceptable Use of Technology Resources policy](#).

Public Transportation

Cascades East Transit offers local transit service throughout the region for the general public. For more information, visit the [Cascades East Transit website](#).

The College offers a discounted bus pass. 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

The College strives to provide the opportunity for an excellent and rewarding education to all students. The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 provide federal guidelines that help the College ensure equal access to students who have qualifying, documented disabilities. The College 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](#) or 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 students' educational experiences. 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 at 541-383-7590 or visit the [student life website](#).

Study Abroad

The College seeks to provide opportunities for students to study abroad while earning COCC transfer credit. Visit the [Study Abroad website](#) for specific offerings.

Programs include Spring Quarter in Barcelona where 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.

For questions about the Study Abroad program, contact [Sara Henson](#) (shenson@cocc.edu) at 541-330-4357.

Transcripts

The College contracts with the National Student Clearinghouse for transcript orders. Official or unofficial transcripts are requested through the [National Student Clearinghouse](#) or by submitting the [transcript request form](#) by email, Postal Service 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](#).

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 students in the Degree Partnership program, 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](#). Former students need to use the [National Student Clearinghouse](#).
- Non-credit transcripts can only be requested using the transcript request form.
- Transcripts will not be processed during the first week of term.
- The College reserves the right to withhold transcripts from students who are in debt to the institution.

Tutoring and Testing Center

The [Tutoring and Testing Center](#) 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 in the lower level 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](#). Proctored testing is available at the Bend campus and to a more limited degree on the Redmond, Madras, and Prineville campuses. For current services and schedules, see the [Tutoring and Testing](#) page.

Tutoring

Tutoring services are free to 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, social sciences, and 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 in room 130. The Writing Center encourages students to bring 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 Testing Center serves a diverse constituency of students and community members. A charter member of the [Consortium of College Testing](#) and a certified [PearsonVUE](#), 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 [Tutoring and Testing Center's website](#). 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 20	January 3	March 28	June 20
Tuition deadline and end 100% refund period ¹	October 1	January 14	April 8	July 1
Begin late registration (\$30 fee)	October 4	January 18	April 11	July 5
Last day to change from audit or drop classes with no grade on transcript ¹	November 5	February 18	May 13	August 5
Last day to drop classes, receive a W grade ¹	December 1	March 9	June 1	August 17
Holidays - (college closed)	November 11 - Veterans Day November 25-26 - Thanksgiving	Dec. 20-24 - Winter Break Dec. 31 - New Year's Day January 17 - Martin Luther King Day	May 30 - Memorial Day	July 4 - Independence Day
Final exams	December 6-10	March 14-18	June 6-10	Varies
Commencement			June 11	
Last day of term	December 12	March 20	June 12	August 28
Grades posted online	December 16	March 24	June 16	September 1

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 account 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. Note: Students who do not have an assigned advisor may request one through CAP Services or Admissions and Records; students on academic warning may not be self-advised, and students who were self-advised must meet with an advisor; students may not change advisors while on academic warning.

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 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. At this stage, 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: Students on third academic warning may be 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, or life situations; attending a career counseling workshop or class; other options 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.

Credit for Prior Learning

Credit for prior learning 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:

- American Council on Education credit recommendation (military service, non-collegiate learning)
- College-Level Examination Program (CLEP)
- Credit for prior industry certifications (CPC)
- 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 the College will accept the recommendations in the ACE National Guide. To be considered for college credit, students must submit official ACE transcripts.

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 the College, 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 Tutoring Center by calling 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

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 per course fee before credits will be awarded.

Credits will be posted at the top of the student's transcript in a section titled "Credit for Prior Certification" so it will not be confused with regular college coursework. The College'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 their 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 to meeting residency requirements for a COCC certificate or degree.

Challenge Courses

Students who have knowledge and experience similar to a particular course's content 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 courses in which they have already demonstrated competency nor at a lower level than courses 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 to 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 before 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 before the end of the term.

Challenged courses are charged the regular tuition rate payable at the time the completed petition is processed through the Admissions and Records office. 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 higher. Students may not re-challenge a course if they do not pass the first attempt. View the [Course Challenge policy](#) for complete details.

Computer Competency Requirement

Some associate degrees require students to demonstrate basic computer skills before graduation. To meet this requirement, students must successfully complete CIS 120 Computer Concepts or pass the Key Applications and either LivingOnLine or Computer Fundamentals IC3 exams.

The IC3 exams may be taken at the Tutoring and Testing Center or any authorized Certipoint Authorized 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 four credits for CIS 120 Computer Concepts. To have the four 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: specific CIS courses may be required in some associate of science or associate of applied science 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 be published each term.

Grade Changes

Instructors are entirely responsible for assigning grades. 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 [college website](#).

Students who wish a change of grade to (or from) W or X must submit a petition directly to the Admissions and Records office. 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 to count in students' overall grades 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 provided 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 Admissions and 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 Associate of Arts Oregon Transfer and may have limitations in specific certificate or degree programs. D grades are not considered passing for prerequisite courses.

Pass/No Pass

Pass is interpreted as a C or higher. Courses using the pass/no pass option have been deemed inappropriate to use standard letter grading. 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

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. W

is not computed in a student's GPA. Note: Online instructor permission is required to withdraw from the course.

In Progress

An IP notation is made on a transcript if the course is currently in progress. At the end of the course, a grade will be entered.

Incomplete

Incomplete grades are assigned at the instructor's discretion when non-academic extenuating circumstances prevented a student from completion, 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 work completion is required and must be completed before the end of the term. An incomplete grade will not count toward 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 term). If contract requirements have been met, the instructor will assign the appropriate grade; if contract requirements 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

Students who want the experience of taking a particular credit class but do not want to receive college credit may choose to audit any of the College's courses. An audit does not require students to meet specific course requirements, but students should participate fully in class activities. 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

The College 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](#) no earlier than their final term.

The College 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 degree, 18 certificate applicable residency credits for a two-year certificate, nine 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 the College, 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 the College, 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 before 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 the College 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. For each additional degree, students must: complete at least 15 credits at COCC that are different than those used for the other degree(s) are applicable to the additional degree requested; complete an application for degree no earlier than their final term.

Graduation Honor Roll

Honors will be listed on graduates' transcripts based on the following cumulative GPA from the end of the term before 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, one-year certificate of completion, or a career pathway 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). To participate in commencement, students must RSVP.

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 the College's A, B, C and D grades. Note that a D will not be accepted for the Associate of Arts Oregon Transfer, foundational requirements, and some programs. See individual program descriptions. The applicability of such transfer credit will be evaluated as is credit from United States institutions.
- Association of International Educators and American Association of College Registrars and Admissions Officers guidelines will be used in evaluating credentials.
- The student will pay 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. Details on foreign transcript evaluation are available at the Admissions and Records office. English taught outside the United States may not meet the College's English composition requirement. Degrees from foreign countries do not waive general education or writing competency requirements.

Midterm Grade Reports

Midway through each term, instructors have the option to file grades of D, F, or NP for students (including those who are not regularly attending class) whose performance indicates it. It is entirely at the instructor's discretion to submit or not submit a midterm grade report. If an instructor submits a midterm grade, an email is sent to the student's COCC 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 the College 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 the College, 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 calculated in the GPA for that term or in cumulative GPA. 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 health and human performance (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 highest grade will be selected.
- Some degrees and certificates have specific policies on permissible age of transfer courses; 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 the College's transfer credit practice is that acceptable transfer credit is applied in the same manner as is credit earned at the College.

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. The College will articulate the transcript toward the certificate or degree listed on the student's admission application. The articulation will be viewable on GradTracks, the College'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 the College.
- Credit awarded by another institution for life experience is not transferrable to COCC.
- Courses which espouse a particular religious view usually 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 Associate of Arts Oregon Transfer degree, foundational requirements, and 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, College Level Examination Program, and Credit for Prior Certification, credits do not meet residency requirements.

Non-collegiate, Non-accredited and Non-regionally Accredited Institutions

The College will evaluate records for career and technical education students from these types of 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 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 the College. 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

The College recognizes Advanced Placement (AP) achievement by awarding credit to students who score three or above on AP exams. An [AP equivalency table](#) outline how credit will be awarded and is maintained on the college website. Credit is applied to a student's record after the student has been admitted to the College and after official transcripts or score reports have been received by the Admissions and Records office.

International Baccalaureate

The College recognizes International Baccalaureate (IB) achievement by awarding credit to students who score four or above on standard or high-level IB exams. An [IB equivalency table](#) outlining how credit will be awarded is maintained on the college website. Credit is applied to a student's record after the student has been admitted to the College 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. The college has also made arrangements with select programs at four-year colleges and universities for the transfer of certain career and technical education 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 College's responsibility 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 will be prosecuted to the full extent of state and federal law, and employee and student consequences are stated in the drug-free campus policy.

Employees and students can drug and alcohol abuse prevention information on the [college website](#).

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 via the College's [incident reporting system](#) or by contacting the Vice President for Student Affairs/Title IX officer at 541-383-7211. Off-campus harassment, misconduct, or violence by members of the college community should be promptly reported.

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 of the Education Amendments of 1972 protects people from discrimination based on sex in education programs and activities. This includes gender discrimination (regardless of gender identity), 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. For questions about Title IX, contact the Title IX officer at 541-383-7211.

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:

- Student's full name
- Terms of attendance (not daily attendance)

- Major field of study
- 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 want the College to release this information must submit a signed statement requesting it to be withheld. Contact Admissions and Records for a 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 update the College with addresses and telephone numbers. Students can update this 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, they must submit a release of information form to Admissions and Records. 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 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, activity, or employment. Persons having questions about equal opportunity and non-discrimination should contact the equal employment officer in the 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 Americans with Disabilities Act coordinator at 541-383-7775. Further inquiries may be directed to the affirmative action officer in the Human Resources office at 541-383-7216.

Photo/Video Consent

The College 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 of 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 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 Rule 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 Data for Analysis (D4A), 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 continue 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 government. 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 the College extends credit to the student.

State and federal law protects the privacy of student records. A 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 law.

Student Concerns Process

The College has a student concerns process designed to provide employees, students, and community members a way to appeal college decisions. Contact Student Life at 541-383-7590 for a copy of the procedure or see the [student concerns page](#) for more information.

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. The Financial Aid office maintains all student aid and scholarship records.

Central Oregon Community College follows the Federal Health Education and Welfare Guidelines for the Family Educational 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@coocc.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 the right to a hearing regarding the request for amendment. The College will provide additional information regarding 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 interest. A school official is a person employed by the College in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the College 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 the College to comply with FERPA requirements.** 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.

Student Rights and Responsibilities

In order to provide for the maximum safety, convenience, and well-being of the college community, certain standards of behavior have been established. 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. 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](#).

Student Right-to-Know Act

In order for students to make 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 students with a disability, cost of attendance and additional program costs, student diversity, students' rights under the Family Educational 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, exit loan counseling, deferment options for Peace Corp and other service organizations
- 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

Please see the [Student Right-To-Know page](#) for more information.

DEGREE AND CERTIFICATE OVERVIEW

Central Oregon Community College offers a variety of transfer and career and technical education options which allows students to choose a program based on their educational goals.

- [Transfer Preparation](#) (p. 52)
- [Career and Technical Education](#) (p. 55)
- [Individualized Study](#) (p. 56)
- [Special Curriculum](#) (p. 57)

Course Lists

- [General Education List](#) (p. 58)
- [CTE List](#) (p. 70)
- [Related Instruction List](#) (p. 75)
- [OSU Bacc Core List](#) (p. 76)

Transfer Preparation

Students wishing to attend Central Oregon Community College 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.

Articulation Agreements

The College partners with several institutions to offer a seamless transfer for specific majors in the form of an articulation agreement. Agreements identify degree requirement equivalencies between two institutions and often provide alignment beyond general transfer tables. Articulation agreements apply to a specific time frame; please see the [Articulation and Partnership Agreement](#) webpage for a current list.

Associate of Arts Oregon Transfer (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 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.

Institutions accepting the College's AAOT degree, in addition to Oregon's public institutions, include George Fox College, Linfield College, Marylhurst College, Pacific University, University of Portland, Warner Pacific College, Willamette University, Evergreen State College, Pacific Lutheran University, and Washington State University.

The AAOT degree is not associated with a major and is awarded as *Associate of Arts/Oregon Transfer*. However, the College provides specific focus areas (e.g., psychology, geology) within the degree that help students select courses aligned with their major (indicated as "recommended" on the course list and sample plan) and the transfer institution's degree requirements.

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.

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 to 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 career and technical education credits
- See individual AAOT focus areas for recommendations for specific bachelor degree majors
- See [Exploratory AAOT](#) or [Undeclared Transfer Major AAOT](#) for a list of AAOT general requirements

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 Arts Transfer (AAT)

Pending approval by the Northwest Commission on Colleges and Universities (NWCCU).

Like the Associate of Science Transfer (AST) degree, a student who completes this degree will have met lower-division major and general education requirements of baccalaureate degree programs for transfer to a public university in Oregon and have junior standing in a specific major or have equivalent status to students who started at a public university in the same major.

Courses of study leading to a major in the humanities, social sciences, or arts will generally be embedded in the Associate of Arts Transfer degree.

Please note that class standing or GPA requirements for specific majors, department, or schools are not necessarily satisfied by an Associate of Arts Transfer degree. Students should always work with their academic

advisor and check with the receiving institutions to ensure they have the most current transfer and degree information.

The College is preparing an AAT in English Literature; check with your advisor for details.

Advantages

- Students can meet all or most general education and major requirements to transfer an Oregon public university with junior standing in the major if appropriate courses are chosen.
- The classes, outcomes, and completion standards for the major-specific elements within Associate of Arts Transfer degree are defined at the state level. In majors where junior standing within 90 credits is not possible, students who complete an Associate of Arts Transfer degree will have equivalent status to students who started at a public university in the same major.
- The Associate of Arts Transfer degree includes at least eight courses (minimum 30 credits) of embedded coursework, called the core transfer map, which will apply to at least 30 credits of general education requirements for a bachelor's degree at any Oregon public university.

Considerations

- A student is encouraged to work with an advisor in the selection of courses in order to meet the degree requirements of the baccalaureate institution to which the student plans to transfer.
- All course, class standing, or GPA requirements for specific majors, departments, or schools are not necessarily satisfied by an Associate of Arts Transfer degree.

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
- Courses may only count in one requirement (except cultural literacy)
- Limit of 12 career and technical education credits

Performance Standards

- Students must have a minimum cumulative GPA of 2.0.
- All courses must be completed with a C grade or higher.

Associate of Science (AS)

The state has approved the College to offer Associate of Science (AS) degrees to prepare students to transfer to specific baccalaureate programs. Identified classes assist students in transitioning to upper division programs.

Unlike the Associate of Arts Oregon Transfer or Associate of Science Oregon Transfer degrees, there is no guarantee how receiving institutions will treat the AS degree. Students should always check with receiving institutions to ensure they have the most current transfer and degree information.

Please see [COCC's full list of programs](#) (p. 80) for AS degrees the College currently offers.

Advantages

- Students can meet all or most general education and/or major requirements for a specific receiving institution if appropriate courses are chosen.
- The AS degree works well for students in more technical majors (e.g., science, business, engineering) or specific institutions.

Considerations

The AS degree:

- can limit a student's flexibility in choosing both the major and the transfer institution,
- does not assure junior standing at Oregon receiving institutions,
- does not guarantee that a student will meet all lower-division general education and major requirements,
- 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 community and technical education 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 Oregon Transfer (ASOT)

Like the Associate of Arts Oregon Transfer (AAOT) degree, a student who completes the Associate of Science Oregon Transfer (ASOT) will have met the lower division general education requirements of baccalaureate degree programs of any Oregon public university. 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.

The College currently offers ASOT degrees in [Business](#) (p. 146) and [Computer Science](#) (p. 180).

Advantages

- Students can meet all or most general education and/or major requirements for a specific transfer institutions if appropriate courses are chosen.

Considerations

The ASOT degree:

- can limit a student's flexibility in choosing both the major and the transfer institution,
- does not ensure junior standing at Oregon transfer institutions,
- 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 career and technical education 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 Transfer (AST)

Pending approval by the Northwest Commission on Colleges and Universities (NWCCU).

Like the Associate of Arts Transfer (AAT) degree, a student who completes this degree will have met lower-division major and general education requirements of baccalaureate degree programs for transfer to a public university in Oregon and have junior standing in a specific major or have equivalent status to students who started at a public university in the same major.

Courses of study leading to a major in a science, technology, engineering, mathematics (STEM) discipline will generally be embedded in the Associate of Science Transfer degree.

Please note that class standing or GPA requirements for specific majors, department, or schools are not necessarily satisfied by an Associate of Science Transfer degree. Students should always work with their academic advisor and check with the receiving institutions to ensure they have the most current transfer and degree information.

The College is preparing an AST in Biology and an AST in Business; check with your advisor for details.

Advantages

- Students can meet all or most general education and major requirements to transfer an Oregon public university with junior standing in the major if appropriate courses are chosen.
- The classes, outcomes, and completion standards for the major-specific elements within Associate of Science Transfer degree are defined at the state level. In majors where junior standing within 90 credits is not possible, students who complete an Associate of Science Transfer degree will have equivalent status to students who started at a public university in the same major.

- The Associate of Science Transfer degree includes at least eight courses (minimum 30 credits) of embedded coursework, called the core transfer map, which will apply to at least 30 credits of general education requirements for a bachelor's degree at any Oregon public university.

Considerations

- A student is encouraged to work with an advisor in the selection of courses in order to meet the degree requirements of the baccalaureate institution to which the student plans to transfer.
- All course, class standing, or GPA requirements for specific majors, departments, or schools are not necessarily satisfied by an Associate of Science Transfer degree.

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
- Courses may only count in one requirement (except cultural literacy)
- Limit of 12 career and technical education credits

Performance Standards

- Students must have a minimum cumulative GPA of 2.0.
- All courses must be completed with a C grade or higher.

Transfer Without a Degree

Students may select individual courses at the College and transfer them to another institution.

Students not completing a degree at Central Oregon Community College are encouraged to research the receiving institution's degree requirements and select courses accordingly.

Oregon public institutions have equivalency guides for selecting equivalent courses. Every institution will have a transfer credit policy, often located on their website under the transfer admissions information. CAP Services and faculty advisors can help students find this information.

Core Transfer Maps

The Core Transfer Map (CTM) is designed for students who plan to transfer to an Oregon public university. Composed of 30 credits in writing, math, social sciences, sciences, arts and letters, and electives, the CTM meets at least 30 credits of general education requirements for a bachelor's degree at any Oregon public university. Students interested in transferring in a specific major should consult with an academic advisor to select specific CTM classes that can also fulfill lower-division requirements in their planned major.

If you believe that you have completed the requirements for the Core Transfer Map, and would like the CTM notated on your transcript please submit your request via our [Application for Degree or Certificate form](#).

Advantages

- Completion of the CTM guarantees that Oregon community colleges and public universities will accept all credits toward the institution's general education requirements, and depending on courses chosen, may meet some lower-division major requirements.

- The CTM provides students with documentation of completion of a standard set of commonly accepted courses.

Considerations

- Students certain of their major should determine if there is a major transfer map (MTM) for their chosen discipline and use the MTM as a guide.
- Students transferring to an Oregon public university should review any world language and specialty course requirements of the transfer institution.
- The CTM is not designed to be an endpoint, but rather a tool toward degree completion. The CTM 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.

Performance Standards

- All courses must be completed with a C or higher and be worth a minimum of three credits.
- Students must have a minimum cumulative GPA of 2.0.

Oregon Transfer Module (OTM)

The Oregon Transfer Module (OTM) is designed for students who plan to transfer to an Oregon community college or public university. Composed of 45 credits in writing, math, communication, social sciences, sciences, arts and letters, and electives, it is similar to many institutions' freshman-year requirements.

Advantages

- Completion of the OTM guarantees that Oregon community colleges and public universities will accept all credits toward the institution's general education requirements, and depending on courses chosen, may meet some lower-division major requirements.
- The OTM 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 community colleges and public universities.

Performance Standards

- All courses must be completed with a C or higher and be worth a minimum of three credits.
- Students must have a minimum cumulative GPA of 2.0.

Career and Technical Education

Central Oregon Community College'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 programs](#) (p. 80) 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 shorter 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 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
- Includes 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 to 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
- Includes related instruction courses in 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 to 108 credits, which take 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
- Includes related instruction courses in 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, a 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 term).

Requirements

Required courses:

- 36 to 71 credits, which 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
- Includes related instruction courses in 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 that acknowledge specific technical skill attainment and meet an employment need. Career pathways are related to (contained within) an approved Associate of Applied Science degree/option and have a defined job entry point.

Requirements

Required courses:

- 12 to 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 not pursuing specific transfer or career and technical education programs, the [Associate of General Studies \(AGS\)](#) (p. 246) provides an opportunity 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 is not transferable as a block (individual courses will be evaluated by transfer institutions) and does not meet certification requirements for any career and technical education area.

The AGS 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 may be designed to do so.

Requirements

Required courses:

- 90 to 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 the College. 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](#) (p. 242), which allows room to explore different subjects while completing general education classes.

Special Curriculum

Continuing Education Non-credit Training Certificate

A non-credit training certificate (NCTC) is a stand-alone course or a series of courses that do not offer college credit for completion but which are included in an official transcript. An assessment of measurable outcomes or mastery of learning or knowledge is required. OAR 589-006-050 (36)

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 Non-credit Training Certificates

Admission

As with all non-credit Continuing Education courses and programs at the College, there is no formal application or admission process. However, NCTC programs may have specific entrance requirements and/or prerequisites that are noted in the [NCTC program guide](#).

Registration and Refund Policy

Pre-registration is required for all classes. Registration is through the Continuing Education department. Payment or arrangement for payment is required at the time of registration. Registration directions and exceptions to the general refund policy are noted in course descriptions on the [Continuing Education](#) page and in the printed class schedule.

Student Records

Upon successful completion of a non-credit training certificate, students will receive a printed certificate with program outcomes listed on the back. Grades are indicated on the non-credit transcript for the courses included in the NCTC program. Transcripts may be ordered through the Admissions & Records [transcript request web page](#).

Program Standards

Students enrolled in NCTC program courses receive a pass/no-pass grade on the official non-credit transcript. Grades are based on program-specific course assessments and are transcribed on an official college non-credit transcript, which indicate *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 NCTC are listed in each program guide.

School Calendar

The [Continuing Education](#) page lists current and future course offerings. Non-credit training certificate programs are offered based on industry needs rather than a defined college-term basis. 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 the College's general policies on conduct and academic honesty. NCTC programs expect student conduct in support of and in alignment with broader [Student Rights and Responsibilities](#).

Satisfactory Academic Progress

The Continuing Education Department holds all NCTC students accountable for satisfactory academic progress (SAP). Instructors meet with students regularly to assess progress. NCTC program guides list each program's standards for SAP.

Continuing Education Credit for Prior Learning

Students entering an NCTC program 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. When the CPC is awarded, the student will pay a certification fee before certification is recorded and/or transcribed.

Because NCTC programs require classroom participation and interaction between peers, the maximum amount of CPC that will be accepted is 10% of the entire program requirement. CPC will be awarded only to students currently enrolled in a NCTC program at the College.

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 appears to violate the Student Code of Conduct, a referral is made to the director of student life for investigation and review. All NCTC review and disciplinary procedures follow standard college policy.

Readmission

NCTC programs are short-term and offered as needed 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.

Sustainability Curriculum

The College recognizes the importance of sustainability literacy, which according to the United Nations is "the knowledge, skills, and mindsets that allow individuals to become deeply committed to building a sustainable future and assisting in making informed and effective decisions to this end."

Sustainability literacy is promoted via two course designations. The first is the sustainability designated course list, which highlights courses that have adopted a moderate-to-strong emphasis on sustainability content. The second course designation is the SUS prefix, which identifies courses that were created with a specific and central focus on sustainability. Sustainability course designations are intended to meet students' and community needs and interests and to create a more just and equitable world.

Course	Title	Credits
BI 142	Introduction to Marine Biology	4
FOR 208	Soils: Sustainable Ecosystems	4
FOR 260	Conservation of Natural Resources	3
G 201	Geology I - The Dynamic Earth	4
G 202	Geology II - Earth's Surface	4
HHP 228	Health and Social Justice	4
HHP 268	Sustainable Food and Nutrition	4
SUS 101	Introduction to Sustainability	4

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.

General Education

General Education Purpose

General education's purpose is to help students develop habits of mind that lead to thoughtful and productive global citizenship. The College 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 student learning outcomes at the time of approval.

Statewide General Education Student Learning Outcomes

Upon successful completion of general education courses, students will be able to:

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

Explanation of Abbreviations

The following courses have been approved by the Curriculum Committee for use as general education courses for the Associate of Arts Oregon Transfer, Associate of Science, and Associate of General Studies and are requirements in some Associate of Applied Science degrees and some 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	Credits	Fulfills Requirements For:
HHP 100 Introduction to Public Health	4	Foundtl Health, Discipl Stud Social Science
HHP 110 Orientation to Public Health Professions	1	Foundtl Health

HHP 131 Introduction to Exercise/Sport Science	3	Foundtl Health	HHP 295 Health and Fitness	3	Foundtl Health
HHP 210 Introduction to the Health Care System	3	Foundtl Health, Discipl Stud Social Science	HHPA 102 Beginning Rock Climbing	1	Foundtl Health
HHP 212A AHA Basic Life Support for Providers CPR	1	Foundtl Health	HHPA 103 Training for Rock Climbing	1	Foundtl Health
HHP 216 Sociocultural Dimensions of Physical Activity	3	Foundtl Health	HHPA 104 Intermediate Rock Climbing	1	Foundtl Health
HHP 228 Health and Social Justice	4	Foundtl Health, Discipl Stud Cultural Literacy, Discipl Stud Social Science	HHPA 105 Backpacking	1	Foundtl Health
HHP 231 Human Sexuality	3	Foundtl Health	HHPA 106 Snowshoeing	1	Foundtl Health
HHP 240 Science of Nutrition	3	Foundtl Health, Discipl Stud Science Not Lab	HHPA 107 Backcountry Skiing	1	Foundtl Health
HHP 242 Stress Management	3	Foundtl Health	HHPA 108 Introduction to Canoeing	1	Foundtl Health
HHP 246 Introduction to Adapted Physical Activity	3	Foundtl Health	HHPA 109 Whitewater Kayaking I	1	Foundtl Health
HHP 248 Health Psychology	4	Foundtl Health, Discipl Stud Cultural Literacy, Discipl Stud Social Science	HHPA 110 Whitewater Rafting I	1	Foundtl Health
HHP 252 First Aid AHA Basic Life Support Provider CPR	3	Foundtl Health	HHPA 112 Beginning Mountain Biking	1	Foundtl Health
HHP 252A Fitness/First Aid	3	Foundtl Health	HHPA 114 Intermediate Mountain Biking	1	Foundtl Health
HHP 258 Holistic Wellness	4	Foundtl Health	HHPA 115 Wilderness Training: Beginning	1	Foundtl Health
HHP 259 Care and Prevention of Athletic Injury	3	Foundtl Health, Discipl Stud Science Not Lab	HHPA 120 Tai Chi/ Qigong	1	Foundtl Health
HHP 260 Anatomical Kinesiology	4	Foundtl Health, Discipl Stud Science Not Lab	HHPA 122 Yoga-Beginning	1	Foundtl Health
HHP 261 Exercise Physiology	4	Foundtl Health, Discipl Stud Science Not Lab	HHPA 125 Yoga-Intermediate	1	Foundtl Health
HHP 262 Exercise Testing and Prescription	3	Foundtl Health, Discipl Stud Science Not Lab	HHPA 126 Yoga-All Levels	1	Foundtl Health
HHP 266 Nutrition for Health	3	Foundtl Health	HHPA 127 Yoga for Athletes	1	Foundtl Health
HHP 267 Wellness Coaching Fundamentals	3	Foundtl Health, Discipl Stud Social Science	HHPA 128 Yoga/Pilates Blend	1	Foundtl Health
HHP 268 Sustainable Food and Nutrition	4	Foundtl Health, Discipl Stud Social Science	HHPA 130 Total Fitness	1	Foundtl Health
HHP 270 Sport and Exercise Psychology	3	Foundtl Health, Discipl Stud Social Science	HHPA 132 Jogging	1	Foundtl Health
HHP 283 Introduction to Alternative Medicine	4	Foundtl Health	HHPA 133 Ski Conditioning-Nordic	1	Foundtl Health
			HHPA 134 Circuit Training	1	Foundtl Health
			HHPA 135 Cycling: Studio	1	Foundtl Health
			HHPA 136 Boot Camp	1	Foundtl Health
			HHPA 137 Progressive Walking	1	Foundtl Health
			HHPA 138 Ki Aikido	1	Foundtl Health
			HHPA 140 Basketball	1	Foundtl Health
			HHPA 141 Golf	1	Foundtl Health
			HHPA 142 Beginning Rugby	1	Foundtl Health
			HHPA 143 Softball	1	Foundtl Health
			HHPA 144 Soccer	1	Foundtl Health
			HHPA 146 Tennis I	1	Foundtl Health

HHPA 147 Tennis II	1	Foundtl Health	MTH 211	4	Foundtl Math
HHPA 148 Volleyball-All Levels	1	Foundtl Health	Fundamentals of Elementary Mathematics I		
HHPA 149 Volleyball-Doubles	1	Foundtl Health	MTH 212	4	Foundtl Math
HHPA 150 Cultural Dance Fitness	1	Foundtl Health	Fundamentals of Elementary Mathematics II		
HHPA 153 Aerobic Dance-Hip Hop	1	Foundtl Health	MTH 213	4	Foundtl Math
HHPA 154 Dancercise	1	Foundtl Health	Fundamentals of Elementary Mathematics III		
HHPA 156 Pilates-Beginning	1	Foundtl Health	MTH 231 Discrete Mathematics	4	Foundtl Math
HHPA 157 Pilates-All Levels	1	Foundtl Health	MTH 241 Calculus for Management/Social Science	4	Foundtl Math, Discipl Stud Science Not Lab
HHPA 158 Stretch and Relaxation	1	Foundtl Health	MTH 243 Introduction to Probability and Statistics I	4	Foundtl Math, Discipl Stud Science Not Lab
HHPA 159 Barre Body	1	Foundtl Health	MTH 244 Introduction to Probability and Statistics 2	4	Foundtl Math, Discipl Stud Science Not Lab
HHPA 170 Snowboarding I	1	Foundtl Health	MTH 251 Calculus I	4	Foundtl Math
HHPA 171 Snowboarding II	1	Foundtl Health	MTH 252 Calculus II	4	Foundtl Math
HHPA 172 Snowboarding III-Competitive Freestyle Riding	1	Foundtl Health	MTH 253 Calculus III	4	Foundtl Math
HHPA 173 Brazilian Jujitsu	1	Foundtl Health	MTH 254 Vector Calculus I	4	Foundtl Math, Discipl Stud Science Not Lab
HHPA 174 Swimming I-Swim Fitness and Technique	1	Foundtl Health	MTH 255 Vector Calculus II	4	Foundtl Math, Discipl Stud Science Not Lab
HHPA 176 Masters Swimming	1	Foundtl Health	MTH 256 Applied Differential Equations	4	Foundtl Math, Discipl Stud Science Not Lab
HHPA 177 Swimming Fundamentals	1	Foundtl Health			
HHPA 178 Ski Alpine I	1	Foundtl Health			
HHPA 179 Ski Alpine II	1	Foundtl Health			
HHPA 182 Tae Kwon Do	1	Foundtl Health			
HHPA 183 Water Aerobics	1	Foundtl Health			
HHPA 184 ZUMBA	1	Foundtl Health			
HHPA 185 Weight Training	1	Foundtl Health			
HHPA 186 Stand Up Paddle Boarding	1	Foundtl Health			

Mathematics

Course	Credits	Fulfills Requirements For:
MTH 105 Math in Society	4	Foundtl Math
MTH 111 College Algebra	4	Foundtl Math, Discipl Stud Science Not Lab
MTH 112 Trigonometry	4	Foundtl Math, Discipl Stud Science Not Lab

Oral Communication

Course	Credits	Fulfills Requirements For:
COMM 111 Fundamentals of Public Speaking	4	Foundtl Oral Communication
COMM 114 Argumentation and Critical Discourse	3	Foundtl Oral Communication
COMM 115 Introduction 4 to Intercultural Communication	4	Foundtl Oral Communication, Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
COMM 218 Interpersonal Communication	3	Foundtl Oral Communication
COMM 219 Small Group 4 Communication	4	Foundtl Oral Communication

Writing & Information Literacy

Course	Credits	Fulfills Requirements For:
WR 121 Academic Composition	4	Foundtl Writing Info Lit

WR 122 Argument,
Research, and
Multimodal
Composition 4
WR 227 Technical
Writing 4

Foundtl Writing Info Lit
Foundtl Writing Info Lit

CHN 141 Chinese 4
Culture Through Film
CHN 201 Second Year 4
Mandarin Chinese I
CHN 202 Second Year 4
Mandarin Chinese II
CHN 203 Second Year 4
Mandarin Chinese III

Discipl Stud Arts
Letters, Discipl Stud
Cultural Literacy
Discipl Stud Arts
Letters, Discipl Stud
Cultural Literacy

Discipl Stud Arts
Letters, Discipl Stud
Cultural Literacy

Discipl Stud Arts
Letters, Discipl Stud
Cultural Literacy

Discipl Stud Arts
Letters, Discipl
Stud Cultural
Literacy, Foundtl Oral
Communication

Discipl Stud Arts
Letters

Discipl Stud Arts
Letters

Discipl Stud Arts
Letters, Discipl Stud
Cultural Literacy

Discipl Stud Arts
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Cultural Literacy

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Cultural Literacy

Discipl Stud Arts
Letters

Discipl Stud Arts
Letters, Discipl Stud
Cultural Literacy

Discipl Stud Arts
Letters, Discipl Stud
Cultural Literacy

Discipl Stud Arts
Letters

Discipline Studies Courses Arts and Letters

Course	Credits	Fulfills Requirements For:		
ARH 201 Art History: Western: Prehistory to Early Byzantine	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	COMM 115 Introduction to Intercultural Communication	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ARH 202 Art History: Western: Early Medieval to Late Renaissance	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	COMM 230 Introduction to the Rhetoric of Film	Discipl Stud Arts Letters
ARH 203 Art History: Western: Baroque to Early Modern	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	COMM 234 Introduction to Visual Rhetoric	Discipl Stud Arts Letters
ARH 206 Art History: Western: Modern and Contemporary	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	COMM 241 Media, Communication, Society	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ARH 207 Native American Art History	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	COMM 255 Free Expression and Public Assembly	Discipl Stud Arts Letters
ARH 208 Art History: Non-Western	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	ED 112 Children's Lit Curriculum	Discipl Stud Arts Letters
ART 101 Introduction to the Visual Arts	4	Discipl Stud Arts Letters	ENG 104 Introduction to Literature: Fiction	Discipl Stud Arts Letters
ART 110 Beginning Graphic Design	3	Discipl Stud Arts Letters	ENG 105 Introduction to Literature: Drama	Discipl Stud Arts Letters
ART 115 Basic Design: 2-D	3	Discipl Stud Arts Letters	ENG 106 Introduction to Literature: Poetry	Discipl Stud Arts Letters
ART 116 Basic Design: Color	3	Discipl Stud Arts Letters	ENG 107 Western World Literature: Ancient	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ART 117 Basic Design: 3-D	3	Discipl Stud Arts Letters	ENG 108 Western World Literature: Middle Ages	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ART 131 Beginning Drawing	3	Discipl Stud Arts Letters	ENG 109 Western World Literature: Modern	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ART 132 Intermediate Drawing	3	Discipl Stud Arts Letters	ENG 201 Shakespeare	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ART 141 Beginning Illustration	3	Discipl Stud Arts Letters	ENG 202 Shakespeare	Discipl Stud Arts Letters
ART 181 Beginning Painting	3	Discipl Stud Arts Letters	ENG 204 Survey British Literature I	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ART 230 Intermediate Graphic Design	3	Discipl Stud Arts Letters	ENG 205 Survey British Literature II	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ART 234 Figure Drawing	3	Discipl Stud Arts Letters	ENG 212 Autobiography	Discipl Stud Arts Letters
ART 241 Intermediate Illustration	3	Discipl Stud Arts Letters		
ART 281 Intermediate Painting	3	Discipl Stud Arts Letters		

ENG 221 Introduction to Children's Literature	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HST 206 War and Society in the 20th century, 1914-1945	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 232C Topics in American Literature: Contemporary Fiction	4	Discipl Stud Arts Letters	HUM 210 Culture And Literature Of Asia	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 250 Introduction to Folklore and Mythology	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 211 Culture and Literature of Africa	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 253 Survey American Literature I	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 212 Culture and Literature of the Americas	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 254 Survey American Literature II	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 213 Culture and Literature of Middle East	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 256 Folklore and US Popular Culture	4	Discipl Stud Arts Letters	HUM 230 Immigrant Experience American Literature	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
ENG 260 Introduction to Women Writers	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 240 Native American Literature and Culture	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
FA 101 Introduction to Film	4	Discipl Stud Arts Letters	HUM 255 Cultural Diversity in Contemporary American Literature	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
FA 125 World Cinema	4	Discipl Stud Arts Letters	HUM 256 Introduction to African-American Literature	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
FA 257 Literature Into Film	4	Discipl Stud Arts Letters	HUM 261 Popular Culture: Science Fiction	4	Discipl Stud Arts Letters
FR 141 Paris: City of Lights: History, Culture and Politics	3	Discipl Stud Arts Letters	HUM 262 Popular Culture: The American Western	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
FR 201 Second Year French I	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 263 Popular Culture: Detective Stories	4	Discipl Stud Arts Letters
FR 202 Second Year French II	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 264 Popular Culture: Spy Thriller	4	Discipl Stud Arts Letters
FR 203 Second Year French III	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 265 Popular Culture: Noir Film and Fiction	4	Discipl Stud Arts Letters
FR 211 French Conversation and Culture I	3	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 266 Popular Culture: Travel Literature	4	Discipl Stud Arts Letters
FR 212 French Conversation and Culture II	3	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 268 Digital Games Culture	4	Discipl Stud Arts Letters
FR 213 French Conversation and Culture III	3	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	HUM 269 Popular Culture Graphic Novels	4	Discipl Stud Arts Letters
GER 201 Second Year German I	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	IT 201 Second Year Italian I	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
GER 202 Second Year German II	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	IT 202 Second Year Italian II	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy
GER 203 Second Year German III	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy	IT 203 Second Year Italian III	4	Discipl Stud Arts Letters, Discipl Stud Cultural Literacy

ARH 202 Art History: Western: Early Medieval to Late Renaissance	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	ENG 205 Survey British Literature II	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
ARH 203 Art History: Western: Baroque to Early Modern	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	ENG 221 Introduction to Children's Literature	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
ARH 206 Art History: Western: Modern and Contemporary	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	ENG 250 Introduction to Folklore and Mythology	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
ARH 207 Native American Art History	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	ENG 253 Survey American Literature I	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
ARH 208 Art History: Non-Western	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	ENG 254 Survey American Literature II	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
CHN 140 Contemporary Chinese Cultures	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	ENG 260 Introduction to Women Writers	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
CHN 141 Chinese Culture Through Film	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	ES 101 Introduction to Ethnic Studies	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
CHN 201 Second Year Mandarin Chinese I	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	ES 211 Introduction to Native American Studies	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
CHN 202 Second Year Mandarin Chinese II	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	ES 212 Introduction to African American Studies	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
CHN 203 Second Year Mandarin Chinese III	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	ES 213 Introduction to Chican@/Latin@ Studies	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
COMM 115 Introduction to Intercultural Communication	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters, Foundtl Oral Communication	ES 214 Introduction to Asian/Pacific Islander American Studies	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
COMM 241 Media, Communication, Society	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	FR 201 Second Year French I	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
ED 216 Foundations of Education	3	Discipl Stud Cultural Literacy, Discipl Stud Social Science	FR 202 Second Year French II	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
ED 219 Multicultural Issues in Education Settings	3	Discipl Stud Cultural Literacy, Discipl Stud Social Science	FR 203 Second Year French III	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
ENG 107 Western World Literature: Ancient	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	FR 211 French Conversation and Culture I	3	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
ENG 108 Western World Literature: Middle Ages	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	FR 212 French Conversation and Culture II	3	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
ENG 109 Western World Literature: Modern	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	FR 213 French Conversation and Culture III	3	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
ENG 201 Shakespeare	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	GEOG 107 Cultural Geography	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
ENG 204 Survey British Literature I	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	GEOG 201 World Regional Geography I	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science

GEOG 202 World Regional Geography II	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 206 War and Society in the 20th century, 1914-1945	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
GER 201 Second Year German I	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 207 History of the American West	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
GER 202 Second Year German II	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 218 Native American History	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
GER 203 Second Year German III	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	HST 225 US Women's History	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
HHP 228 Health and Social Justice	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science, Foundtl Health	HST 235 Sexuality in 20th Century Europe	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
HHP 248 Health Psychology	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science, Foundtl Health	HST 242 History of the Pacific NW	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
HS 208 Multicultural Issues in Human Services	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 258 Colonial Latin American History	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
HST 101 Europe: The Classical Era (pre-history to 600 C.E.)	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 259 Modern Latin American History	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
HST 102 Europe: From the Middle Ages to Enlightenment (700-1700 C.E.)	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 260 History of Islamic Civilizations	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
HST 103 Europe: Revolution and War (1789 - Present)	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 270 20th Century European History	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
HST 104 Ancient Societies (Pre-history - 500 C.E.)	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 290 East Asian History	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
HST 105 The Expansion of World Religions (500 - 1700)	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 291 East Asian History	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
HST 106 Modern World History: Industrialization, Nations and War (1800-Present)	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HST 292 East Asian History	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
HST 201 Early America - History of the United States (pre-history to 1820)	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HUM 210 Culture And Literature Of Asia	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
HST 202 19th and early 20th Century United States History (1820-1920)	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HUM 211 Culture and Literature of Africa	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
HST 203 20th and Early 21st Century United States History (1920-present)	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HUM 212 Culture and Literature of the Americas	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
HST 204 History of the Civil War	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	HUM 213 Culture and Literature of Middle East	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
			HUM 230 Immigrant Experience American Literature	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
			HUM 240 Native American Literature and Culture	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters

HUM 255 Cultural Diversity in Contemporary American Literature	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SOC 219 Sociology of Religion	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
HUM 256 Introduction to African-American Literature	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SOC 250 Sociology of Popular Culture	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science
HUM 262 Popular Culture: The American Western	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SPAN 201 Second Year Spanish I	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
IT 201 Second Year Italian I	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SPAN 202 Second Year Spanish II	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
IT 202 Second Year Italian II	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SPAN 203 Second Year Spanish III	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
IT 203 Second Year Italian III	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SPAN 211 Spanish Conversation and Culture I	3	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
KIK 201 Second Year Kiksht Native Language I	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SPAN 212 Spanish Conversation and Culture II	3	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
KIK 202 Second Year Kiksht Native Language II	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	SPAN 213 Spanish Conversation and Culture III	3	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
KIK 203 Second Year Kiksht Native Language III	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	WS 101 Introduction to Women's and Gender Studies	4	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters
MUS 205 Introduction to Jazz History	3	Discipl Stud Cultural Literacy, Discipl Stud Arts Letters	Science/Math/Computer Science		
PSY 101 Applied Psychology	3	Discipl Stud Cultural Literacy, Discipl Stud Social Science	Science/Math/Computer Science, Not Lab		
PSY 202 Mind and Society	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	Course	Credits	Fulfills Requirements For:
PSY 215 Developmental Psychology	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	ANTH 235 Evolution of Human Sexuality	4	Discipl Stud Science Not Lab
PSY 216 Social Psychology	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	ANTH 236 The Primates: Behavior and Evolution	4	Discipl Stud Science Not Lab
PSY 219 Abnormal Psychology	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	ANTH 237 Forensic Anthropology	4	Discipl Stud Science Not Lab
PSY 228 Positive Psychology	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	BI 108 Introduction to Human Genetics	4	Discipl Stud Science Not Lab
PSY 233 Psychology of Violence Aggression	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	BI 114 Science Literacy	3	Discipl Stud Science Not Lab
SOC 201 Introduction to Sociology	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	CIS 122 Introduction to Programming	4	Discipl Stud Science Not Lab
SOC 212 Race, Class, and Gender	4	Discipl Stud Cultural Literacy, Discipl Stud Social Science	CS 160 Computer Science Orientation	4	Discipl Stud Science Not Lab
			CS 161 Computer Science I	4	Discipl Stud Science Not Lab
			CS 162 Computer Science II	4	Discipl Stud Science Not Lab
			ENGR 201 Electrical Fundamentals	4	Discipl Stud Science Not Lab
			FN 225 Human Nutrition	4	Discipl Stud Science Not Lab
			FOR 251 Recreational Resource Management	3	Discipl Stud Science Not Lab

FW 251 Wildlife Conservation	3	Discipl Stud Science Not Lab	BI 213 Principles of Biology	5	Discipl Stud Science Lab
GEOG 265 Geographic Information Systems	4	Discipl Stud Science Not Lab	BI 231 Human Anatomy and Physiology I	4	Discipl Stud Science Lab
HHP 240 Science of Nutrition	3	Discipl Stud Science Not Lab, Foundtl Health	BI 232 Human Anatomy and Physiology II	4	Discipl Stud Science Lab
HHP 259 Care and Prevention of Athletic Injury	3	Discipl Stud Science Not Lab, Foundtl Health	BI 233 Human Anatomy and Physiology III	4	Discipl Stud Science Lab
HHP 260 Anatomical Kinesiology	4	Discipl Stud Science Not Lab, Foundtl Health	BI 234 Microbiology	4	Discipl Stud Science Lab
HHP 261 Exercise Physiology	4	Discipl Stud Science Not Lab, Foundtl Health	CH 104 Introduction to Chemistry I	5	Discipl Stud Science Lab
HHP 262 Exercise Testing and Prescription	3	Discipl Stud Science Not Lab, Foundtl Health	CH 105 Introduction to Chemistry II	5	Discipl Stud Science Lab
HS 224 Psychopharmacology	4	Discipl Stud Science Not Lab	CH 106 Introduction to Chemistry III	5	Discipl Stud Science Lab
MTH 111 College Algebra	4	Discipl Stud Science Not Lab, Foundtl Math	CH 221 General Chemistry I	5	Discipl Stud Science Lab
MTH 112 Trigonometry	4	Discipl Stud Science Not Lab, Foundtl Math	CH 222 General Chemistry II	5	Discipl Stud Science Lab
MTH 241 Calculus for Management/Social Science	4	Discipl Stud Science Not Lab, Foundtl Math	CH 223 General Chemistry III	5	Discipl Stud Science Lab
MTH 243 Introduction to Probability and Statistics I	4	Discipl Stud Science Not Lab, Foundtl Math	FOR 208 Soils: Sustainable Ecosystems	4	Discipl Stud Science Lab
MTH 244 Introduction to Probability and Statistics 2	4	Discipl Stud Science Not Lab, Foundtl Math	G 161 Field Geology: Study of Landscape Evolution	3	Discipl Stud Science Lab
MTH 254 Vector Calculus I	4	Discipl Stud Science Not Lab, Foundtl Math	G 162CV Field Geology: Cascade Volcanoes	3	Discipl Stud Science Lab
MTH 255 Vector Calculus II	4	Discipl Stud Science Not Lab, Foundtl Math	G 163 Field Geology: Rivers, Lakes and Springs of Central Oregon	3	Discipl Stud Science Lab
MTH 256 Applied Differential Equations	4	Discipl Stud Science Not Lab, Foundtl Math	G 201 Geology I - The Dynamic Earth	4	Discipl Stud Science Lab

Science/Math/Computer Science, Lab

Course	Credits	Fulfills Requirements For:			
ANTH 234 Biological Anthropology	4	Discipl Stud Science Lab	G 202 Geology II - Earth's Surface	4	Discipl Stud Science Lab
BI 101 General Biology: Cells Genes	4	Discipl Stud Science Lab	G 203 Geology III - Earth History	4	Discipl Stud Science Lab
BI 102 General Biology: Evolution	4	Discipl Stud Science Lab	G 207 Geology of the Pacific Northwest	4	Discipl Stud Science Lab
BI 103 General Biology: Ecology	4	Discipl Stud Science Lab	GEOG 101 Introduction to Geospatial Science GIS	4	Discipl Stud Science Lab
BI 142 Introduction to Marine Biology	4	Discipl Stud Science Lab	GEOG 278 Physical Geography-Landforms and Water	4	Discipl Stud Science Lab
BI 202 General Botany	4	Discipl Stud Science Lab	GEOG 279 Physical Geography-Weather and Climate	4	Discipl Stud Science Lab
BI 211 Principles of Biology	5	Discipl Stud Science Lab	GS 104 Physical Science: Physics	4	Discipl Stud Science Lab
BI 212 Principles of Biology	5	Discipl Stud Science Lab	GS 105 Physical Science: Chemistry	4	Discipl Stud Science Lab
			GS 106 Physical Science: Geology	4	Discipl Stud Science Lab

ES 212 Introduction to African American Studies	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HS 208 Multicultural Issues in Human Services	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
ES 213 Introduction to Chican@/Latin@ Studies	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HS 209 Introduction to Psychological Trauma: Theory and Practice	4	Discipl Stud Social Science
ES 214 Introduction to Asian/Pacific Islander American Studies	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 101 Europe: The Classical Era (pre-history to 600 C.E.)	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 106 Economic Geography	4	Discipl Stud Social Science	HST 102 Europe: From the Middle Ages to Enlightenment (700-1700 C.E.)	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 107 Cultural Geography	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 103 Europe: Revolution and War (1789 - Present)	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 190 Environmental Geography	4	Discipl Stud Social Science	HST 104 Ancient Societies (Pre-history - 500 C.E.)	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 198 Field Geography of Central Oregon	3	Discipl Stud Social Science	HST 105 The Expansion of World Religions (500 - 1700)	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 201 World Regional Geography I	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 106 Modern World History: Industrialization, Nations and War (1800- Present)	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 202 World Regional Geography II	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	HST 201 Early America - History of the United States (pre-history to 1820)	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 290 Environmental Problems	3	Discipl Stud Social Science	HST 202 19th and early 20th Century United States History (1820-1920)	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
GEOG 295 Wilderness and Society	4	Discipl Stud Social Science	HST 203 20th and Early 21st Century United States History (1920- present)	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HHP 100 Introduction to Public Health	4	Discipl Stud Social Science, Foundtl Health	HST 204 History of the Civil War	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HHP 210 Introduction to the Health Care System	3	Discipl Stud Social Science, Foundtl Health	HST 207 History of the American West	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HHP 228 Health and Social Justice	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy, Foundtl Health	HST 218 Native American History	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HHP 248 Health Psychology	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy, Foundtl Health	HST 225 US Women's History	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HHP 267 Wellness Coaching Fundamentals	3	Discipl Stud Social Science, Foundtl Health	HST 235 Sexuality in 20th Century Europe	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HHP 268 Sustainable Food and Nutrition	4	Discipl Stud Social Science, Foundtl Health	HST 242 History of the Pacific NW	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HHP 270 Sport and Exercise Psychology	3	Discipl Stud Social Science, Foundtl Health			
HS 101 Orientation to Human Services	3	Discipl Stud Social Science			
HS 206 Group Counseling Skills for Human Services	4	Discipl Stud Social Science			

HST 258 Colonial Latin American History	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	PSY 228 Positive Psychology	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HST 259 Modern Latin American History	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	PSY 233 Psychology of Violence Aggression	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HST 260 History of Islamic Civilizations	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	SOC 201 Introduction to Sociology	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HST 270 20th Century European History	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	SOC 208 Sport and Society	4	Discipl Stud Social Science
HST 290 East Asian History	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	SOC 211 Social Deviance	4	Discipl Stud Social Science
HST 291 East Asian History	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	SOC 212 Race, Class, and Gender	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
HST 292 East Asian History	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy	SOC 215 Social Issues and Social Movements	4	Discipl Stud Social Science
OL 244 Psychology of Risk and Adventure	3	Discipl Stud Social Science	SOC 219 Sociology of Religion	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
PS 201 Introduction to US Government and Politics	4	Discipl Stud Social Science	SOC 222 Sociology of Family and Intimate Relationships	4	Discipl Stud Social Science
PS 203 State/Local Government	3	Discipl Stud Social Science	SOC 250 Sociology of Popular Culture	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy
PS 204 Introduction to Comparative Politics	4	Discipl Stud Social Science	SUS 101 Introduction to Sustainability	4	Discipl Stud Social Science
PS 205 Introduction to International Relations	4	Discipl Stud Social Science			
PS 206 Introduction to Political Thought	4	Discipl Stud Social Science			
PS 207 Politics of the Middle East	4	Discipl Stud Social Science			
PS 250 Terrorism and the American Public	4	Discipl Stud Social Science			
PSY 101 Applied Psychology	3	Discipl Stud Social Science, Discipl Stud Cultural Literacy			
PSY 201 Mind and Brain	4	Discipl Stud Social Science			
PSY 202 Mind and Society	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy			
PSY 210 Introduction to Cognitive Psychology	4	Discipl Stud Social Science			
PSY 215 Developmental Psychology	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy			
PSY 216 Social Psychology	4	Discipl Stud Social Science, Discipl Stud Cultural Literacy			
PSY 219 Abnormal Psychology	4	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 and Associate of Science degrees. Note that CTE courses are not intended to transfer, and if baccalaureate institutions accept them, they are usually limited in number.

Course	Title	Credits
AH 111	Medical Terminology I	3
AH 112	Medical Terminology II	3
AUT 101	Basic Electricity for 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 Automotive Trade	3
AUT 115	College Success for Automotive Technology	2
AUT 199	Selected Topics: Automotive	1-4
AUT 201	Automotive Engines	4

AUT 202	Manual Drive Trains I	3	AV 227D	Helicopter Flt Lab Series I	1
AUT 203	Manual Drive Trains II	3	AV 227E	Helicopter Flt Lab Series I	1
AUT 204	Steering and Suspension	3	AV 227F	Helicopter Flt Lab Series I	1
AUT 205	Engine Performance I	2	AV 227G	Helicopter Flt Lab Series I	1
AUT 206	Engine Performance II	2	AV 227H	Helicopter Flt Lab Series I	1
AUT 208	Automotive Brakes	3	AV 227I	Helicopter Flt Lab Series I	1
AUT 211	ASE Test Prep I	1	AV 227J	Helicopter Flt Lab Series I	1
AUT 212	ASE Test Prep II	1	AV 227N	Helicopter Flt Lab Series I	1
AUT 216	Co-op Work Experience Automotive	1-4	AV 228A	Helicopter Flt Lab Series II	1
AUT 216A	CWE Automotive A	4	AV 228B	Helicopter Flt Lab Series II	1
AUT 216B	CWE Automotive B	4	AV 228C	Helicopter Flt Lab Series II	1
AUT 251	Automatic Transmissions - Rebuild	3	AV 228D	Helicopter Flt Lab Series II	1
AUT 253	Automotive Air Conditioning	3	AV 228E	Helicopter Flt Lab Series II	1
AUT 256	Automatic Transmissions Theory	2	AV 228F	Helicopter Flt Lab Series II	1
AUT 260	Diesel Performance II	4	AV 228G	Helicopter Flt Lab Series II	1
AUT 270	Automotive Controller Systems I	4	AV 228H	Helicopter Flt Lab Series II	1
AUT 271	Automotive Controller Systems II	4	AV 228I	Helicopter Flt Lab Series II	1
AUT 280	Hybrid Electric Vehicles I	4	AV 228J	Helicopter Flt Lab Series II	1
AUT 281	Hybrid Electric Vehicles II	4	AV 228N	Helicopter Flt Lab Series II	1
AV 101	Introduction to Aviation	3	AV 235	Human Factors	4
AV 104	Introduction to Aircraft Systems	4	AV 245	Advanced Helicopter Operations	4
AV 108	Meteorology I	4	AV 246	Aviation Safety	3
AV 110	Private Pilot - Airplane	5	AV 250	Certified Flight Instructor-Airplane	5
AV 112	Technically Advanced Aircraft	3	AV 255	Certified Flight Instructor-Helicopter	5
AV 115	Private Pilot-Helicopter	5	AV 271	Introduction to Unmanned Aerial Systems	4
AV 116	Airplane Fundamentals	3	AV 272	Unmanned Aerial Systems (UAS) Operations	5
AV 117	Helicopter Fundamentals	3	AV 273	Unmanned Aerial Sys Ops Maint	5
AV 150	Aerodynamics	4	AV 288	Special Studies: Aviation	1-5
AV 188	Special Studies: Aviation	1-5	AV 299	Selected Topics: Aviation	1-8
AV 199	Selected Topics: Aviation	1-8	BAK 100	Want to be a Pastry Chef?	2
AV 200	Aviation Law	3	BAK 101	Introduction to Baking & Pastry	4
AV 201	Airport Management	3	BAK 110	Baking and Pastry Foundations I	4
AV 204	Advanced Aircraft Systems	4	BAK 140	Baking and Pastry Foundations II	4
AV 208	Meteorology II	4	BAK 170	Baking and Pastry Foundations III	4
AV 210	Instrument - Airplane	5	BAK 180	Custards and Frozen Desserts	4
AV 215	Instrument Helicopter	5	BAK 188	Special Studies: Baking and Pastry Arts	1-6
AV 220	Commercial Pilot-Airplane	4	BAK 199	Selected Topics: Baking and Pastry Arts	1-6
AV 222A	Airplane Flight Lab	1	BAK 210	Modern Sugar and Chocolate Decor	4
AV 222B	Airplane Flight Lab	1	BAK 215	Laminated Dough and Viennoiserie	4
AV 222C	Airplane Flight Lab	1	BAK 220	Wedding Celebration and Specialty Cakes	4
AV 222D	Airplane Flight Lab	1	BAK 225	Entremets	4
AV 222E	Airplane Flight Lab	1	BAK 230	Plated Desserts and Presentation	4
AV 222F	Airplane Flight Lab	1	BAK 235S	Classical French Pastries	4
AV 222G	Airplane Flight Lab	1	BAK 240	The Craft of Artisan Breads	4
AV 222H	Airplane Flight Lab	1	BAK 245S	Advanced Sugar Decor and Chocolate Sculpting	4
AV 222I	Airplane Flight Lab	1	BAK 250	Petit Fours, Candies and Classical Mignardise	4
AV 222J	Airplane Flight Lab	1	BAK 255S	Artisan Breads with Heirloom Whole Grains	4
AV 222K	Airplane Flight Lab	1	BAK 260	Advanced Wedding, Celebration, and Specialty Cakes	4
AV 225	Commercial Pilot-Helicopter	4	BAK 265	Comprehensive Retail Baking Operations	5
AV 227A	Helicopter Flt Lab Series I	1	BAK 280	Baking and Pastry Arts Industry Internship	1-6
AV 227B	Helicopter Flt Lab Series I	1	BAK 298	Independent Study: Baking	1-4
AV 227C	Helicopter Flt Lab Series I	1			

CIS 010	Computer Keyboarding	1	CIS 284EH	Ethical Hacking	4
CIS 070	Introduction to Computers: Windows	2	CIS 288	Special Studies II	1-4
CIS 099	Selected Topics: Computer and Information Systems	1-4	CIS 295	Web Development II	4
CIS 101	Information Technology Orientation	3	CIS 297	CIS Professional Capstone	4
CIS 120	Computer Concepts	4	CIS 298	Independent Study: CIS	1-4
CIS 122	Introduction to Programming	4	CIS 299	Selected Topics: CIS	1-7
CIS 124	IT Fundamentals	4	CUL 100	Want to be a Chef?	2
CIS 125A	Access	4	CUL 101	Introduction to Culinary Arts	4
CIS 125A1	AutoCAD 1	4	CUL 102	Food Safety and Sanitation	2
CIS 125A2	AutoCAD 2	4	CUL 104	Applied Math for Culinary Arts	4
CIS 125DV	Digital Video Productions	4	CUL 105	International Exchange Preparation	2
CIS 125E	Excel	4	CUL 110	Culinary Foundations I	4
CIS 125G	Photoshop	4	CUL 140	Culinary Foundations II	4
CIS 125I	Adobe Illustrator	4	CUL 170	Culinary Foundations III	4
CIS 125V	Visio	4	CUL 180	Modern Garde Manger	4
CIS 125WA	Web Animation	4	CUL 188	Special Studies: Culinary Arts	1-6
CIS 131	Software Applications	4	CUL 199	Selected Topics: Culinary Arts	1-6
CIS 133JS	Introduction to JavaScript	4	CUL 200	Comprehensive Kitchen Operations for the Restaurant Industry	5
CIS 133P	Introduction to PHP	4	CUL 203	Food Truck Operations	4
CIS 135A1	AutoDESK Revit 1	4	CUL 220	International Cuisine and Global Flavor Profiling	4
CIS 135A2	AutoDESK Revit 2	4	CUL 225	Applied Harvesting and Food Preservation Principles	4
CIS 135C1	AutoCAD Civil 3D	4	CUL 230	Culinary Nutrition and Applied Techniques of Healthy Cooking	4
CIS 135DB	Database Theory/SQL	4	CUL 235S	Farm-to-Table and Sustainable Cuisine Practices	4
CIS 135S1	SolidWorks 1	4	CUL 240	Butchery	4
CIS 135S2	SolidWorks 2	4	CUL 242	Charcuterie	4
CIS 140	A+ Essentials I	4	CUL 245S	Modernist Cuisine and the Evolution of Cooking	4
CIS 145	A+ Essentials II	4	CUL 255S	Event Planning and Execution with Modern Banquet Cookery	4
CIS 151C	Cisco Internetworking	4	CUL 265S	Advanced Skill Development and Culinary Competition Mastery	4
CIS 152C	Cisco Router Configuration	4	CUL 270	Culinary Arts Capstone	5
CIS 154C	Cisco VLAN and WAN Technologies	4	CUL 276A	Regional World Cuisines: Africa	4
CIS 178	Internet in Depth	4	CUL 276C	Regional World Cuisines: Caribbean	4
CIS 179	Networking Essentials	4	CUL 276F	Regional World Cuisines: France	4
CIS 179CL	Cloud Essentials	4	CUL 276G	Regional World Cuisines: Germany	4
CIS 179L	Linux Essentials	4	CUL 276I	Regional World Cuisines: Italy	4
CIS 188	Special Studies I	1-4	CUL 276J	Regional World Cuisines: Asia	4
CIS 195	Web Development I	4	CUL 276S	Regional World Cuisines: Spain	4
CIS 197	CMS Web Development: WordPress	4	CUL 280	Culinary Arts Industry Internship	1-6
CIS 198	Computer and Information Systems Projects	3	CUL 298	Independent Study: Culinary	1-4
CIS 199	Selected Topics: Computer and Information Systems	1-7	DA 110	Basic Dental Assisting	4
CIS 233P	Web Programming	4	DA 115	Dental Science	5
CIS 244	Information Systems Analysis	4	DA 120	Advanced Dental Assisting	4
CIS 279L	Linux+	4	DA 125	Dental Infection Control	3
CIS 279OP	Cybersecurity Operations	4	DA 130	Dental Materials I	4
CIS 279SC	Windows Server Configuration	4	DA 131	Dental Materials II	4
CIS 279SE	Security+	4	DA 134	Dental Radiology I	3
CIS 279SM	Windows Server Management	4	DA 135	Dental Radiology II	4
CIS 279SS	Windows Server Services	4	DA 145	Preventive Dentistry	3
CIS 279WC	Windows Client	4	DA 150	Intro to Dental Office Management	3
CIS 280	Co-op Work Experience CIS	1-3			
CIS 284	Cisco CCNA Security	4			

DA 151	Dental Computing	2	FIRE 210	FI-210 Wildfire Origin/Cause	2
DA 160	Oral Medicine	3	FIRE 210S	Structure Fire Investigation	2
DA 181	Dental Seminar I	1	FIRE 211	S-211 Portable Pumps	1
DA 182	Dental Seminar II	1	FIRE 215	S-215 Fire Operations in the Urban Interface	3
DA 190	Dental Assisting Practicum I	1-5	FIRE 215S	S-215 Fire Operations in Urban Interface for Structure Fire	3
DA 191	Dental Assisting Practicum II	1-8	FIRE 219	S-219 Fire Operations	2
DA 199	Selected Topics: Dental Assisting	1-4	FIRE 230	S-230 Crew Boss	2
EMT 151	Emergency Medical Technician Part A	5	FIRE 231	S-231 Engine Boss	1
EMT 152	Emergency Medical Technician Part B	5	FIRE 232	Fire Protection Hydraulics and Water Supply	4
EMT 163	Advanced EMT Part I	5	FIRE 236	S-236 Heavy Equipment Boss	1
EMT 164	Advanced EMT Part II	5	FIRE 248	S-248 Status/Check-In Recorder	2
EMT 170	Emergency Response Communication/Documentation	2	FIRE 261	S-261 Applied Interagency Incident Business Management	2
EMT 171	Emergency Response Patient Transport	2	FIRE 263	Human Behavior in Fire	3
EMT 188	Special Studies: Emergency Medical Technician	1-5	FIRE 265	Capstone: Fire and Emergency Service Administration	3
EMT 195	Crisis Intervention for the Emergency Medical Provider	3	FIRE 270	S-270 Basic Air Operations	2
EMT 199	Selected Topics: Emergency Medical Technician	1-5	FIRE 275	Capstone: Tactics & Strategies	3
EMT 280	Paramedic Co-op Work Experience	4	FIRE 280	Co-op Work Experience Fire Science	1-4
EMT 280A	Paramedic Co-op Work Experience	1	FIRE 281	L-280 Followership/Leadership	2
EMT 280B	Paramedic Co-op Work Experience	2	FIRE 286	Pacific Northwest Engine Academy	3
EMT 280C	Paramedic Co-op Work Experience	3	FIRE 290	S-290 Intermediate Wildfire Behavior	3
EMT 288	Special Studies: Emergency Medical Technician	1-5	FIRE 291	S-300 IC Extended Attack	1
EMT 290	Paramedic Part I	8	FIRE 292	S-330 Task Force/Strike Team Leader	1
EMT 291	Paramedic Part I Clinical	3	FIRE 293	S-339 Division Group Supervisor	1
EMT 292	Paramedic Part II	8	FIRE 294	S-390 Fire Behavior Calculation	3
EMT 293	Paramedic Clinical Part II	3	FIRE 298	Independent Study: Fire Science	1-4
EMT 294	Paramedic Part III	8	FIRE 299	Selected Topics: Fire Science	1-4
EMT 295	Paramedic Clinical Part III	3	FOR 130	Chainsaw Use and Maintenance	2
EMT 296	Advanced Cardiac Life Support (ACLS)	1	FW 212	Survey of Northwest Birds	2
EMT 297	Pediatric Advanced Life Support (PALS)	1	FW 218	Survey of Northwest Mammals	2
EMT 298	Prehospital Trauma Life Support (PHTLS)	1	GEOG 211	Cartography	4
EMT 299	Selected Topics: Emergency Medical Technician	1-5	GEOG 266	ArcGIS	4
FIRE 100	Firefighter Type II Training	3	GEOG 267	Geodatabase Design	4
FIRE 101	Introduction to Emergency Services	4	GEOG 273	Spatial Data Collection	4
FIRE 102	Fire Service Safety and Survival	3	GEOG 280	Co-op Work Experience GIS	1-3
FIRE 110	Building Construction for Fire Personnel	3	GEOG 284	GIS Customization	4
FIRE 111	Tactical Decision Simulations	2	GEOG 285	Data Conversion and Documentation	4
FIRE 112	Public Education and Fire Prevention	3	GEOG 286	Remote Sensing	4
FIRE 114	Fire Codes and Ordinances	3	GEOG 287	Spatial Analysis	4
FIRE 120	Fire Protection Systems	3	HIM 103	Introduction to Health Information Management	4
FIRE 121	Fire Law	1	HIM 104	Health Information Standards and Governance	4
FIRE 122	Fire Department Budget	1	HIM 105	Health Information Compliance and Analytics	4
FIRE 123	HazMat Awareness & Operations	3	HIM 171	Project Management	2
FIRE 130	Rescue Practices	3	HIM 182	Introduction to Reimbursement and Classification Systems	4
FIRE 131	S-131, Firefighter Type I	1	HIM 184	Pathophysiology and Pharmacology	5
FIRE 175	NFPA Firefighter 1 Academy	7	HIM 190	HIPAA for Practical Experience	2
FIRE 199	Selected Topics: Fire Science	1-4	HIM 199	Selected Topics: Health Information Management	1-4
FIRE 200	S-200 Initial Attack Incident Command	1	HIM 201	Legal and Ethical Aspects of Health Care	4
FIRE 201	NFPA Instructor 1	3	HIM 202	Health Information Management Applications	2
FIRE 203	S-203 Introduction to Incident Information	3	HIM 203	Health Information Technologies	4
FIRE 205	Fire Behavior & Combustion	3			

HIM 265	Health Information Management Community Service Learning Project	2	MA 199	Selected Topics: Medical Assistant	1-4
HIM 271	Quality Improvement in Health Care	4	MA 280	Co-op Work Experience Medical Assisting	1-4
HIM 272	Management Principles and Leadership in HIM	4	MA 298	Independent Study: Medical Assisting	1-4
HIM 273	HIM Capstone	2	MFG 100	MFG Orientation	1
HIM 281	Healthcare Statistics	4	MFG 101	Blueprint Reading	3
HIM 282	Reimbursement Systems	4	MFG 102	Blueprint Reading Sheet Metal	2
HIM 283	Coding Classifications I	4	MFG 103	Welding Technology I	4
HIM 284	Coding Classifications II	5	MFG 105	Welding Technology II	4
HIM 285	Revenue Cycle Management	5	MFG 107	Welding Technology III	4
HIM 293	Professional Practice Experience	2	MFG 109	Lean Practices	2
HM 280	Hospitality Management Industry Internship	1-6	MFG 110	Manufacturing Processes I	4
LMT 101	Intro Massage Therapy Career	1	MFG 112	Manufacturing Processes II	3
LMT 113	Kinesiology for Massage Therapy I	4	MFG 114	Manufacturing Processes III	3
LMT 118	Kinesiology for Massage Therapy II	4	MFG 115	Design Processes I	4
LMT 124	Kinesiology for Massage Therapy III	4	MFG 116	Manufacturing Electrical Systems	2
LMT 130	Massage Fundamentals	2	MFG 118	Fluid Power Systems I	2
LMT 135	Managing a Massage Practice	3	MFG 119	Manufacturing Design and Drafting Techniques	4
LMT 140	Pathology for Massage Therapy	4	MFG 119M	Mechanical Drawing Techniques	4
LMT 145	Massage I	5	MFG 133	Quality Assurance	3
LMT 150	Massage II	5	MFG 160	Materials Engineering	2
LMT 155	Eastern Theory & Practice	2	MFG 161	CNC Project I	4
LMT 160	Hydrotherapy	1	MFG 188	Special Studies: Manufacturing Technology	1-4
LMT 170	Professional Ethics and Rules	2	MFG 199	Selected Topics: Manufacturing	1-4
LMT 175	Swedish Relaxation Clinic	2	MFG 201	Bench Work	2
LMT 180	Therapeutic Clinic	3	MFG 202	Metals Preparation	2
LMT 188	Special Studies: LMT	1-4	MFG 203	Layout	2
LMT 199	Selected Topics: Licensed Massage Therapy	1-4	MFG 205	Drill Press	2
LMT 206	The Spirit of Massage	1	MFG 210	Vertical Milling	2
LMT 210	Community Outreach	2	MFG 214	Lathe Operator I	2
LMT 216	Aromatherapy Fundamentals	2	MFG 216	Lathe Operator II	2
LMT 217	Aromatherapy Applications	2	MFG 246	Mechanical Troubleshooting	2
LMT 226	Thai Massage I	2	MFG 250	Additive Manufacturing	2
LMT 227	Thai Massage II	2	MFG 254	Manufacturing Jigs and Fixtures	2
LMT 228	Foot Reflexology	1	MFG 256	CNC Mill Programming	4
LMT 229	Japanese Facial Massage	1	MFG 257	CNC Mill Setup & Operation	4
LMT 240	Neuromuscular Treatments I	5	MFG 258	Mastercam Mill	4
LMT 245	Effective Office Decisions	2	MFG 259	CNC Lathe Programming	4
LMT 255	Zen Shiatsu	4	MFG 260	CNC Lathe Setup & Operation	4
LMT 265	Sports Massage	4	MFG 261	Mastercam Lathe	4
LMT 271	Pregnancy Massage	1	MFG 262	Welding Inspection/Quality Control	2
LMT 288	Special Studies: LMT	1-4	MFG 264	Automated Cutting	3
LMT 298	Independent Study: Massage Therapy	1-4	MFG 266	Manufacturing Cost Estimation	2
LMT 299	Selected Topics: LMT	1-7	MFG 267	Oxygen-Fuel and Plasma Cutting	3
MA 110	Introduction to Clinical Medical Assisting	7	MFG 268	Production CNC Operations Mill	3
MA 111	Introduction to Professional Medical Assisting	4	MFG 270	CNC Fixture Design Mill	3
MA 120	Clinical Medical Assisting II	7	MFG 271	SMAW I	3
MA 121	Administrative Medical Assisting	5	MFG 272	GMAW I	3
MA 137	Application of Professional Medical Assisting	4	MFG 273	SMAW II	3
MA 147	Medical Assistant Practicum I	5	MFG 274	GMAW II	3
MA 150	Pharmacology for Medical Assistants	3	MFG 275	SMAW III	3
MA 188	Special Studies: Medical Assistant	1-4	MFG 276	GMAW III	3
			MFG 277	Production CNC Operations Lathe	3

MFG 278	CNC Fixture Design Lathe	3
MFG 279	CNC Project II	4
MFG 280	Co-op Work Experience Manufacturing	1-4
MFG 281	GTAW I	3
MFG 282	FCAW I	3
MFG 283	GTAW II	3
MFG 284	FCAW II	3
MFG 285	GTAW III	3
MFG 286	FCAW III	3
MFG 288	Industrial Fabrication	3
MFG 289	Material Handling-Fork Lift Safety	1
MFG 290	Certification Test Preparation AWS I	1
MFG 291	Certification Test Preparation NIMS I	1
MFG 298	Independent Study: Manufacturing	1-4
NUR 103	Nursing Assistant	9
NUR 104	Certified Nursing Assistant: Level 2	6
NUR 106	Nursing I	12
NUR 107	Nursing II	10
NUR 108	Nursing III	11
NUR 188	Special Studies: Nursing I	1-8
NUR 199	Selected Topics: Nursing I	1-8
NUR 206	Nursing IV	11
NUR 207	Nursing V	10
NUR 208	Nursing VI	9
NUR 218	Basic EKG	1
NUR 280A	CWE Nursing I	1-4
NUR 280B	CWE Nursing II	1-4
NUR 288	Special Studies: Nursing	1-8
NUR 298	Independent Study: Nursing	1-4
NUR 299	Selected Topics: Nursing	1-3
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 180	Co-op Work Experience Pharmacy Technician	1-4
PHM 181	Pharmacy Technician Seminar	2
PHM 188	Special Studies: Pharmacy Technician	1-4
PHM 190	Pharmacy Technician Practicum I: Hospital/ Institutional	1-4
PHM 191	Pharmacy Technician Practicum II: Retail/ Community	1-4
PHM 199	Selected Topics: Pharmacy Technician	1-4
PHM 298	Independent Study: Pharmacy Technician	1-4
VT 101	Intro to Veterinary Technician	3
VT 102	Veterinary Terminology	3
VT 103	Animal Hospital and Office Procedures	3
VT 108	Small Animal Nursing	4
VT 110	Parasitology and Pathology	4
VT 111	Hematology and Urinalysis	4
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	5
VT 118	Veterinary Anatomy & Physiology II	4
VT 188	Special Studies Vet Technician	1-4
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	9
VT 281	Clinical Practicum II	5
VT 288	Special Studies Vet Technician	1-4
VT 298	Independent Study: Veterinary Technician	1-4
VT 299	Special Topics: Veterinary Technician	1-4

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. The College 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 Outcomes

Computation

Upon successful completion of the course, the student will be able to:

1. Solve basic problems using mathematical principles and be prepared to apply them to workplace scenarios.
2. Evaluate and interpret data in order to make informed decisions in the workplace.

Communication

Upon successful completion of the course, the student will be able to:

1. Communicate clearly, accurately, and professionally in a variety of situations including workplace scenarios.
2. Communicate in written format confidently and effectively with a variety of audiences and be prepared to apply these skills in the workplace.

Human Relations

Upon successful completion of this course, the student will be able to:

1. Identify and model behaviors that demonstrate respect for diverse perspectives and experiences and be prepared to apply them in the workplace.
2. Collaborate and dialogue with empathy and respect.

Related Instruction Courses

Communication

Course	Credits	Fulfills Requirements For:
BA 214 Business Communications	3	Rel Instr Communications
WR 121 Academic Composition	4	Rel Instr Communications

Computation

Course	Credits	Fulfills Requirements For:
AH 105 Calculations for Allied Health	3	Rel Instr Computation
BA 104 Business Math	3	Rel Instr Computation
CUL 104 Applied Math for Culinary Arts	4	Rel Instr Computation
ED 114 Mathematics for Early Learning Educators	4	Rel Instr Computation
HIM 281 Healthcare Statistics	4	Rel Instr Computation
MTH 102 Applied Technical Mathematics	4	Rel Instr Computation
MTH 105 Math in Society	4	Rel Instr Computation
VT 114 Pharmaceutical Math	3	Rel Instr Computation

Human Relations

Course	Credits	Fulfills Requirements For:
AH 115 Cultural Responsiveness in Allied Health	3	Rel Instr Human Relations
BA 178 Customer Service	3	Rel Instr Human Relations
BA 285 Business Human Relations	3	Rel Instr Human Relations
COMM 115 Introduction to Intercultural Communication	4	Rel Instr Human Relations
COMM 218 Interpersonal Communication	3	Rel Instr Human Relations
COMM 219 Small Group Communication	4	Rel Instr Human Relations

ED 219 Multicultural Issues in Education Settings	3	Rel Instr Human Relations
ED 224 Anti-Bias Curriculum in Education	4	Rel Instr Human Relations
HM 190 Dining Room Operations	5	Rel Instr Human Relations
HS 162 Effective Helping Skills I	4	Rel Instr Human Relations
HS 208 Multicultural Issues in Human Services	4	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. 244). 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](#).

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 211	Fundamentals of Elementary Mathematics I	4
MTH 241	Calculus for Management/Social Science	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 - The Dynamic Earth	4
G 202	Geology II - Earth's Surface	4
G 203	Geology III - Earth History	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

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 204	Survey British Literature I	4
ENG 205	Survey British Literature II	4
GEOG 201	World Regional Geography I	4
HST 101	Europe: The Classical Era (pre-history to 600 C.E.)	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 201	Early America - History of the United States (pre-history to 1820)	4
HST 203	20th and Early 21st Century United States History (1920-present)	4
HST 270	20th Century European History	4
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 213	Introduction to Chican@/Latin@ Studies	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 221	Introduction to Children's Literature	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	Introduction to Music: Antiquity-1800	3
MUS 202	Introduction to Music: 1800-Present	3
MUS 203	Introduction to Music: World 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
GEOG 107	Cultural Geography	4
HHP 210	Introduction to the Health Care System	3
HHP 231	Human Sexuality	3
HHP 248	Health Psychology	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 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

A

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- [Art](#) (p. 85)
- [Automotive Technology](#) (p. 91)
- [Aviation](#) (p. 114)

B

- [Biology](#) (p. 129)
- [Business Administration](#) (p. 135)

C

- [Cascade Culinary Institute](#) (p. 148)
- [Chemistry](#) (p. 161)
- [Communication](#) (p. 163)
- [Computer & Information Systems](#) (p. 166)
- [Criminal Justice](#) (p. 181)

D

- [Dental Assisting](#) (p. 186)

E

- [Economics](#) (p. 189)
- [Education](#) (p. 191)
- [Emergency Medical Services](#) (p. 204)
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F

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- [Forest Resources Technology/Forestry](#) (p. 229)

G

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- [Geographic Information Systems](#) (p. 247)
- [Geography](#) (p. 252)
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H

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- [History](#) (p. 262)
- [Human Services](#) (p. 265)
- [Humanities](#) (p. 272)

M

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- [Mathematics](#) (p. 296)
- [Medical Assistant](#) (p. 300)
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N

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O

- [Outdoor Leadership](#) (p. 318)

P

- [Pharmacy Technician](#) (p. 323)
- [Political Science](#) (p. 327)
- [Psychology](#) (p. 329)
- [Public Health](#) (p. 332)

S

- [Sociology](#) (p. 336)

V

- [Veterinary Technician](#) (p. 339)

W

- [World Languages](#) (p. 343)

PROGRAMS

Title	Award	Type
Anthropology		
Anthropology (p. 84)	Associate of Arts Oregon Transfer	Transfer
Art		
Art (p. 89)	Associate of Arts Oregon Transfer	Transfer
Automotive Technology		
Auto Electrical Tech - Basic (p. 105)	Career Pathway Certificate of Completion	CTE
Auto Electrical Tech-Advanced (p. 104)	Career Pathway Certificate of Completion	CTE
Auto Electronics & Diagnostics (p. 96)	Associate of Applied Science	CTE
Auto Engine Performance Tech (p. 106)	Career Pathway Certificate of Completion	CTE
Automotive Basic with BasicEng (p. 99)	Career Pathway Certificate of Completion	CTE
Automotive Basic with Welding (p. 100)	Career Pathway Certificate of Completion	CTE
Automotive Clean Diesel Tech (p. 111)	Career Pathway Certificate of Completion	CTE
Automotive Controller Tech I (p. 101)	Career Pathway Certificate of Completion	CTE
Automotive Controller Tech II (p. 102)	Career Pathway Certificate of Completion	CTE
Automotive Drive Train Tech (p. 103)	Career Pathway Certificate of Completion	CTE
Automotive Engine Technician (p. 107)	Career Pathway Certificate of Completion	CTE
Automotive Heating & AC Tech (p. 108)	Career Pathway Certificate of Completion	CTE
Automotive Hybrid Elec Tech I (p. 109)	Career Pathway Certificate of Completion	CTE
Automotive Hybrid Elec Tech II (p. 110)	Career Pathway Certificate of Completion	CTE
Automotive Management (p. 94)	Associate of Applied Science	CTE
Master Automotive Technician (p. 97)	Two-Year Certificate of Completion	CTE
Undercar Technician (p. 113)	Career Pathway Certificate of Completion	CTE
Aviation		
Aviation (p. 128)	Associate of Science	Transfer
Aviation-Prof Pilot Airplane (p. 119)	Associate of Applied Science	CTE
Aviation-Prof Pilot Helicopter (p. 122)	Associate of Applied Science	CTE
Unmanned Aerial Sys Operations (p. 126)	Associate of Applied Science	CTE
Biology		
Biological Sciences (p. 131)	Associate of Arts Oregon Transfer	Transfer
Dental Hygiene (p. 132)	Associate of Arts Oregon Transfer	Transfer
Pre-Med/Veterinary/Dentistry (p. 133)	Associate of Arts Oregon Transfer	Transfer
Business Administration		
Accounting (p. 139)	Associate of Applied Science Option	CTE
Accounting Clerk (p. 143)	One-Year Certificate of Completion	CTE
Business (p. 146)	Associate of Science Oregon Transfer	Transfer
Business Administration (p. 137)	Associate of Applied Science	CTE
Entrepreneurship (p. 144)	One-Year Certificate of Completion	CTE
Management (p. 140)	Associate of Applied Science Option	CTE
Marketing Communications (p. 145)	One-Year Certificate of Completion	CTE
Office Professional (p. 145)	One-Year Certificate of Completion	CTE
Small Business/Entrepreneur (p. 141)	Associate of Applied Science Option	CTE
Cascade Culinary Institute		
Baking & Pastry Arts (p. 153)	Associate of Applied Science	CTE
Baking & Pastry Arts (p. 154)	Two-Year Certificate of Completion	CTE
Culinary Arts (p. 155)	Associate of Applied Science	CTE
Culinary Arts (p. 157)	Two-Year Certificate of Completion	CTE
Hospitality Management (p. 158)	Associate of Applied Science	CTE

<u>Hospitality Management</u> (p. 160)	Two-Year Certificate of Completion	CTE
Chemistry		
<u>Chemistry</u> (p. 162)	Associate of Arts Oregon Transfer	Transfer
Communication		
<u>Communication</u> (p. 165)	Associate of Arts Oregon Transfer	Transfer
Computer & Information Systems		
<u>Computer & Information Systems</u> (p. 170)	Associate of Applied Science	CTE
<u>Computer & Information Systems</u> (p. 177)	One-Year Certificate of Completion	CTE
<u>Computer Aided Drafting (CAD)</u> (p. 172)	Associate of Applied Science Option	CTE
<u>Computer Aided Drafting (CAD)</u> (p. 178)	One-Year Certificate of Completion	CTE
<u>Computer Science</u> (p. 180)	Associate of Science Oregon Transfer	Transfer
<u>Cybersecurity</u> (p. 179)	Career Pathway Certificate of Completion	CTE
<u>Networking and Cybersecurity</u> (p. 174)	Associate of Applied Science Option	CTE
<u>Web Development</u> (p. 175)	Associate of Applied Science Option	CTE
Criminal Justice		
<u>Criminal Justice</u> (p. 183)	Associate of Applied Science	CTE
<u>Criminal Justice</u> (p. 185)	Associate of Arts Oregon Transfer	Transfer
Dental Assisting		
<u>Dental Assisting</u> (p. 187)	One-Year Certificate of Completion	CTE
Economics		
<u>Economics</u> (p. 190)	Associate of Arts Oregon Transfer	Transfer
Education		
<u>Child, Family & Community</u> (p. 198)	Career Pathway Certificate of Completion	CTE
<u>Dev App Learning Environments</u> (p. 199)	Career Pathway Certificate of Completion	CTE
<u>Early Childhood Education</u> (p. 194)	Associate of Applied Science	CTE
<u>Early Childhood Education</u> (p. 200)	Associate of Arts Oregon Transfer	Transfer
<u>Education - Elementary</u> (p. 201)	Associate of Arts Oregon Transfer	Transfer
<u>Education - Secondary</u> (p. 203)	Associate of Arts Oregon Transfer	Transfer
<u>Equity in Education</u> (p. 196)	One-Year Certificate of Completion	CTE
Emergency Medical Services		
<u>Emergency Medical Technician</u> (p. 209)	One-Year Certificate of Completion	CTE
<u>Paramedicine</u> (p. 206)	Associate of Applied Science	CTE
Engineering		
<u>Engineering</u> (p. 213)	Associate of Science	Transfer
<u>Physics</u> (p. 212)	Associate of Arts Oregon Transfer	Transfer
Exercise Science		
<u>Exercise Science-Kinesiology</u> (p. 218)	Associate of Arts Oregon Transfer	Transfer
<u>Pre-PhysTherapy</u> (p. 220)	Associate of Arts Oregon Transfer	Transfer
Fire Science		
<u>Fire Science</u> (p. 225)	Associate of Applied Science	CTE
<u>Fire Service Administration</u> (p. 227)	Associate of Science	Transfer
Forest Resources Tech/Forestry		
<u>Advanced Forest Concepts</u> (p. 234)	Career Pathway Certificate of Completion	CTE
<u>Agricultural Sciences</u> (p. 237)	Associate of Science	Transfer
<u>Conserv of Natural Resources</u> (p. 235)	Career Pathway Certificate of Completion	CTE
<u>Forest Ecology</u> (p. 235)	Career Pathway Certificate of Completion	CTE
<u>Forest Measurements</u> (p. 236)	Career Pathway Certificate of Completion	CTE
<u>Forest Protection</u> (p. 236)	Career Pathway Certificate of Completion	CTE
<u>Forest Resources Technology</u> (p. 232)	Associate of Applied Science	CTE
<u>Forestry</u> (p. 239)	Associate of Science	Transfer
<u>Mapping/Cartography</u> (p. 237)	Career Pathway Certificate of Completion	CTE
<u>Natural Resources</u> (p. 240)	Associate of Science	Transfer

General

<u>Associate of General Studies</u> (p. 246)	Associate of General Studies	Transfer
<u>Exploratory</u> (p. 242)	Associate of Arts Oregon Transfer	Transfer
<u>General OSU Transfer Emphasis</u> (p. 244)	Associate of Science	Transfer
<u>Undeclared Transfer</u> (p. 243)	Associate of Arts Oregon Transfer	Transfer

Geographic Information Systems

<u>Geographic Information Systems</u> (p. 248)	Associate of Applied Science	CTE
<u>Geographic Information Systems</u> (p. 250)	One-Year Certificate of Completion	CTE
<u>Geospatial Science</u> (p. 251)	Associate of Science	Transfer

Geography

<u>Geography</u> (p. 254)	Associate of Arts Oregon Transfer	Transfer
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Geology

<u>Geology</u> (p. 256)	Associate of Arts Oregon Transfer	Transfer
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Health Information Management

<u>Health Information Management</u> (p. 259)	Associate of Applied Science	CTE
<u>Medical Office Specialist</u> (p. 261)	One-Year Certificate of Completion	CTE

History

<u>History</u> (p. 264)	Associate of Arts Oregon Transfer	Transfer
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Human Services

<u>Addiction Studies-Human Svcs</u> (p. 267)	Associate of Applied Science	CTE
<u>Addiction Studies-Human Svcs</u> (p. 269)	Two-Year Certificate of Completion	CTE
<u>Human Services</u> (p. 270)	Associate of Arts Oregon Transfer	Transfer

Humanities

<u>English/Literature</u> (p. 276)	Associate of Arts Oregon Transfer	Transfer
<u>Humanities</u> (p. 278)	Associate of Arts Oregon Transfer	Transfer
<u>Liberal Arts/Liberal Studies</u> (p. 279)	Associate of Arts Oregon Transfer	Transfer

Manufacturing Technology

<u>CNC Machine Operator</u> (p. 285)	One-Year Certificate of Completion	CTE
<u>Manufacturing Machining Tech</u> (p. 283)	Associate of Applied Science	CTE
<u>Manufacturing Technician</u> (p. 286)	Career Pathway Certificate of Completion	CTE
<u>Welding</u> (p. 287)	Associate of Applied Science	CTE
<u>Welding</u> (p. 289)	One-Year Certificate of Completion	CTE
<u>Welding Technician</u> (p. 290)	Career Pathway Certificate of Completion	CTE

Massage Therapy

<u>Massage Therapy</u> (p. 293)	Associate of Applied Science	CTE
<u>Massage Therapy</u> (p. 295)	Two-Year Certificate of Completion	CTE

Mathematics

<u>Mathematics</u> (p. 298)	Associate of Arts Oregon Transfer	Transfer
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Medical Assistant

<u>Medical Assistant</u> (p. 303)	Career Pathway Certificate of Completion	CTE
<u>Medical Assistant</u> (p. 301)	One-Year Certificate of Completion	CTE

Music

<u>Music</u> (p. 308)	Associate of Arts Oregon Transfer	Transfer
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Nursing

<u>Nursing</u> (p. 315)	Associate of Arts Oregon Transfer	Transfer
<u>Nursing (RN)</u> (p. 311)	Associate of Applied Science	CTE
<u>Practical Nursing</u> (p. 313)	Two-Year Certificate of Completion	CTE

Nursing Assistant

<u>Nursing Assistant</u> (p. 316)	One-Year Certificate of Completion	CTE
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Outdoor Leadership

<u>Outdoor Leadership</u> (p. 320)	Associate of Arts Oregon Transfer	Transfer
<u>Outdoor Leadership</u> (p. 321)	Associate of Science	Transfer

Pharmacy Technician

Pharmacy Technician (p. 325)	One-Year Certificate of Completion	CTE
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Political Science

Political Science (p. 327)	Associate of Arts Oregon Transfer	Transfer
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Psychology

Psychology (p. 330)	Associate of Arts Oregon Transfer	Transfer
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Public Health

Public Health (p. 334)	Associate of Arts Oregon Transfer	Transfer
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Sociology

Pre-Law (p. 337)	Associate of Arts Oregon Transfer	Transfer
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Sociology (p. 338)	Associate of Arts Oregon Transfer	Transfer
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Veterinary Technician

Veterinary Technician (p. 341)	Associate of Applied Science	CTE
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World Languages

World Languages (p. 348)	Associate of Arts Oregon Transfer	Transfer
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Anthropology

Anthropology is the study of humans and is composed of four subfields: archaeology, biological anthropology, cultural anthropology, and linguistic anthropology. 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. It is therefore especially attuned to questions of social, cultural, and biological diversity as well as issues of power, identity, and inequality across societies.

Studying anthropology prepares for life in a multicultural and globally interconnected world and equips 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.

See the [Anthropology page](#) for more information.

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Modoc Hall, Bend Campus

Department: World Languages and Cultures

Department Chair: [Murray Godfrey \(mgodfrey@cooc.edu\)](mailto:mgodfrey@cooc.edu)

Programs

Transfer

Associate of Arts Oregon Transfer

- [Anthropology - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 84)

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. Cross-listed with: SOC 141; courses are identical and credit counts once.

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 236 The Primates: Behavior and Evolution (4 Credits)**Recommended preparation:** ANTH 234.

Examines the diversity of species within the primate order, ranging from the pygmy mouse lemurs of Madagascar to the mountain gorillas of Rwanda. Explores how primate behaviors related to sociality, reproduction, communication, competition, cooperation, and culture have evolved. As primates ourselves, studying primate behavior is essential to better comprehend the evolution of our own behavioral repertoire and assess our branch on the tree of life.

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 288 Special Studies: Anthropology (1-4 Credits)

Explores topics of current interest in the discipline.

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 with a focus in anthropology is designed for students who wish to pursue a bachelor's degree in anthropology and work in fields such as public service, conservation and heritage management, museum studies, and social work. Those completing graduate degrees may work in anthropology, law, public health, medicine, science, or education.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 58)		
Choose 3 credits ¹		3

Mathematics: (p. 60)	
Choose one course	4
Oral Communication: (p. 60)	
Choose one course	3-4
Writing: (p. 60)	
WR 121 Academic Composition	4
WR 122 Argument, Research, and Multimodal Composition or WR 227 Technical Writing	4
General Education/Discipline Studies	
Cultural Literacy: (p. 63)	
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).	
Arts and Letters: (p. 61)	
Choose at least three courses from at least two prefixes	9-12
Social Science: (p. 68)	
Choose at least four courses from at least two prefixes	12-16
Recommend: ANTH 102, ANTH 103, ANTH 240	
Science/Math/Computer Science: (p. 66)	
Choose at least four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science	
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 lab requirements. If the interest is primarily in biological anthropology, then it is recommended to select the biology sequence or the human anatomy and physiology sequence.

In choosing electives, consider two years of a world language since many bachelor of art 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. 60)	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 Argument, Research, and Multimodal or WR 227 Composition or 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

The Visual Arts program provides a foundation in art history, two- and three-dimensional design, graphic design, illustration, photography, drawing, watercolor, painting, ceramics, metals, jewelry, and sculpture. Opportunity for in-depth investigation is offered through studio and online formats for students to produce, view, and interpret art using a variety of media. Pence Hall and Ochoco Hall on the Bend campus house art studios equipped with drawing tables, easels, potter's wheels, darkroom, sculpting, and metalwork equipment, all exclusively for student use. Students and faculty members develop extraordinary art exhibitions for the Gallery at the Pinckney Center and the Barber Library Rotunda Gallery, both of which also exhibit work by artists from across the nation.

See the [Art](#) page for more information.

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Pence Hall, Bend Campus

[Venus Nguyen \(vnguyen3@coocc.edu\)](mailto:vnguyen3@coocc.edu) (2D and Digital Art)

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Pence Hall, Bend Campus

[Bill Cravis \(wcravis@coocc.edu\)](mailto:wcravis@coocc.edu) (3D Art)

541-383-7513

Ochoco Hall, Bend Campus

Department: Fine Arts and Communication

Department Chair: [Lilli Ann Linford-Foreman \(lforeman@coocc.edu\)](mailto:lforeman@coocc.edu)

Programs

Transfer

Associate of Arts Oregon Transfer

- [Art - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 89)

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 or minimum placement Wr/Comm Level 7.

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 or higher or minimum placement Wr/Comm Level 7.

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 or higher or minimum placement Wr/Comm Level 7.

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 or higher or minimum placement Wr/Comm Level 7.

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 288 Special Studies: Art History (1-4 Credits)

Explores topics of current interest in the discipline.

ART 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.

ARH 299 Selected Topics: Art History (1-4 Credits)

Provides a learning experience in art history not currently available; this course is in development to be proposed as a permanent course.

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 Beginning Graphic Design (3 Credits)

Introduces standard graphic design concepts and principles. Introduces functionality of industry standard graphic design software. Includes projects that use these applications for the purposes of rendering and designing various forms of digital output and print.

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

Introduces concepts and principles of visual language and basic design in two dimensions. Applies the elements of art and principles of design to communicate ideas and solve problems. Emphasizes critical thinking and creative problem solving in a variety of two-dimensional artistic media.

ART 116 Basic Design: Color (3 Credits)

Introduces concepts and principles of color theory related to the visual arts. Make informed color choices to communicate ideas through studying scientific research (theory) and hands-on projects (practice). Emphasizes critical thinking and creative problem solving in a variety of media.

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.

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 Beginning Drawing (3 Credits)

Recommended preparation: ART 115.

Emphasizes observing and developing fundamental drawing and composition skills. Uses still life material extensively. Covers historical and cultural approaches to drawing and drawing materials.

ART 132 Intermediate Drawing (3 Credits)

Recommended preparation: ART 131.

Builds on drawing fundamentals from ART 131. Introduces use of color in drawings. Create and analyze projects that demonstrate critical and creative thinking. Demonstrate individual exploration of process and content. May be repeated for credit.

ART 141 Beginning Illustration (3 Credits)

Recommended preparation: ART 115 and ART 116.

Introduces illustration as a means of communication. Covers visual problem solving, the process of illustration, and an introduction to markets: publication and advertising. Render in various traditional media, bitmap, and vector software through the use of reference and research. Explores personal style, self-promotion, and an introduction to business practices.

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 158B1 Jewelry - Casting I (3 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.

ART 158B2 Jewelry - Casting II (3 Credits)

Recommended preparation: ART 158B1 and ART 157A1.

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

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

Introduces materials and techniques of painting, using alkyd oil, acrylic, and/or water-soluble oil paints. Provides essential painting skills such as building canvas supports, stretching canvas, and preparing painting grounds. Subject matter for paintings will vary.

ART 184 Beginning Watercolor (3 Credits)

Explores the unique qualities of watercolor as a painting medium. Emphasizes fundamental skills, color, and composition while painting from a variety of subjects.

ART 185 Intermediate Watercolor (3 Credits)**Recommended preparation:** ART 131 and ART 184.

Continues exploration watercolor's unique qualities as a painting medium. Emphasizes fundamental skills, color, and composition while painting from a variety of subjects. May be repeated for credit.

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 Portfolio Development (1 Credit)**Recommended preparation:** Developed body of art work suggested for this course.

Develop traditional and digital visual art portfolio. Create resume and other career search materials. 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. Developed body of art work suggested for the course.

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

This course is in development.

ART 230 Intermediate Graphic Design (3 Credits)**Prerequisites:** ART 110.**Recommended preparation:** ART 115 and ART 116.

Explores developing innovative solutions to problems of visual communication in graphic design. Emphasizes concept and creation of designs with targeted intention. Introduces graphic design practice, theory, methodologies, and delivery systems including branding, typography, print and digital advertising, packaging, and promotional design. Builds upon technical skills gained in ART 110. May be repeated for credit.

ART 234 Figure Drawing (3 Credits)**Recommended preparation:** ART 131.

Introduces drawing the clothed and unclothed figure using a variety of techniques and media. Uses models for the study of the human figure and portrait. Addresses representational and expressive approaches.

ART 241 Intermediate Illustration (3 Credits)**Recommended preparation:** ART 141.

Further explores visual problem solving, the process of illustration, rendering with traditional media, bitmap and vector software. Introduces markets: editorial and narrative illustration, and surface design. Focuses on developing illustrations in conjunction with type. Emphasizes professional presentation of work. May be repeated for credit.

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 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 281 Intermediate Painting (3 Credits)**Recommended preparation:** ART 181.

Continues exploration of the materials and techniques of painting with alkyd oil, acrylic, and/or water-soluble oil paints. Emphasizes color theory and personal expression. May be repeated for credit.

ART 288 Special Studies: Art (1-4 Credits)

Explores topics of current interest in the discipline.

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 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 297 Capstone Project (1 Credit)**Recommended preparation:** Completion of secondary level course in chosen medium.

Provides advanced, individualized development in visual arts. Develop a unique project in chosen medium. Provides opportunity for final piece(s) to go through a jury process for a gallery show, call for art, or other juried art competition. May be repeated for credit.

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 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. The College's art curriculum includes courses in art history, two-dimensional and three-dimensional design, graphic design, drawing, illustration, painting, sculpture, digital and darkroom photography, ceramics, jewelry, and metalwork.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

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		
<u>Health:</u> (p. 58)		
Choose 3 credits	¹	3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommend: MTH 105		
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
	or WR 227 Technical Writing	
General Education/ Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose at least three courses chosen from at least two prefixes		9-12
Recommend: Two courses with an ARH prefix (ARH 201 and ARH 202 or ARH 203 or ARH 206) and one course with an ART prefix (ART 115 or ART 117)		
<u>Social Science:</u> (p. 68)		
Choose at least four courses from at least two prefixes		12-16
<u>Science/Math/Computer Science:</u> (p. 66)		
Choose at least four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		
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 116, ART 131, ART 197, courses in art selected emphasis, and foreign language courses for students seeking Bachelor of Arts ^{2,3}		
Total Credits		90-106

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

² Students seeking to obtain a Bachelor of Arts must complete all foreign language through the 200 level (i.e., 203). 100-level foreign language courses, depending on language placement, may be required.

³ Art selected emphasis options are drawing, painting, photography, 3-D and digital arts. See advising notes for additional information.

Advising Notes

Students pursuing a Bachelor of Arts degree 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 can be applied to partially fulfill the arts and letters requirement.

Students pursuing a Bachelor of Fine Arts degree should consider taking two terms of Western art history and one of non-Western art history. ARH courses can be applied to partially fulfill the arts and letters requirement.

Students pursuing transfer to an upper-division arts school or program will typically be required to have completed core foundational art courses. Recommended foundational art courses are ART 115 Basic Design: 2-D, ART 116 Basic Design: Color, ART 117 Basic Design: 3-D, and ART 131 Beginning Drawing; these courses can be applied to partially fulfill the arts and letters requirement.

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 and to take ART 197 Portfolio Development.

Students pursuing transfer to an upper-division arts school or program will typically have a discipline emphasis. Recommended courses based on emphasis:

Drawing:

Course	Title	Credits
ART 132	Intermediate Drawing	3
ART 141	Beginning Illustration	3
ART 184	Beginning Watercolor	3
ART 185	Intermediate Watercolor	3
ART 241	Intermediate Illustration	3
ART 234	Figure Drawing	3
ART 297	Capstone Project	1

Painting:

Course	Title	Credits
ART 181	Beginning Painting	3
ART 184	Beginning Watercolor	3
ART 185	Intermediate Watercolor	3
ART 234	Figure Drawing	3
ART 281	Intermediate Painting	3
ART 297	Capstone Project	1

Photography:

Course	Title	Credits
ART 110	Beginning Graphic Design	3
ART 161	Photography I	3
ART 162	Photography II	3
ART 230	Intermediate Graphic Design	3
ART 265	Digital Photography	3
ART 267	Digital Photography II	3
ART 297	Capstone Project	1

Graphic Design/Illustration:

Course	Title	Credits
ART 110	Beginning Graphic Design	3
ART 141	Beginning Illustration	3
ART 184	Beginning Watercolor	3
ART 230	Intermediate Graphic Design	3
ART 234	Figure Drawing	3
ART 241	Intermediate Illustration	3
ART 297	Capstone Project	1

Sculpture/Ceramics:

Course	Title	Credits
ART 121	Ceramics: Introductory Hand Building	3
ART 122	Ceramics: Introductory Wheel Throwing	3
ART 190	Figurative Clay Sculpture	3
ART 191	Sculpture	3
ART 253	Ceramics: Intermediate Ceramics	3
ART 291	Mold Making for Ceramics and Sculpture	3
ART 293	Outdoor and Public Sculpture	3
ART 297	Capstone Project	1

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
WR 121 Academic Composition	4
Mathematics (recommend MTH 105)	4
Discipline Studies Art & Letters (recommend ART 115 or ART 117)	3
Elective (recommend ART 116)	3
Credits	14
Second Term	Credits
WR 122 Argument, Research, and Multimodal or WR 227 Composition or Technical Writing	4
Discipline Studies Arts & Letters (recommend ARH 201)	4
Discipline Studies Social Science	3-4
Elective (recommend ART 121 or ART 131 or ART 191)	3
Elective (recommend art selected emphasis)	3
Credits	17-18
Third Term	Credits
Discipline Studies Arts & Letters (recommend: ARH 202 or ARH 203 or ARH 206)	4
Discipline Studies Science/Math/Computer Science	3-5
Oral Communication: (p. 60)	3-4
Elective (recommend art selected emphasis)	3
Elective	3-4
Credits	16-20

Fourth Term

Discipline Studies Laboratory Science	3-5
Discipline Studies Social Science	3-4
Health (3 credits with HHP or HHPA prefix)	3
Elective (recommend art selected emphasis)	3
Elective (recommend art selected emphasis)	3

Credits **15-18**

Fifth Term

Discipline Studies Laboratory Science	3-5
Discipline Studies Social Science	3-4
Elective (recommend ART 197)	1
Elective (recommend art selected emphasis)	3
Elective	3-4

Credits **13-17**

Sixth Term

Discipline Studies Laboratory Science	3-5
Discipline Studies Social Science	3-4
Elective (recommend art selected emphasis)	3
Elective (recommend art selected emphasis)	3
Elective	3-4

Credits **15-19**

Total Credits **90-106**

Automotive Technology

Automotive Technology offers students the opportunity to become a skilled automotive service technician and provides skills necessary to succeed in an ever changing and challenging industry. Faculty prepare technicians for future technologies.

The program is accredited by the National Automotive Technicians Education Foundation, an arm of industry-certifying Automotive Service Excellence.

See the [Automotive page](#) for more information.

Contact:

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Ponderosa Hall, Bend Campus

Department: Natural and Industrial Resources

Department Chair: Wayne Yeatman

Programs

Career and Technical Education

Associate of Applied Science

- [Automotive Management - Associate of Applied Science \(AAS\)](#) (p. 94)
- [Automotive Technology in Electronics and Diagnostics - Associate of Applied Science \(AAS\)](#) (p. 96)

Two-Year Certificate of Completion

- [Master Automotive Technician - Two-Year Certificate of Completion \(CC2\)](#) (p. 97)

Career Pathway Certificate of Completion

- [Automotive Basic Skills with Basic Engine Performance - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 99)
- [Automotive Basic Skills with Welding - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 100)
- [Automotive Clean Energy Diesel Technician \(Advanced\) - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 111)
- [Automotive Controller Systems Technician Level 1 - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 101)
- [Automotive Controller Systems Technician Level 2 - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 102)
- [Automotive Drive Train Technician - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 103)
- [Automotive Electrical Technician \(Advanced\) - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 104)
- [Automotive Electrical Technician \(Basic\) - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 105)
- [Automotive Engine Performance Technician - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 106)
- [Automotive Engine Technician - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 107)
- [Automotive Heating & Air Conditioning Technician - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 108)
- [Automotive Hybrid Electric Vehicles \(HEV\) Technician - Level 1 - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 109)
- [Automotive Hybrid Electric Vehicles \(HEV\) Technician - Level 2 - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 110)
- [Undercar Technician - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 113)

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 060 or higher or minimum placement Math Level 10.

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 with concurrency: 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 060 or higher or minimum placement Math Level 10.

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. P/NP grading.

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 060 or higher or minimum placement Math Level 10.

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 188 Special Studies: Automotive Technology (1-4 Credits)

Explores topics of current interest in the automotive discipline.

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:** or to be taken with: MTH 060 or higher or minimum placement Math Level 10.

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 060 or higher or minimum placement Math Level 10.

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 with concurrency:** 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.

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 with concurrency:** 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 with concurrency:** 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:** or to be taken with: MTH 060 or higher or minimum placement Math Level 10.

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 - Rebuild (3 Credits)**Prerequisites:** AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

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:** or to be taken with: MTH 060 or higher or minimum placement Math Level 10.

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 Theory (2 Credits)

This course is instructor lead which includes; 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 105 and 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.

AUT 288 Special Studies: Automotive Technology (1-4 Credits)

Explores topics of current interest in the automotive discipline.

AUT 298 Independent Study: Automotive Technology (1-4 Credits)**Prerequisites:** Instructor approval required.**Recommended preparation:** Prior coursework in the discipline.

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

AUT 299 Selected Topics: Automotive (1-4 Credits)

This course is in development.

Automotive Management - Associate of Applied Science (AAS)

Description

The Automotive Management Associate of Applied Science prepares students to be an automotive technician and manager. Coursework includes technical skills in computer applications, electrical, electronic, mechanical, hydraulic, and network systems. Communication skills are also highly emphasized.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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 Automotive Service Excellence and understanding of sophisticated drivability and emissions-related issues by obtaining Advanced Engine Performance Specialist Certification.

ENTRANCE REQUIREMENTS

Academic Entrance Requirements

Required:

- Students must complete the following five courses before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Trade	3
AUT 115	College Success for Automotive Technology	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 - Rebuild	3
AUT 253	Automotive Air Conditioning	3
AUT 256	Automatic Transmissions Theory	2
BA 101	Introduction to Business	4
BA 111	Applied Accounting I	3
BA 206	Management Fundamentals I	4
BA 223	Marketing Principles I	4
BA 280	Co-op Work Experience Business	3
BA 250	Entrepreneurship	4
Other Courses		
Choose one math course from the following:		3-4
BA 104	Business Math	
MTH 102	Applied Technical Mathematics	
Or one math course from the foundational requirements math list		
BA 214	Business Communications	3-4
or WR 121	Academic Composition	
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
HHP 252A	Fitness/First Aid	3
<u>Human Relations:</u> (p. 76)		3-4
Total Credits		98-105

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 advised to avoid working more than 15 hours per week due to a heavy course load. It is recommended that the 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		Credits
Fall		
AUT 101	Basic Electricity for 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 Automotive Technology	2
Choose one math course from the following:		3-4
BA 104	Business Math	
MTH 102	Applied Technical Mathematics	
Or one math course from the foundational requirements math list		

	Credits	14-15
Winter		
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 202	Manual Drive Trains I	3
AUT 205	Engine Performance I	2
BA 214	Business Communications	3-4
or WR 121	or Academic Composition	

	Credits	15-16
Spring		
AUT 104	Automotive Electric III	2
AUT 111	Computerized Engine Controls	5
AUT 112	Basic Engine Performance I	1
AUT 113	Basic Engine Performance II	1
AUT 206	Engine Performance II	2
BA 101	Introduction to Business	4

	Credits	15
Summer		
AUT 216A	CWE Automotive A	4
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
AUT 253	Automotive Air Conditioning	3

	Credits	7-11
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Second Year		
Fall		
AUT 114	Welding for the Automotive Trade	3
AUT 201	Automotive Engines	4
AUT 208	Automotive Brakes	3
BA 111	Applied Accounting I	3
Credits		13

Winter		
AUT 105	Diesel Performance I	2
AUT 203	Manual Drive Trains II	3
AUT 256	Automatic Transmissions Theory	2
BA 206	Management Fundamentals I	4
BA 223	Marketing Principles I	4
Credits		15

Spring		
AUT 204	Steering and Suspension	3
AUT 251	Automatic Transmissions - Rebuild	3
BA 250	Entrepreneurship	4
HHP 252A	Fitness/First Aid	3

<u>Human Relations:</u> (p. 76)		3-4
	Credits	16-17
Summer		
BA 280	Co-op Work Experience Business	1-3
	Credits	1-3
	Total Credits	96-105

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

Recommended:

- High school diploma or GED

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

Description

The Associate of Applied Science in Automotive Technology in Electronics and Diagnostics prepares students to enter the field of electric and hybrid vehicle service. Coursework includes technical skills in computer applications, electrical, electronic, mechanical, hydraulic and network systems. Students will learn theory as well as application and will use the latest equipment to diagnose and repair alternative fuel vehicles.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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.

Entrance Requirements

Required:

- Students must complete the following five courses before enrolling in other AUT courses: AUT 101 Basic Electricity for Automotive, AUT 106 Automotive Program Orientation, AUT 107

ADDITIONAL PROGRAM COSTS (BEYOND STANDARD TUITION/FEES AND TEXTBOOKS)

Material costs

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	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 - Rebuild	3
AUT 253	Automotive Air Conditioning	3
AUT 256	Automatic Transmissions Theory	2
AUT 260	Diesel Performance II	4
AUT 270	Automotive Controller Systems I	4
AUT 271	Automotive Controller Systems II	4
AUT 280	Hybrid Electric Vehicles I	4

AUT 281	Hybrid Electric Vehicles II	4
Other Required Courses		
BA 214 or WR 121	Business Communications Academic Composition	3-4
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
<u>Human Relations:</u> (p. 76)		3-4
Choose one math course from the following:		3-4
BA 104	Business Math	
MTH 102	Applied Technical Mathematics	
Or one math course from the foundational requirements math list		
Total Credits		96-103

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

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 recommended to avoid working more than 15 hours per week due to a heavy course load. It is recommended that the 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 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 115	College Success for Automotive Technology	2
AUT 110	Small Gas Engines	3
AUT 101	Basic Electricity for Automotive	2
CIS 120	Computer Concepts	0-4
Choose one math course from the following list:		3-4
BA 104	Business Math	
MTH 102	Applied Technical Mathematics	
Or one math course from the foundational requirements math list		
Credits		14-19

Winter		
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 205	Engine Performance I	2
AUT 251	Automatic Transmissions - Rebuild	3
BA 214 or WR 121	Business Communications or Academic Composition	3-4
Credits		15-16

Spring		
AUT 104	Automotive Electric III	2
AUT 111	Computerized Engine Controls	5
AUT 202	Manual Drive Trains I	3
AUT 206	Engine Performance II	2
CIS 131	Software Applications	4
Credits		16

Summer		
AUT 216A	CWE Automotive A	4
AUT 253	Automotive Air Conditioning	3
Credits		7

Second Year		
Fall		
AUT 201	Automotive Engines	4
AUT 208	Automotive Brakes	3
AUT 280	Hybrid Electric Vehicles I	4
AUT 270	Automotive Controller Systems I	4
Credits		15

Winter		
AUT 105	Diesel Performance I	2
AUT 203	Manual Drive Trains II	3
AUT 256	Automatic Transmissions Theory	2
<u>Human Relations:</u> (p. 76)		3-4
AUT 281	Hybrid Electric Vehicles II	4
Credits		14-15

Spring		
AUT 204	Steering and Suspension	3
AUT 216B	CWE Automotive B	4
AUT 260	Diesel Performance II	4
AUT 271	Automotive Controller Systems II	4
Credits		15
Total Credits		96-103

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

The Master Automotive Technician Two-Year Certificate of Completion prepares students to enter the transportation industry as an automotive technician. Coursework includes technical skills in computer applications, electrical, electronic, mechanical, hydraulic, and network systems. Communication skills are also highly emphasized.

The program is designed so that students will be able to complete in approximately 12 to 15 months and earn up to seven career pathway certificates.

The program is accredited by the National Automotive Technicians Education Foundation, an arm of industry-certifying Automotive Service Excellence.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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:

- 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	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 - Rebuild	3
AUT 253	Automotive Air Conditioning	3
AUT 256	Automatic Transmissions Theory	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 Automotive Trade	
AUT 211	ASE Test Prep I	
AUT 212	ASE Test Prep II	
Other Required Courses		
BA 214 or WR 121	Business Communications Academic Composition	3-4
Human Relations: (p. 76)		3-4
Choose one math course from the following:		3-4
BA 104	Business Math	
MTH 102	Applied Technical Mathematics	
Or one math course from the foundational requirements math list		
Total Credits		74-79

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

Advising Notes

Full-time students are recommended to avoid working more than 15 hours per week due to a heavy course load.

It is recommended that the [Automotive Service Excellence](#) certification test be taken as the student completes the program.

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.

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 for 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 Automotive Technology	2
Choose one math course from the following:		3-4
BA 104	Business Math	
MTH 102	Applied Technical Mathematics	
Or one math course from the foundational requirements math list		
Credits		14-15

Winter

AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 202	Manual Drive Trains I	3
AUT 205	Engine Performance I	2
BA 214 or WR 121	Business Communications or Academic Composition	3-4
Credits		15-16

Spring

AUT 104	Automotive Electric III	2
AUT 111	Computerized Engine Controls	5
AUT 206	Engine Performance II	2
Automotive Elective		1
Automotive Elective		1
Human Relations : (p. 76)		3-4
Credits		14-15

Second Year

Fall		
AUT 201	Automotive Engines	4
AUT 208	Automotive Brakes	3

AUT 251	Automatic Transmissions - Rebuild	3
Credits		10
Winter		
AUT 105	Diesel Performance I	2
AUT 203	Manual Drive Trains II	3
AUT 256	Automatic Transmissions Theory	2
Credits		7
Spring		
AUT 204	Steering and Suspension	3
Automotive Elective		1
Automotive Elective		1
Credits		5
Summer		
AUT 253	Automotive Air Conditioning	3
AUT 216A	CWE Automotive A	4
AUT 216B	CWE Automotive B	4
Credits		11
Total Credits		76-79

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 direct current electrical and schematic understanding, and vehicle inspection. The certificate also introduces the operation, diagnosis, and repair of the carburetor system and the points ignition system. The largest portion addresses shop and vehicle safety.

Green statement: As with all engine performance related subjects, fuel delivery in carburetors affects air quality. This class introduces the skill of reducing hydrocarbon and carbon dioxide emissions.

The certificate prepares students for the [Automotive Service Excellence certification](#) in (G1) Maintenance and Light Repair.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- 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 before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	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 Year

Fall		Credits
AUT 101	Basic Electricity for 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 Automotive Technology	2
Credits		11
Winter		Credits
No courses offered for this program winter term		0
Spring		Credits
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 provide a range of skills required for the automotive industry, including basic internal combustion engines and theory, basic direct current electrical and schematic understanding, and vehicle inspection. The largest portion addresses shop and vehicle safety.

The certificate prepares students for the [Automotive Service Excellence certification](#) in (G1) Maintenance and Light Repair.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- 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 before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Trade	3
AUT 115	College Success for Automotive Technology	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 Year

Fall		Credits
AUT 101	Basic Electricity for 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 Automotive Technology	2
Credits		11
Winter		
AUT 114	Welding for the Automotive 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 of a vehicle's drivability problems. Students learn to identify everything from power train malfunctions to ignition failures using state-of-the-art computer diagnostic equipment. 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.

The certificate prepares students for the [Automotive Service Excellence certification](#) in (A6) Automotive Electrical/Electronic Systems and (A8) Automotive Engine Performance.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- 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 before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	2
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 270	Automotive 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 Year

Fall		Credits
AUT 101	Basic Electricity for 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 Automotive Technology	2
Credits		11

Winter

AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 105	Diesel Performance I	2
AUT 205	Engine Performance I	2
Credits		11

Spring

AUT 111	Computerized Engine Controls	5
AUT 206	Engine Performance II	2
AUT 104	Automotive Electric III	2
Credits		9

Second Year

Fall		Credits
AUT 270	Automotive Controller Systems I	4
Credits		4
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 of a vehicle's drivability problems. Students learn to identify everything from power train malfunctions to ignition failures using state-of-the-art computer diagnostic equipment. The certificate also trains students in testing volumetric efficiency performance as it relates to program modification, dynamo meter operation and safety, and reprogramming for performance.

The certificate prepares students for the [Automotive Service Excellence certification](#) in (A6) Automotive Electrical/Electronic Systems, (A8) Automotive Engine Performance, and the (L1) Advanced Engine Performance Specialist.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- 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.

AUT 271	Automotive Controller Systems II	4
Total Credits		39

ENTRANCE REQUIREMENTS

Academic Entrance Requirements

Required:

- Students must complete the following five courses before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	2
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 270	Automotive Controller Systems I	4

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 for 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 Automotive Technology	2
Credits		11

Winter

AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 105	Diesel Performance I	2
AUT 205	Engine Performance I	2
Credits		11

Spring

AUT 104	Automotive Electric III	2
AUT 111	Computerized Engine Controls	5
AUT 206	Engine Performance II	2
Credits		9

Second Year

Fall

AUT 270	Automotive Controller Systems I	4
Credits		4

Winter

No program courses offered winter term		
Credits		0

Spring

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

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

Description

The Automotive Drivetrain 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 certificate also prepares students to work with vehicle drivelines, transaxles, clutches, differentials, and transmissions.

The certificate prepares students for the Automotive Service Excellence certification in (A2) Automotive Automatic Transmission, (A3) Automotive Manual Drive Trains and Axles, and (G1) Maintenance and Light Repair.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- 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 before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	2
AUT 202	Manual Drive Trains I	3
AUT 203	Manual Drive Trains II	3
AUT 251	Automatic Transmissions - Rebuild	3
AUT 256	Automatic Transmissions Theory	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 Year		Credits
Fall		
AUT 101	Basic Electricity for 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 Automotive Technology	2
Credits		11
Winter		
AUT 202	Manual Drive Trains I	3
AUT 203	Manual Drive Trains II	3
AUT 251	Automatic Transmissions - Rebuild	3
AUT 256	Automatic Transmissions Theory	2
Credits		11
Total Credits		22

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 and establishing skills in voltage drops, electrical troubleshooting, vehicle ignition systems, logic controls, air bag systems, controller area network, and cruise control.

The certificate prepares students for Automotive Service Excellence certification in (A6) Electrical/Electronic Systems, (A8) Engine Performance, and (G1) Maintenance and Light Repair.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- 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 before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	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 Year

Fall		Credits
AUT 101	Basic Electricity for 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 Automotive Technology	2

Credits 11

Winter

AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2

Credits 7

Spring

AUT 104	Automotive Electric III	2
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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 and establishes skills in charging systems, starting systems, voltage drops, electrical troubleshooting, lighting, gauges, accessories, battery load testing, and repairs.

The certificate prepares students for the [Automotive Service Excellence certification](#) in (A6) Electrical/Electronic Systems and (G1) Maintenance and Light Repair.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- 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 before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Required Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	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 Year

Fall		Credits
AUT 101	Basic Electricity for 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 Automotive Technology	2
Credits		11
Winter		
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 a vehicle's drivability problems. Students learn to identify everything from powertrain malfunctions to ignition failures using state-of-the-art computer diagnostic equipment.

The certificate prepares students for the [Automotive Service Excellence certification](#) in (A6) Automotive Electrical/Electronic Systems, (A8) Automotive Engine Performance, and (L1) Advanced Engine Performance Specialist.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- 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 before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	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 Year		Credits
Fall		
AUT 101	Basic Electricity for 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 Automotive Technology	2
Credits		11
Winter		
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 105	Diesel Performance I	2
AUT 205	Engine Performance I	2
Credits		11
Spring		
AUT 111	Computerized Engine Controls	5
AUT 206	Engine Performance II	2
Credits		7
Total Credits		29

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

Description

The Automotive Engine Technician Career Pathway Certificate Of Completion Preparation covers the automotive engine rebuilding process. Students all study diesel engine systems.

The certificate prepares students for the [Automotive Service Excellence certification](#) in (A1) Automotive Engine Repair, (A9) Light Vehicle Diesel Engines, and (G1) Maintenance and Light Repair.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- 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 before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	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 Year		Credits
Fall		
AUT 101	Basic Electricity for 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 Automotive Technology	2
Credits		11

Winter		Credits
AUT 105	Diesel Performance I	2
Credits		2
Spring		Credits
No program courses offered spring term		0
Credits		0
Second Year		Credits
Fall		
AUT 201	Automotive Engines	4
Credits		4
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, the Environmental Protection Agency's recovery requirements for refrigerant systems, and general diagnosis and service.

The certificate prepares students for the [Automotive Service Excellence certification](#) in (A7) Automotive Heating and Air Conditioning, (A6) Electrical/Electronic Systems, and (G1) Maintenance and Light Repair.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- 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 before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	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 Year		Credits
Fall		
AUT 101	Basic Electricity for 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 Automotive Technology	2
Credits		11
Winter		
AUT 102	Automotive Electric I	5
Credits		5

Spring

No program courses offered spring term

	Credits	0
Summer		
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 of a vehicle's drivability problems. Students learn to identify everything from power-train malfunctions to ignition failures using state-of-the-art computer diagnostic equipment. Students will also diagnose systems on vehicles with electric drive systems.

The certificate prepares students for the [Automotive Service Excellence certification](#) in (A6) Automotive Electrical/Electronic Systems and (L3) Light Duty Hybrid/Electric Vehicle Specialist.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. 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.
2. Develop diagnosis and repair procedures for hybrid electric and electric vehicles.
3. Describe hybrid safety and service procedures along with first responder safety and procedures.
4. Describe hybrid batteries and service, hybrid electric motors, generators, and controls.
5. Describe regenerative braking systems, hybrid vehicle transmissions, and transaxles.
6. Perform vehicle diagnosis using manufacturer and generic scan tools.

ENTRANCE REQUIREMENTS

Academic Entrance Requirements

Required:

- Students must complete the following five courses before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	2
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 280	Hybrid Electric Vehicles 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 Year		Credits
Fall		
AUT 101	Basic Electricity for 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 Automotive Technology	2
Credits		11
Winter		
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 105	Diesel Performance I	2
AUT 205	Engine Performance I	2
Credits		11
Spring		
AUT 104	Automotive Electric III	2
AUT 111	Computerized Engine Controls	5
AUT 206	Engine Performance II	2
Credits		9
Second Year		
Fall		
AUT 280	Hybrid Electric Vehicles I	4
Credits		4
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 of the Automotive Hybrid Electric Vehicles Technician Level 1 Career Pathway Certificate.

Students will analyze and repair electric drive vehicles as it applies to the state-of-health and predictive maintenance on vehicles with electric drive systems. Students spend significant time analyzing vehicles with electric drive systems. Emphasis will be placed on high voltage battery systems and inverter diagnosis.

The certificate prepares students for the Automotive Service Excellence certification in (A6) Automotive Electrical/Electronic Systems and (L3) Light Duty Hybrid/Electric Vehicle Specialist.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. 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.
2. Describe and perform diagnosis and repair hybrid electric and electric vehicles.
3. Develop the capacity to train other technicians on the safety precautions and procedures when working on hybrid electric and electric vehicles.
4. Perform testing and restoration of hybrid electric and electric vehicle drive motors and battery systems.

5. Describe the use of oscilloscopes, multimeters, and hand-held testers to assist in diagnosis.
6. Perform the use of manufacturer and generic scan tools to capacity.

ENTRANCE REQUIREMENTS

Academic Entrance Requirements

Required:

- Students must complete the following five courses before enrolling in 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	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 Year		Credits
Fall		
AUT 101	Basic Electricity for 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 Automotive Technology	2
Credits		11
Winter		
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 105	Diesel Performance I	2
AUT 205	Engine Performance I	2
Credits		11
Spring		
AUT 104	Automotive Electric III	2
AUT 111	Computerized Engine Controls	5
AUT 206	Engine Performance II	2
Credits		9
Second Year		
Fall		
AUT 280	Hybrid Electric Vehicles I	4
Credits		4
Spring		
AUT 281	Hybrid Electric Vehicles II	4
Credits		4
Total Credits		39

Automotive 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 of a vehicle's drivability problems on the latest light duty diesel systems. Students identify powertrain malfunctions using the latest computer diagnostic equipment. The certificate also trains students on the operational principles and theory of hydraulically

actuated electronically controlled unit injection systems, electronic unit injection systems, and common rail systems.

This certificate applies toward [Automotive Service Excellence certification](#) in (A6) Automotive Electrical/Electronic Systems and (A9) Diesel Engine Performance.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment fees

- All AUT courses lower than AUT 260 Diesel Performance II and higher: \$200 course fee

- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	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 Year		
Fall		Credits
AUT 101	Basic Electricity for 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 Automotive Technology	2
Credits		11
Winter		
AUT 102	Automotive Electric I	5
AUT 103	Automotive Electric II	2
AUT 105	Diesel Performance I	2
AUT 205	Engine Performance I	2
Credits		11
Spring		
AUT 104	Automotive Electric III	2
AUT 111	Computerized Engine Controls	5
AUT 206	Engine Performance II	2
Credits		9

Second Year**Fall**

No program courses offered fall term	
Credits	0

Winter

No program courses offered winter term	
Credits	0

Spring

AUT 260	Diesel Performance II	4
Credits		4
Total Credits		35

Undercar Technician - Career Pathway Certificate of Completion (CPCC)

Description

The Automotive Undercar Technician Career Pathway Certificate of Completion gives students an in-depth understanding of brakes, suspension, driveline, and electrical. It prepares students for a job in suspension and brakes as a technician or manager.

The certificate prepares students for Automotive Service Excellence certification in (A5) Automotive Brakes, (A4) Automotive Steering and Suspension, and (G1) Maintenance and Light Repair.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- 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

- Automotive Service Excellence certification: up to \$450 total for all eight areas of testing
- Tools: \$1,500 to \$2,500
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200

Enrollment Fees

- All AUT courses AUT 260 Diesel Performance II and higher: \$200 course fee
- All AUT courses lower than AUT 260 Diesel Performance II: \$15 course fee

Course Requirements

Course	Title	Credits
Core Courses		
AUT 101	Basic Electricity for 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 Automotive Technology	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 Year		
Fall		Credits
AUT 101	Basic Electricity for 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 Automotive Technology	2
Credits		11
Winter		
No program courses offered winter term		
Credits		0
Spring		
AUT 204	Steering and Suspension	3
Credits		3

Second Year**Fall**

AUT 208	Automotive Brakes	3
Credits		3
Total Credits		17

Aviation

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

See the [Aviation page](#) for more information.

Contact:

[Karl Baldessari \(kbaldessari@cooc.edu\)](mailto:Karl_Baldessari@cooc.edu)

541-318-3702

Grandview Hall, Bend Campus

Department: Business/Aviation

Department Chair: [Vaughan Briggs \(vbriiggs@cooc.edu\)](mailto:Vbriiggs@cooc.edu)

Programs

Career and Technical Education

Associate of Applied Science

- [Aviation - Professional Pilot Airplane - Associate of Applied Science \(AAS\)](#) (p. 119)
- [Aviation - Professional Pilot Helicopter- Associate of Applied Science \(AAS\)](#) (p. 122)
- [Unmanned Aerial Systems \(UAS\) Operations - Associate of Applied Science \(AAS\)](#) (p. 126)

Transfer

Associate of Science

- [Aviation-Technology and Management \(OIT Transfer\) Emphasis - Associate of Science \(AS\)](#) (p. 128)

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 060 or higher or minimum placement Math Level 10.

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 (3 Credits)

Prerequisites with concurrency: AV 210 or AV 215.

Covers principles and operation of technologically advanced avionics systems in modern aircraft. Provides classroom discussion and hands-on training in programming and using electronic flight instruments, navigation radios, information systems, and technology safety/risk management.

AV 115 Private Pilot-Helicopter (5 Credits)

Recommended preparation: MTH 060 or higher or minimum placement Math Level 10.

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 116 Airplane Fundamentals (3 Credits)

Covers the fundamentals of airplane flight, flight operations, airplane performance, navigation, airplane systems, aeronautical publications, airplane flight maneuvers, flight planning, radio procedures, meteorology, and human factors.

AV 117 Helicopter Fundamentals (3 Credits)

Recommended preparation: MTH 060 or higher or minimum placement Math Level 10.

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 102 (or one course from the foundational requirements math list) or minimum placement Math Level 14.

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).

Provides 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 and multi-engine 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 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 298 Independent Study: Aviation (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

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 Professional Pilot Airplane Associate of Applied Science trains professional pilots for the air transportation industry. There are many fascinating work opportunities, including 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, and providing flight instruction to student pilots.

Upon satisfactory completion of prescribed flight element, students in the airplane track will be eligible to earn the following Federal Aviation Administration ratings/certificates: Private Pilot, Commercial Pilot, Instrument, Certified Flight Instructor, and Certified Flight Instructor Instrument. Training will be conducted under Federal Aviation Regulations Part 141 or Part 61.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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 Professional Pilot Airplane AAS.

Other Entrance Requirements

Required:

Students who enroll in this course of study must have a valid Federal Aviation Administration (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 are encouraged to obtain at least a second-class medical certificate before entering the program to ensure that they can eventually pursue a career in commercial aviation. The medical application form asks about the applicant's prior medical history, prior DUI/DUII records, records of

alcohol or substance abuse, and history of non-traffic misdemeanors and 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.

Fees:

- Pilot headset: approximately \$350
- AV 112 Technically Advanced Aircraft: \$650
- Flight labs (authorized aircraft and hourly rates for airplane aircraft C-172, C-182, Seminole, Bonanza, Baron, Decathlon, flight training device)
 - AV 222A Airplane Flight Lab (AV 110 Private Pilot - Airplane)
 - Cessna 172
 - 16 hours pre- and post-instruction at \$35/hour: \$560
 - 18 hours dual flight at \$214/hour: \$3,852
 - 2 hours dual flight training device at \$125/hour: \$250
 - Total: \$4,662
 - Total flight hours: 20 (1 credit)
 - AV 222B Airplane Flight Lab (AV 110 Private Pilot - Airplane)
 - Cessna 172
 - 14 hours pre- and post-instruction at \$35/hour: \$490
 - 15 hours dual flight at \$214/hour: \$3,210
 - 7 hours solo flight at \$179/hour: \$1,253
 - 3 hours dual flight training device at \$125/hour: \$375
 - Written exam: \$160
 - Total: \$5,488
 - Total flight hours: 25 (1 credit)
 - AV 222C Airplane Flight Lab (AV 110 Private Pilot - Airplane)
 - Cessna 172
 - 11 hours pre- and post-instruction at \$35/hour: \$385
 - 17 hours dual flight at \$214/hour: \$3,638
 - 3 hours solo flight at \$179/hour: \$537
 - 3 hours dual flight training device at \$125/hour: \$375
 - Designated pilot examiner: \$450
 - Total: \$5,385
 - Total flight hours: 23 (1 credit)
 - AV 222D Airplane Flight Lab (AV 210 Instrument - Airplane)
 - Cessna 172
 - 13 hours pre- and post-instruction at \$35/hour: \$455
 - 20 hours dual flight at \$214/hour: \$4,280
 - 10 hours dual flight training device at \$125/hour: \$1,250
 - Written exam: \$160
 - Total: \$6,145
 - Total flight hours: 30 (1 credit)
 - AV 222E Airplane Flight Lab (AV 210 Instrument - Airplane)
 - Cessna 172
 - 13 hours pre- and post-instruction at \$35: \$455
- 20 hours dual flight at \$214/hour: \$4,280
- 12 hours dual flight training device at \$125/hour: \$1,500
- Designated pilot examiner fee: \$450
- Total: \$6,685
- Total flight hours: 32 (1 credit)
- AV 222F Airplane Flight Lab (AV 220 Commercial Pilot-Airplane)
 - Cessna 172
 - 15 hours pre- and post-instruction at \$35/hour: \$525
 - 25 hours dual flight at \$214/hour: \$5,350
 - 15 hours solo flight at \$179/hour: \$2,685
 - 12 hours dual flight training device at \$125/hour: \$1,500
 - Total: \$10,060
 - Total flight hours: 52 (1 credit)
- AV 222G Airplane Flight Lab (AV 220 Commercial Pilot-Airplane)
 - Cessna 172, Cessna 182, Bonanza
 - 20 hours pre- and post-instruction at \$35/hour: \$700
 - 25 hours dual flight at \$214/hour: \$5,350
 - 20 hrs, dual flight at \$265/hour: \$5,300
 - 15 hours solo flight at \$179/hour: \$2,685
 - 12 hours dual flight training device at \$125/hour: \$1,500
 - Written exam: \$160
 - Designated pilot examiner fee: \$450
 - Total: \$16,145
 - Total flight hours: 72 (1 credit)
- AV 222I Airplane Flight Lab (AV 250 Certified Flight Instructor-Airplane)
 - Cessna 172
 - 35 hours pre- and post-instruction at \$35/hour: \$1,225
 - 20 hrs, dual flight at \$214/hour: \$4,280
 - 5 hours dual flight training device at \$125/hour: \$625
 - Written exam: \$320
 - Designated pilot examiner fee: \$650
 - Total: \$7,100
 - Total flight hours: 25 (1 credit)
- AV 222J Airplane Flight Lab (AV 250 Certified Flight Instructor-Airplane)
 - Cessna 172
 - 12 hours pre- and post-instruction at \$35/hour: \$420
 - 15 hours dual flight at \$214/hour: \$3,210
 - 6 hours dual flight training device at \$125/hour: \$750
 - Written exam: \$160
 - Designated pilot examiner fee: \$450
 - Total: \$4,990
 - Total flight hours: 21 (1 credit)
- AV 222K Airplane Flight Lab (AV 220 Commercial Pilot-Airplane)
 - Baron, Seminole
 - 10 hours pre- and post-instruction at \$35/hour: \$350
 - 20 hours dual flight at \$425/hour: \$8,500
 - Designated pilot examiner fee: \$450
 - Total: \$9,300
 - Total flight hours: 20 (1 credit)
- AV 222H Airplane Flight Lab (AV 220 Commercial Pilot-Airplane)

- Baron, Seminole
- 10 hours pre- and post-instruction at \$35/hour. \$350
- 20 hours dual flight at \$425/hour. \$8,500
- Designated pilot examiner fee: \$450
- Total: \$9,300
- Total flight hours: 20 (1 credit)

Course Requirements

Course	Title	Credits
Core Courses		
AV 101	Introduction to Aviation ¹	3
AV 104	Introduction to Aircraft Systems ¹	4
AV 108	Meteorology I ¹	4
AV 110	Private Pilot - Airplane ²	5
AV 112	Technically Advanced Aircraft	3
AV 116	Airplane Fundamentals	3
AV 150	Aerodynamics ¹	4
AV 200	Aviation Law ¹	3
or AV 201	Airport Management	
AV 204	Advanced Aircraft Systems ¹	4
AV 208	Meteorology II ¹	4
AV 210	Instrument - Airplane	5
AV 220	Commercial Pilot-Airplane	4
AV 235	Human Factors ¹	4
AV 246	Aviation Safety ¹	3
AV 250	Certified Flight Instructor-Airplane	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	Management Fundamentals I	4
or BA 101	Introduction to Business	
BA 285	Business Human Relations	3
or COMM 218	Interpersonal Communication	
CIS 120	Computer Concepts (Computer Competency Test)	0-4
Discipline Studies Courses		9
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition ⁴	3-4
or BA 214	Business Communications	
Total Credits		92-97

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

Advising Notes

Airplane students 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 is designed to train the student as a professional pilot. Universities that have an aviation bachelor's degree (Embry-Riddle Aeronautical University) 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 degree program. For information about transfer requirements at other institutions, contact the program director at 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

		Credits
First Term		
AV 101	Introduction to Aviation	3
AV 104	Introduction to Aircraft Systems	4
AV 110	Private Pilot - Airplane	5
AV 116	Airplane Fundamentals	3
AV 222A	Airplane Flight Lab	1
AV 222B	Airplane Flight Lab	1
Credits		17
Second Term		
AV 108	Meteorology I	4
AV 222C	Airplane Flight Lab	1
AV 246	Aviation Safety	3
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
Credits		12
Third Term		
AV 112	Technically Advanced Aircraft	3
AV 210	Instrument - Airplane	5
AV 222D	Airplane Flight Lab	1
AV 222E	Airplane Flight Lab	1
WR 121 or BA 214	Academic Composition or Business Communications	3-4
Credits		13-14
Fourth Term		
AV 200 or AV 201	Aviation Law or Airport Management	3
AV 204	Advanced Aircraft Systems	4
AV 222F	Airplane Flight Lab	1
BA 285 or COMM 218	Business Human Relations or Interpersonal Communication	3
CIS 120	Computer Concepts (Computer Competency Test)	0-4
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	Introduction to Business or Management Fundamentals I	4
Credits		13
Sixth Term		
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	11
Seventh Term	
AV 208	4
AV 235	4
AV 250	5
AV 222H	1
AV 222K	1
Credits	15
Total Credits	92-97

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

Program Description

The Professional Pilot Helicopter Associate of Applied Science trains individuals to work as professional pilots in the air transportation industry. Students in the helicopter track will be eligible to earn the following Federal Aviation Administration ratings/certificates: Private Pilot, Commercial Pilot, Instrument, and Certified Flight Instructor. Training will be conducted under Federal Aviation Regulations Part 141 or Part 61.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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 Professional Pilot Helicopter AAS.

Other Entrance Requirements

Required:

Students who enroll in this course of study must have a valid Federal Aviation Administration (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 are encouraged to obtain at least a second-class medical certificate before entering 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.

Fees:

- Pilot headset: approximately \$350
- AV 112 Technically Advanced Aircraft: \$650
- Flight labs (authorized aircraft and hourly rates for Helicopter FLT Lab Series I: Robinson R22, R44, B206, flight training device)
 - AV 227A Helicopter Flt Lab Series I (AV 115 Private Pilot-Helicopter)
 - Robinson R22
 - 20 hours pre- and post-instruction at \$35/hour: \$700
 - 23 hours dual flight at \$360/hour: \$8,280
 - 2 hours dual flight training device at \$195/hour: \$390
 - Total: \$9,370
 - Total flight hours: 25 (1 credit)
 - AV 227B Helicopter Flt Lab Series I (AV 115 Private Pilot-Helicopter)
 - Robinson R22
 - 16 hours pre- and post-instruction at \$35/hour: \$560
 - 23 hours dual flight at \$360/hour: \$8,280
 - 2 hours dual flight training device at \$195/hour: \$390
 - Written exam fee: \$160
 - Total: \$9,390
 - Total flight hours: 25 (1 credit)
 - AV 227C Helicopter Flt Lab Series I (AV 115 Private Pilot-Helicopter)
 - Robinson R22
 - 18 hours pre- and post-instruction at \$35/hour: \$630
 - 14 hours dual flight at \$360/hour: \$5,040
 - 10 hours solo flight at \$360/hour*: \$3,600
 - 2 hours dual flight training device at \$195: \$390
 - Designated pilot examiner fee: \$750
 - Total: \$10,410
 - Total flight hours: 26 (1 credit)
 - *Supervised solo charged at a dual rate due to required presence of a certified flight instructor
 - AV 227D Helicopter Flt Lab Series I (AV 215 Instrument Helicopter)
 - Robinson R44
 - 20 hours pre- and post-instruction at \$35/hour: \$700
 - 20 hours dual flight (includes 15 hours pilot in command) at \$650/hour: \$13,000
 - 10 hours dual flight training device at \$195/hour: \$1,950
 - Written exam fee: \$160
 - Total: \$15,810
 - Total flight hours: 30 (1 credit)
- AV 227E Helicopter Flt Lab Series I (AV 215 Instrument Helicopter)
 - Robinson R44
 - 25 hours pre- and post-instruction at \$35/hour: \$875
 - 17 hours dual flight at \$650/hour: \$11,050
 - 10 hours dual flight training device at \$195/hour: \$1,950
 - Designated pilot examiner fee: \$750
 - Total: \$14,625
 - Total flight hours: 27 (1 credit)
- AV 227N Helicopter Flt Lab Series I (AV 215 Instrument Helicopter)
 - Robinson R44
 - 10 hours pre- and post-instruction at \$35/hour: \$350
 - 10 hours dual flight at \$760/hour*: \$7,600
 - Total: \$7,950
 - Total flight hours: 10 (1 credit)
 - * Flown in a night vision goggle compatible helicopter
- AV 227F Helicopter Flt Lab Series I (AV 225 Commercial Pilot-Helicopter)
 - Robinson R22
 - 18 hours pre- and post-instruction at \$35/hour: \$630
 - 35 hours dual flight (includes 15 hours pilot in command) at \$360/hour: \$12,600
 - 2 hours dual flight training device at \$195/hour: \$390
 - Total: \$13,620
 - Total flight hours: 37 (1 credit)
- AV 227G Helicopter Flt Lab Series I (AV 225 Commercial Pilot-Helicopter)
 - Robinson R22
 - 18 hours pre- and post-instruction at \$35/hour: \$630
 - 35 hours dual flight at \$360/hour: \$12,600
 - 2 hours dual flight training device at \$195/hour: \$390
 - Written exam fee: \$160
 - Designated pilot examiner fee: \$750
 - Total: \$14,530
 - Total flight hours: 37 (1 credit)

- AV 227H Helicopter Flt Lab Series I (AV 225 Commercial Pilot-Helicopter)
 - Bell 206
 - 8 hours pre- and post-instruction at \$35/hour: \$280
 - 18 hours dual flight at \$935/hour: \$16,830
 - Total: \$17,110
 - Total flight hours: 18 (1 credit)
- AV 227I Helicopter Flt Lab Series I (AV 255 Certified Flight Instructor-Helicopter)
 - Robinson R22
 - 53 hours pre- and post-instruction at \$35/hour: \$1,855
 - 20 hours dual flight at \$360/hour: \$7,200
 - 2 hours dual flight training device at \$195/hour: \$390
 - Written exam fee: \$320
 - Designated pilot examiner fee: \$850
 - Total: \$10,615
 - Total flight hours: 22 (1 credit)
- AV 227J Helicopter Flt Lab Series I (AV 255 Certified Flight Instructor-Helicopter)
 - Robinson R44
 - 25 hours pre- and post-instruction at \$35/hour: \$875
 - 10 hours dual flight at \$650/hour: \$6,500
 - 7 hours dual flight training device at \$195/hour: \$1365
 - Written exam fee: \$160
 - Designated pilot examiner fee: \$750
 - Total: \$9,650
 - Total flight hours: 17 (1 credit)
 - Series II Aircraft: Robinson R44, B206, flight training device
- AV 228A Helicopter Flt Lab Series II (AV 115 Private Pilot-Helicopter)
 - Robinson R44
 - 20 hours pre- and post-instruction at \$35/hour: \$700
 - 23 hours dual flight at \$650/hour: \$14,950
 - 2 hours dual flight training device at \$195/hour: \$390
 - Total: \$16,040
 - Total flight hours: 25 (1 credit)
- AV 228B Helicopter Flt Lab Series II (AV 115 Private Pilot-Helicopter)
 - Robinson R44
 - 16 hours pre- and post-instruction at \$35/hour: \$560
 - 23 hours dual flight at \$650/hour: \$14,950
 - 2 hours dual flight training device at \$195/hour: \$390
 - Written exam fee: \$160
 - Total: \$16,060
 - Total flight hours: 25 (1 credit)
- AV 228C Helicopter Flt Lab Series II (AV 115 Private Pilot-Helicopter)
 - Robinson R44
 - 18 hours pre- and post-instruction at \$35/hour: \$630
 - 14 hours dual flight at \$650/hour: \$9,100
 - 10 hours solo flight at \$650/hour*: \$6,500
 - 2 hours dual flight training device at \$195/hour: \$390
 - Designated pilot examiner fee: \$750
 - Total: \$17,370
 - Total flight hours: 26 (1 credit)
 - *Supervised solo charged at a dual rate due to required presence of a certified flight instructor
- AV 228D Helicopter Flt Lab Series II (AV 215 Instrument Helicopter)
 - Robinson R44
 - 20 hours pre- and post-instruction at \$35/hour: \$700
 - 20 hours dual flight (includes 15 hours pilot in command) at \$650/hour: \$13,000
 - 10 hours dual flight training device at \$195/hour: \$1,950
 - Written exam fee: \$160
 - Total: \$15,810
 - Total flight hours: 30 (1 credit)
- AV 228E Helicopter Flt Lab Series II (AV 215 Instrument Helicopter)
 - Robinson R44
 - 25 hours pre- and post-instruction at \$35/hour: \$875
 - 17 hours dual flight at \$650/hour: \$11,050
 - 10 hours dual flight training device at \$195/hour: \$1,950
 - Designated pilot examiner fee: \$750
 - Total: \$14,625
 - Total flight hours: 27 (1 credit)
- AV 228N Helicopter Flt Lab Series II (AV 215 Instrument Helicopter)
 - Robinson R44
 - 10 hours pre- and post-instruction at \$35/hour: \$350
 - 10 hours dual flight at \$760/hour*: \$7,600
 - Total: \$7,950
 - Total flight hours: 10 (1 credit)
 - * Flown in a night vision goggle compatible helicopter
- AV 228F Helicopter Flt Lab Series II (AV 225 Commercial Pilot-Helicopter)
 - Robinson R44
 - 18 hours pre- and post-instruction at \$35/hour: \$630
 - 35 hours dual flight (includes 15 hours pilot in command) at \$650/hour: \$22,750
 - 2 hours dual flight training device at \$195/hour: \$390
 - Total: \$23,770
 - Total flight hours: 37 (1 credit)
- AV 228G Helicopter Flt Lab Series II (AV 225 Commercial Pilot-Helicopter)
 - Robinson R44
 - 18 hours pre- and post-instruction at \$35/hour: \$630
 - 35 hours dual flight at \$650/hour: \$22,750
 - 2 hours dual flight training device at \$195/hour: \$390

- Written exam fee: \$160
- Designated pilot examiner fee: \$750
- Total: \$24,680
- Total flight hours: 37 (1 credit)
- AV 228H Helicopter Flt Lab Series II (AV 225 Commercial Pilot-Helicopter)
 - Bell 206
 - 8 hours pre- and post-instruction at \$35/hour: \$280
 - 18 hours dual flight at \$935/hour: \$16,830
 - Total: \$17,110
 - Total flight hours: 18 (1 credit)
- AV 228I Helicopter Flt Lab Series II (AV 255 Certified Flight Instructor-Helicopter)
 - Robinson R44
 - 53 hours pre- and post-instruction at \$35/hour: \$1,855
 - 20 hours dual flight at \$650/hour: \$13,000
 - 2 hours dual flight training device at \$195/hour: \$390
 - Written exam fee: \$320
 - Designated pilot examiner fee: \$850
 - Total: \$16,415
 - Total flight hours: 22 (1 credit)
- AV 228J Helicopter Flt Lab Series II (AV 255 Certified Flight Instructor-Helicopter)
 - Robinson R44
 - 25 hours pre- and post-instruction at \$35/hour: \$875
 - 10 hours dual flight at \$650/hour: \$6,500
 - 7 hours dual flight training device at \$195/hour: \$1,365
 - Written exam fee: \$160
 - Designated pilot examiner fee: \$750
 - Total: \$9,650
 - Total flight hours: 17 (1 credit)

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
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	Introduction 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 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition ⁵	3-4
or BA 214	Business Communications	

Total Credits 91-96

- 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 Private Pilot-Helicopter shall be completed prior to the Instrument Helicopter course AV 215 Instrument Helicopter, and the Instrument Helicopter course AV 215 Instrument Helicopter shall be completed before the Commercial Pilot Helicopter course AV 225 Commercial Pilot-Helicopter.
- ⁵ WR 121 Academic Composition is recommended for students who plan to pursue a bachelor's degree.

Course Requirements

Course	Title	Credits
Core Courses		
AV 101	Introduction to Aviation ¹	3
AV 104	Introduction to Aircraft Systems ¹	4
AV 108	Meteorology I ¹	4
AV 112	Technically Advanced Aircraft	3
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	Certified Flight Instructor-Helicopter	5
Helicopter Flight Labs (Choose Series I or Series II) ³		11
Series I		

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.

Sample Plan

First Term		Credits
AV 101	Introduction to Aviation	3
AV 104	Introduction 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		
AV 108	Meteorology I	4
AV 246	Aviation Safety	3
AV 227C	Helicopter Flt Lab Series I	1
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
Credits		12
Third Term		
AV 112	Technically Advanced Aircraft	3
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 or Business Communications	3-4
Credits		13-14
Fourth Term		
AV 200 or AV 201	Aviation Law or 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 or Interpersonal Communication	3

CIS 120	Computer Concepts (Computer Competency Test)	0-4
Credits		8-12
Fifth Term		
BA 101 or BA 206	Introduction to Business or 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		
Discipline Studies Course		4
Discipline Studies Course		4
AV 245	Advanced Helicopter Operations	4
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	Certified Flight Instructor-Helicopter	5
Credits		14
Total Credits		91-96

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

Description

The Unmanned Aerial Systems Operations Associate of Applied Science trains individuals to work as professional unmanned aerial systems (UAS) operators in the national/international arena. Students will learn to operate UAS, including conducting mission/pre-flight 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 prepares students for a rapidly 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.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- Recall various unmanned aerial systems platforms, sensors, and terminology.
- Apply of Federal Aviation Administration regulations/requirements necessary to commercially operate unmanned aerial systems.
- Configure unmanned aerial platforms with sensors appropriate to the prescribed operation.

4. Plan an unmanned aerial system operation for safe execution.
5. Operate unmanned aerial systems safely in a real-world environment.
6. Provide geospatial and thematic data.
7. Translate data collection to geographic information systems product development.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met before 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	Introduction 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 246	Aviation Safety	3
AV 271	Introduction to Unmanned Aerial Systems	4
AV 272	Unmanned Aerial Systems (UAS) Operations	5
AV 273	Unmanned Aerial Sys Ops Maint	5
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
GEOG 101	Introduction to Geospatial Science & GIS	4
GEOG 211	Cartography	4
GEOG 265	Geographic Information Systems	4
GEOG 266	ArcGIS	4
GEOG 267	Geodatabase Design	4
GEOG 273	Spatial Data Collection	4
GEOG 275	GIS Capstone	4
GEOG 285	Data Conversion and Documentation	4
GEOG 286	Remote Sensing	4
GEOG 287	Spatial Analysis	4
Other Required Courses		
BA 285 or COMM 218	Business Human Relations Interpersonal Communication	3
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
WR 121 or BA 214	Academic Composition Business Communications	3-4
Total Credits		92-97

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 271	Introduction to Unmanned Aerial Systems	4
GEOG 101	Introduction to Geospatial Science & GIS	4
GEOG 266	ArcGIS	4
CIS 120	Computer Concepts	0-4
Credits		12-16
Second Term		
AV 108	Meteorology I	4
AV 272	Unmanned Aerial Systems (UAS) Operations	5
GEOG 265	Geographic Information Systems	4
GEOG 285	Data Conversion and Documentation	4
Credits		17
Third Term		
AV 273	Unmanned Aerial Sys Ops Maint	5
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
GEOG 286	Remote Sensing	4
Credits		17
Fourth Term		
AV 104	Introduction to Aircraft Systems	4
AV 246	Aviation Safety	3
MTH 102	Applied Technical Mathematics	4
Credits		11
Fifth Term		
AV 150	Aerodynamics	4
GEOG 273	Spatial Data Collection	4
WR 121 or BA 214	Academic Composition or Business Communications	3-4
Credits		11-12
Sixth Term		
BA 285	Business Human Relations	3
GEOG 211	Cartography	4
GEOG 287	Spatial Analysis	4
Credits		11
Seventh Term		
AV 110	Private Pilot - Airplane	5
GEOG 267	Geodatabase Design	4
GEOG 275	GIS Capstone	4
Credits		13
Total Credits		92-97

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

Description

The Aviation-Technology and Management Associate of Science prepares students to continue to Oregon Institute of Technology's Bachelor of Applied Science in Technology and Management or Bachelor of Science in Operations Management in order to promote career advancement into management or the aviation field. This degree will also articulate to Embry-Riddle Aeronautical University's Bachelor of Science in Aeronautics.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
Mathematics		
MTH 111	College Algebra	4
Oral Communication		
COMM 111	Fundamentals of 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		
<u>Arts and Letters:</u> (p. 61)		
Choose two courses from the Discipline Studies list		6-8
<u>Social Science:</u> (p. 68)		
Choose two courses from the Discipline Studies list		8
Recommend: EC 201 and EC 202		
<u>Science/Math/Computer Science:</u> (p. 66)		
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

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 of 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

Biology

Biology is the study of life across molecular, cellular, organismal, ecological, and evolutionary scales. Core concepts 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 to solve biological problems with quantitative reasoning, models, and simulations. Biologists 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 graduates.

See the [Biology page](#) for more information.

Contact Information:

Sarah Fuller (sfuller@cocc.edu)
541-383-7550
Science Center, Bend Campus

Department: Science
Department Chair: [Carol Higginbotham \(chigginbotham@cocc.edu\)](mailto:chigginbotham@cocc.edu)

Programs

Transfer

Associate of Arts Oregon Transfer

- [Biological Sciences - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 131)
- [Dental Hygiene - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 132)
- [Pre-Dentistry, Pre-Medicine, Pre-Veterinary - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 133)

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 108 Introduction to Human Genetics (4 Credits)

Designed for non-science majors and introduces students to basic principles of genetics and genetic technologies applied to human health and human affairs. Topics include classical (Mendelian) inheritance, complex inheritance, inherited disorders, analysis of pedigrees, gene structure and gene expression, epigenetic effects on gene expression, sex determination and the genetics of cancer. Some technologies introduced include: the use of DNA in genealogy and forensic biology, gene-editing technologies, and reproductive cloning technologies.

BI 114 Science Literacy (3 Credits)

Introduces the language and process of the scientific method and scientific studies. Provides tools to evaluate scientific information, including identifying pseudoscience and unethical uses of science. Promotes critical evaluation of scientific data and effective science communication.

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 the ecology, biodiversity, sustainability, and conservation of marine resources.

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

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

BI 199 Selected Topics: Biology (1-5 Credits)

Provides a learning experience in biology not currently available; this course is in development to be proposed as a permanent course.

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 211 Principles of Biology (5 Credits)

Prerequisites: WR 065 or WR 121 or minimum placement Wr/Comm Level 7.

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 WR 121 or minimum placement Wr/Comm Level 7.

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 WR 121 or minimum placement Wr/Comm Level 7 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 298 Independent Study: Biology (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

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

This course is in development.

FN 188 Special Studies: Foods and Nutrition (1-4 Credits)

Explores topics of current interest in the foods and nutrition discipline.

FN 199 Selected Topics: Foods & Nutrition (1-4 Credits)

Provides a learning experience in foods and nutrition not currently available; this course is in development to be proposed as a permanent course.

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.

FN 288 Special Studies: Foods and Nutrition (1-4 Credits)

Explores topics of current interest in the foods and nutrition discipline.

FN 298 Independent Study: Foods and Nutrition (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

FN 299 Selected Topics: Foods & Nutrition (1-4 Credits)

Provides a learning experience in foods and nutrition not currently available; this course is in development to be proposed as a permanent course.

Biological Sciences - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer 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 in physics, chemistry, biology, and mathematics prepares students to transfer to a four-year university for upper-division biology coursework. Graduates with a Bachelor of Science in Biology from their transfer institution will be well equipped for graduate school and careers in biomedical fields, industry, governmental agencies, and non-governmental organizations requiring 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.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose three credits	¹	3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommend: MTH 112 or higher		
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
	or WR 227 Technical Writing	
General Education/Discipline Studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses chosen from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
<u>Science/Math/Computer Science:</u> (p. 66)		
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 CH 221 ²

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, CH 241, CH 242, CH 243, MTH 251, MTH 252, PH 201, PH 202, PH 203 ³

Total Credits **90-106**

- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² 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.
- ³ Consider completing both Organic Chemistry [CH 241 Organic Chemistry I, CH 242 Organic Chemistry II and CH 243 Organic Chemistry III] and Physics [PH 201 General Physics I, PH 202 General Physics II and PH 203 General Physics III] sequences. Best practice is to complete entire sequence prior to transfer. Speak with your advisor for details.

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.

Consider CH 241 Organic Chemistry I, CH 242 Organic Chemistry II, and CH 243 Organic Chemistry III as an alternative to PH 201 General Physics I, PH 202 General Physics II, and PH 203 General Physics III in the electives; 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 and CH 241 Organic Chemistry I, CH 242 Organic Chemistry II, CH 243 Organic Chemistry III, MTH 251 Calculus I, and MTH 252 Calculus II from electives 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 112 or higher)	4
Health (3 credits with HHP or HHPA prefix)	3
WR 121 Academic Composition	4
Discipline Studies Science/Math/Computer Science (recommend CH 221)	5
Credits	16
Second Term	Credits
WR 122 Argument, Research, and Multimodal or WR 227 Composition or Technical Writing	4
Elective (recommend CH 222)	5
Discipline Studies Social Science	3-4
Elective (recommend MTH 251)	4
Credits	16-17
Third Term	Credits
Elective (recommend CH 223)	5
Elective (recommend MTH 252)	4
Oral Communication: (p. 60)	3-4
Discipline Studies Social Science	3-4
Credits	15-17
Fourth Term	Credits
Discipline Studies Lab Science (BI 211)	5
Elective (recommend CH 241 or PH 201)	5
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Credits	16-18
Fifth Term	Credits
Discipline Studies Lab Science (BI 213)	5
Elective (recommend CH 242 or PH 202)	5
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Credits	16-18
Sixth Term	Credits
Discipline Studies Lab Science (BI 212)	5
Elective (recommend CH 243 or PH 203)	5
Discipline Studies Arts & Letters	3-4
Credits	13-14
Total Credits	92-100

Dental Hygiene - Associate of Arts Oregon Transfer (AAOT)

Description

While Central Oregon Community College does not offer a dental hygiene program, many students begin their course work at COCC with the

Associate of Arts Oregon Transfer (AAOT) degree with the intent of transferring to another college to earn a dental hygiene degree.

Statewide General Education Student Learning Outcomes

Please see the [General Education](#) page (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommend: MTH 111		
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
Recommend: COMM 111		
<u>Writing:</u> (p. 60)		
WR 121 Academic Composition		4
WR 122 Argument, Research, and Multimodal or WR 227 Technical Writing		4
General Education/Discipline Studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose at least three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
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 hours ²		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](#).

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 (LCC), PSY 201 Mind and Brain or PSY 202 Mind and Society and WR 227 Technical Writing are recommended. LCC 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 (MHCC), a psychology elective is recommended. See the MHCC catalog and website for details.

If transferring to Oregon Institute of Technology (OIT), DHE 100 Introduction to Dental Hygiene (an online OIT course) is required. OIT requires completion of CH 104 Introduction to Chemistry I. See OIT's catalog and website for details.

If transferring to Portland Community College (PCC), 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

	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 with an emphasis on biological-science coursework. Students should consult with their assigned academic advisors to choose the academic pathway that best supports their career goals.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health : (p. 58)		
Choose 3 credits ¹		3
Mathematics : (p. 60)		
Choose one course		4

Recommend: MTH 112 or higher	
<u>Oral Communication:</u> (p. 60)	
Choose one course	3-4
<u>Writing:</u> (p. 60)	
WR 121 Academic Composition	4
WR 122 Argument, Research, and Multimodal Composition or WR 227 Technical Writing	4
General Education/Discipline Studies	
<u>Cultural Literacy:</u> (p. 63)	
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).	
<u>Arts and Letters:</u> (p. 61)	
Choose three courses from at least two prefixes	9-12
<u>Social Science:</u> (p. 68)	
Choose four courses from at least two prefixes	12-16
<u>Science/Math/Computer Science:</u> (p. 66)	
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 CH 221 ²	
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 222, CH 223, CH 241, CH 242, CH 243, MTH 251, MTH 252, PH 201, PH 202, PH 203 ³	
Total Credits	90-106

- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² 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.
- ³ Consider completing both Organic Chemistry [[CH 241](#) Organic Chemistry I, [CH 242](#) Organic Chemistry II and [CH 243](#) Organic Chemistry III] and Physics [[PH 201](#) General Physics I, [PH 202](#) General Physics II and [PH 203](#) General Physics III] sequences. Best practice is to complete entire sequence prior to transfer. Speak with your advisor for details.

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, and 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
Mathematics (recommend MTH 112 or higher)	4
Health (3 credits with HHP or HHPA prefix)	3
WR 121 Academic Composition	4
Discipline Studies Science/Math/Computer Science (recommend CH 221)	5
Credits	16
Second Term	Credits
WR 122 Argument, Research, and Multimodal or WR 227 Composition or Technical Writing	4
Elective (recommend CH 222)	5
Discipline Studies Social Science	3-4
Elective (recommend MTH 251)	4
Credits	16-17
Third Term	Credits
Elective (recommend CH 223)	5
Elective (recommend MTH 252)	4
<u>Oral Communication:</u> (p. 60)	3-4
Discipline Studies Social Science	3-4
Credits	15-17
Fourth Term	Credits
Discipline Studies Lab Science (BI 211)	5
Elective (recommend CH 241 or PH 201)	5
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Credits	16-18
Fifth Term	Credits
Discipline Studies Lab Science (BI 213)	5
Elective (recommend CH 242 or PH 202)	5
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Credits	16-18

Sixth Term

Discipline Studies Lab Science (BI 212)	5
Elective (recommend CH 243 or PH 203)	5
Discipline Studies Arts & Letters	3-4
Credits	13-14
Total Credits	92-100

Business Administration

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

See the [Business page](#) for more information.

Contact:

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Department: Business/Aviation
Department Chair: Vaughan Briggs

Programs

Career and Technical Education

Associate of Applied Science

- [Business Administration - Associate of Applied Science \(AAS\)](#) (p. 137)

Associate of Applied Science Option

- [Accounting - Associate of Applied Science Option \(AASO\)](#) (p. 139)
- [Management - Associate of Applied Science Option \(AASO\)](#) (p. 140)
- [Small Business and Entrepreneurship - Associate of Applied Science Option \(AASO\)](#) (p. 141)

One-Year Certificate of Completion

- [Accounting Clerk - One-Year Certificate of Completion \(CC1\)](#) (p. 143)
- [Entrepreneurship - One-Year Certificate of Completion \(CC1\)](#) (p. 144)
- [Marketing Communications - One-Year Certificate of Completion \(CC1\)](#) (p. 145)
- [Office Professional - One-Year Certificate of Completion \(CC1\)](#) (p. 145)

Transfer

Associate of Science Oregon Transfer

- [Business - Associate of Science Oregon Transfer \(ASOT\)](#) (p. 146)

Courses

BA 101 Introduction to Business (4 Credits)

Learn about the many exciting and challenging facets of business and its dynamic role in today's environment. Gain a working knowledge of components of business including discussion of management, marketing, entrepreneurship and finance. Introduces 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 Math Level 10.

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 Math Level 10.

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 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)

Introduces principles of effective customer service. 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 (or higher) or minimum placement Math Level 10.

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 or minimum placement Wr/Comm Level 7.

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 060 (or higher) or minimum placement Math Level 10.

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 (4 Credits)

Introduces students to all the elements of personal financial planning including the creation of a personal vision, and a plan for attaining the vision. Includes the appropriate evaluation of financial products such as investing, debt, risk management and budgeting.

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: BA 101 and (BA 214 or WR 121).

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 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 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)

Explores the theory and practice of interactions between people in the workplace. Examines individual perceptions and effective communications between diverse individuals to create collaborative work environments, build effective teams, and achieve organizational goals.

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.

BA 299 Selected Topics: Business (1-5 Credits)**Prerequisites:** instructor approval.

Provides a learning experience in business not currently available; this course is in development to be proposed as a permanent course.

Business Administration - Associate of Applied Science (AAS)

Description

The Business Administration Associate of Applied Science (AAS) prepares students for immediate employment in business occupations. The Business Administration AAS may be awarded indicating emphasis in the following areas of specialization: General Business, Accounting, Management, or Small Business/Entrepreneurship.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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.

- Identify how a business operates and external factors that can affect its performance.
- Identify and resolve business problems through critical thinking and the decision making process.

public or private baccalaureate institutions. See advisor for additional information.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10

Course Requirements

Course	Title	Credits
Level 1 Foundation Courses		
BA 101	Introduction 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	4
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 and Budgeting	4
BA 222	Business Finance	4
BA 290	Business Seminar	3
Total Credits		91-98

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

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	Introduction to Business	4
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts	0-4
BA 178	Customer Service	3
or BA 285	or 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 206	Management Fundamentals I	4
BA 113	Applied Accounting III	3
BA 223	Marketing Principles I	4
BA 218	Personal Finance	4
Credits		15
Summer		
BA 214	Business Communications	3
BA 226	Business Law I	4
BA 250	Entrepreneurship	4
Credits		11
Second Year		
Fall		
BA Elective		3-4
BA Elective		3-4
BA Elective		3-4
CIS 125E	Excel	4
Credits		13-16
Winter		
BA 220	Business Analysis and 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		91-102

Accounting - Associate of Applied Science Option (AASO)

Description

The Accounting Associate of Applied Science Option qualifies graduates for employment as accounting managers, full-charge bookkeepers, staff accountants, accounts payable managers, and accounts receivable managers.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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.
 - Completion of WR 065 Rhetoric and Critical Thinking II (or higher) or minimum placement Wr/Comm Level 7.
 - Completion of MTH 060 Beginning Algebra (or higher) or minimum placement Math Level 10.

Course Requirements

Course	Title	Credits
Level 1 Foundation Courses		
BA 101	Introduction 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	4
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 Applications	3
BA 229	QuickBooks	3
BA Elective	Any BA prefix course	3-4

Level 4 Advanced Core and Capstone Courses

BA 220	Business Analysis and Budgeting	4
BA 222	Business Finance	4
BA 290	Business Seminar	3

Total Credits **94-99**

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

Fall		Credits
BA 101	Introduction to Business	4
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts	0-4
BA 178 or BA 285	Customer Service or 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 177	Payroll Accounting	3
BA 206	Management Fundamentals I	4
BA 218	Personal Finance	4
BA Elective		3-4
Credits		17-18

Summer

BA 214	Business Communications	3
BA 223	Marketing Principles I	4
Credits		7

Second Year

Fall		Credits
BA 211	Financial Accounting I	4
BA 229	QuickBooks	3
BA 250	Entrepreneurship	4
CIS 125E	Excel	4
Credits		15

Winter

BA 212	Financial Accounting II	4
BA 220	Business Analysis and Budgeting	4
BA 226	Business Law I	4
BA 228	Computer Accounting Applications	3
Credits		15

Spring

BA 213	Managerial Accounting	4
BA 261	Consumer Behavior	4
BA 222	Business Finance	4
BA 290	Business Seminar	3
Credits		15

Total Credits 94-99

Management - Associate of Applied Science Option (AASO)

Description

The Associate of Applied Science Option in Business Administration Management 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.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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 managers can use in successfully managing the global environment, diversity, and social responsibility.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10

Course Requirements

Course	Title	Credits
Level 1 Foundation Courses		
BA 101	Introduction 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	4
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
Choose 13-16 credits from any BA prefix		13-16
Level 4 Advanced Core and Capstone Courses		
BA 220	Business Analysis and Budgeting	4
BA 222	Business Finance	4
BA 290	Business Seminar	3
Total Credits		91-98

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		
Fall		Credits
BA 101	Introduction to Business	4
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts	0-4
BA 178 or BA 285	Customer Service or 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 206	Management Fundamentals I	4
BA 218	Personal Finance	4
BA 250	Entrepreneurship	4
Credits		15
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 and 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 290	Business Seminar	3
BA Elective		4
Credits		15
Total Credits		91-98

Small Business and Entrepreneurship - Associate of Applied Science Option (AASO)

Description

The Small Business and Entrepreneurship Associate of Applied Science Option 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.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- Apply effective written and verbal communication skills individually and in groups.
- 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.

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	Introduction to Business	4
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts	0-4
BA 178 or BA 285	Customer Service or 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	4
BA 223	Marketing Principles I	4
BA 250	Entrepreneurship	4
Credits		15
Summer		
BA 206	Management Fundamentals I	4
BA 214	Business Communications	3
Credits		7

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10

Course Requirements

Course	Title	Credits
Level 1 Foundation Courses		
BA 101	Introduction 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	4
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 229	QuickBooks	3
BA 232	Branding	4
BA 233	Internet Marketing	4
BA 237	Marketing Research	4
BA 249	Retailing	4
CIS 178 or CIS 195	Internet in Depth Web Development I	4
Level 4 Advanced Core and Capstone Courses		
BA 220	Business Analysis and Budgeting	4

Second Year**Fall**

BA 229	QuickBooks	3
BA 249	Retailing	4
BA 261	Consumer Behavior	4
CIS 125E	Excel	4

Credits **15**

Winter

BA 220	Business Analysis and Budgeting	4
BA 232	Branding	4
BA 237	Marketing Research	4
CIS 178 or CIS 195	Internet in Depth or Web Development I	4

Credits **16**

Spring

BA 222	Business Finance	4
BA 233	Internet Marketing	4
BA 290	Business Seminar	3
BA 226	Business Law I	4

Credits **15**

Total Credits **93-97**

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 the Associate of Applied Science in Business Administration.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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
- Completion of WR 065 Rhetoric and Critical Thinking II (or higher) or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra (or higher) or minimum placement Math Level 10

Course Requirements

Course	Title	Credits
BA 101	Introduction 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 214	Business Communications	3
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
Total Credits		39-44

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 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		Credits
Fall		
BA 101	Introduction to Business	4
BA 104	Business Math	3
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
	Credits	10-14
Winter		
BA 112	Applied Accounting II	3
BA 178 or BA 285	Customer Service or Business Human Relations	3
BA 214	Business Communications	3
CIS 131	Software Applications	4
	Credits	13

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		39-44

CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 131	Software Applications	4
LIB 100	Intro to Finding Information	1
Total Credits		38-42

Entrepreneurship - One-Year Certificate of Completion (CC1)

Description

The Entrepreneurship One-Year Certificate of Completion is designed to provide students a foundation for starting their own businesses or assisting business startup activities. All coursework may be applied to the Associate of Applied Science in Business Administration.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10

Course Requirements

Course	Title	Credits
Core Courses		
BA 101	Introduction to Business	4
BA 104	Business Math	3
BA 178	Customer Service	3
BA 206	Management Fundamentals I	4
BA 214	Business Communications	3
BA 217	Accounting Fundamentals	4
BA 223	Marketing Principles I	4
BA 237	Marketing Research	4
BA 250	Entrepreneurship	4

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/or math.

The 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	Introduction to Business	4
BA 104	Business Math	3
BA 178	Customer Service	3
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
LIB 100	Intro to Finding Information	1
Credits		11-15
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
BA 214	Business Communications	3
BA 250	Entrepreneurship	4
Credits		11
Total Credits		38-42

Marketing Communications - One-Year Certificate of Completion (CC1)

Description

The Marketing Communications One-Year Certificate provides students skills to research target consumer preferences to create a branding strategy and promotional content for electronic and traditional marketing media channels. All coursework may be applied to the Associate of Applied Science in Business Administration.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10
- 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	Internet Marketing	4
or BA 239	Advertising	
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/or math.

The 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 (or 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 Professional - One-Year Certificate of Completion (CC1)

Description

The Office Professional One-Year Certificate of Completion prepares students for occupations such as executive secretaries and

administrative assistants, human resources assistants, and clerks. The program can be completed in an academic year; students can continue to earn the Associate of Applied Science in Business Administration.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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 resolve business problems through critical thinking and the decision-making process.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10
- Keyboarding at 25 words per minute or higher; CIS 010 Computer Keyboarding is recommended for those needing basic keyboarding skills

Course Requirements

Course	Title	Credits
Core Courses		
BA 101	Introduction to Business	4
BA 104	Business Math	3
BA 178	Customer Service	3
BA 206	Management Fundamentals I	4
BA 214	Business Communications	3
BA 223	Marketing Principles I	4
BA 233	Internet Marketing	4
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
CIS 125E	Excel	4
CIS 131	Software Applications	4
LIB 100	Intro to Finding Information	1
Choose one course from the following:		3-4
BA 217	Accounting Fundamentals	
BA 218	Personal Finance	
BA 224	Human Resources Management	
BA 280	Co-op Work Experience Business	
Total Credits		37-42

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		
BA 101	Introduction to Business	4
BA 104	Business Math	3
BA 178	Customer Service	3
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
LIB 100	Intro to Finding Information	1
Credits		11-15
Winter		
BA 214	Business Communications	3
BA 206	Management Fundamentals I	4
BA 223	Marketing Principles I	4
CIS 131	Software Applications	4
Credits		15
Spring		
BA 233	Internet Marketing	4
CIS 125E	Excel	4
Choose one course from the following:		3-4
BA 217	Accounting Fundamentals	
BA 218	Personal Finance	
BA 224	Human Resources Management	
BA 280	Co-op Work Experience Business	
Credits		11-12
Total Credits		37-42

Business - Associate of Science Oregon Transfer (ASOT)

Description

The Associate of Science Oregon Transfer (ASOT) in Business is designed for students with a high level of certainty about earning a bachelor's degree in business from an Oregon public university. The degree meets lower-division general education requirements for transfer to an Oregon public institution, and students will have junior standing for registration purposes. Admission to a business school is not guaranteed;

students are strongly encouraged to contact the institution to which they intend to transfer before choosing courses in the ASOT.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 098 Math Literacy or minimum placement in Math Level 14

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Mathematics:</u> (p. 60)		
MTH 243	Introduction to Probability and Statistics I	4
Two additional courses of MTH 105 or higher.		8
<u>Oral Communication:</u> (p. 60)		3-4
<u>Writing:</u> (p. 60)		
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).		
<u>Arts and Letters:</u> (p. 61)		
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
<u>Science/Math/Computer Science:</u> (p. 66)		
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	Introduction 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 Introduction 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 or WR 227 Technical Writing	4
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

Cascade Culinary Institute

The [Cascade Culinary Institute](#) offers courses and programs to prepare students for immediate employment in baking and pastry arts, culinary arts, or hospitality industries. Students benefit from hands-on learning, small classes, and knowledgeable and accessible instructors with vast industry experience. The Jungers Culinary Center on the Bend campus combines the latest kitchen classroom technology, multiple cooking labs, a demonstration theater, and a fine-dining restaurant operated by students.

The Cascade Culinary Institute's Culinary Arts and Baking & Pastry Arts programs are accredited by the [American Culinary Federation](#).

See the [Cascade Culinary Institute page](#) for more information.

Contact:

[Laura Hagen \(lhagen@cocc.edu\)](mailto:lhagen@cocc.edu)

541-318-3751

Jungers Culinary Center, Bend Campus

Department: Cascade Culinary Institute

Department Chair: [Wayne Yeatman \(wyeatman@cocc.edu\)](mailto:wyeatman@cocc.edu)

Programs

Career and Technical Education

Associate of Applied Science

- [Baking and Pastry Arts - Associate of Applied Science \(AAS\)](#) (p. 153)
- [Culinary Arts - Associate of Applied Science \(AAS\)](#) (p. 155)
- [Hospitality Management - Associate of Applied Science \(AAS\)](#) (p. 158)

Two-Year Certificate of Completion

- [Baking and Pastry Arts - Two-Year Certificate of Completion \(CC2\)](#) (p. 154)
- [Culinary Arts - Two-Year Certificate of Completion \(CC2\)](#) (p. 157)
- [Hospitality Management - Two-Year Certificate of Completion \(CC2\)](#) (p. 160)

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 102; CUL 104; 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.

Covers basic pastry dough production, the textural complexity of each dough, and their role in creating delicious pastries and desserts. Includes tart and pie dough, puff pastry, pâte a choux, crêpes, biscuits, shortbread, fritters, sweet yeasted doughs, strudel, phyllo, and cookies. Create a variety of products in each of these categories.

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)

Explores topics of current interest in the baking and pastry discipline.

BAK 199 Selected Topics: Baking and Pastry Arts (1-6 Credits)

Provides a learning experience in baking and pastry arts not currently available; this course is in development to be proposed as a permanent course.

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:** BAK 140 or BAK 101 and CUL 140.

Apply principles and techniques of preparing lean yeasted, rich, and sourdough bread including flatbreads, baguettes, brioche, bagels, pretzels, sourdough, and rye bread. Emphasizes regional and international bread, natural fermentation, and the use of various flours and grains. Practice and apply traditional and innovative baking, shaping, and finishing 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 265 Comprehensive Retail Baking Operations (5 Credits)**Prerequisites:** BAK 140 or CUL 140.

Learn business concepts for building a successful bakery enterprise and apply those concepts in a real-world setting. The instructor guided lab is ideal for students wanting to start their own retail bakery and test ideas in a secure setting. Create and sell products in the bakery kiosk using current baking production methods and equipment. Apply baking production techniques and business theory in the retail arena.

BAK 280 Baking and Pastry Arts Industry Internship (1-6 Credits)**Prerequisites:** BAK 140.

Provides supervised work experience designed to expand career knowledge and experiential confidence while increasing knowledge, speed, timing, organization and the ability to execute industry skills repetitively. Includes a diverse work experience designed on a systematic rotation of different stations in the kitchen, dining room, and general operations positions.

BAK 288 Special Studies: Baking and Pastry Arts (1-6 Credits)

Explores topics of current interest in the baking and pastry discipline.

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.

BAK 299 Selected Topics: Baking and Pastry Arts (1-6 Credits)

Provides a learning experience in baking and pastry arts not currently available; this course is in development to be proposed as a permanent course.

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. P/NP grading.

CUL 104 Applied Math for Culinary Arts (4 Credits)

Prerequisites: MTH 015 (or higher) or minimum placement Math Level 7. 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 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 102; CUL 104; 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)

Prerequisites with concurrency: CUL 140.

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.

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 203 Food Truck Operations (4 Credits)

Prerequisites: CUL 170 or BAK 170.

Recommended preparation: CUL 200.

Covers owning and operating a food truck or cart. Uses the tools needed to formulate a food truck concept to turn it into a standardized plan. Focuses on menu planning, truck/cart design and location, government regulations, licenses, and permits. Requires local travel.

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 with concurrency:** 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 288 Special Studies: Culinary Arts (1-6 Credits)

Explores topics of current interest in the discipline.

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.

CUL 299 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.

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 104.

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.

HM 160 Wine and Specialty Beverage Management and Service (3 Credits)

Explores organization of a beverage program within the operation of a hospitality business. Introduces the world of wine and beverage including beer and distilled beverages. Emphasizes major wine regions, varietals, viticulture, the winemaking process, and food and wine pairings.

HM 188 Special Studies: Hospitality Management (1-4 Credits)

Explores topics of current interest in the hospitality management discipline.

HM 190 Dining Room Operations (5 Credits)

Covers elements of customer service in a real-life dining room setting including culture and delivery, standards of service, causes of service breakdowns, and service recovery techniques. Provides customer service strategies using systems, technologies, and communication skills to serve diverse customer needs. Emphasizes service styles and guidelines, guest relations, management systems, and equipment identification and handling. Results in the following industry certifications: Oregon Liquor Control Commission (OLCC) Alcohol Service Permit and the Federation of Dining Room Professionals (FDRP) Dining Room Associate and Wine Steward Associate Certificates.

HM 199 Selected Topics: Hospitality Management (1-4 Credits)

This course is in development.

HM 210 Menu Composition and Analysis (3 Credits)**Prerequisites:** CUL 104.

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:** (BA 214 or 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 288 Special Studies: Hospitality Management (1-4 Credits)

Explores topics of current interest in the hospitality management discipline.

HM 290 Career Success and E-Folio Presentation (2 Credits)

Prerequisites: CUL 170 or BAK 170.

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.

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.

HM 299 Selected Topics: Hospitality Management (1-4 Credits)

Provides a learning experience in hospitality management not currently available; this course is in development to be proposed as a permanent course.

Baking and Pastry Arts - Associate of Applied Science (AAS)

Description

The Baking and Pastry Arts Associate of Applied Science is designed to expose students to the step-by-step process, from foundation to advanced skills, of classical and contemporary baking and pastry techniques and to serve as a competency-based learning experience that prepares students for a successful career in the hospitality industry.

The program is accredited by the [American Culinary Federation](#).

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Synthesize the process of classical and contemporary baking and pastry techniques.
2. Apply flavor profiling, ingredient selection, nutrition, and presentation principles.
3. Use baking and pastry industry-specific equipment.
4. Apply diligent food and beverage management, leadership, customer service, and interpersonal skills.
5. Apply rigorous food safety and sanitation practices.

6. Demonstrate basic measuring, conversion, food costing, and yield management practices.
7. Use baking and pastry industry-specific communication.

Entrance Requirements

Academic Entrance Requirements

- Completion of or concurrent enrollment in WR 121 Academic Composition or BA 214 Business Communications
- Completion of MTH 015 Basic Mathematics or minimum placement Math Level 7

Additional Program Costs (BEYOND STANDARD TUITION/FEES AND TEXTBOOKS)

Material Costs

- Oregon Liquor Control Commission service permit: \$28.65
- Knives, uniforms, and additional supplies: approximately \$1,500

Enrollment Fees

- Specified courses: \$185 per credit fee for lab and consumable materials (see [program requirements](#) for courses with these fees indicated with: *courses*¹)

Course Requirements

Course	Title	Credits
Core Courses		
BAK 110	Baking and Pastry Foundations I ¹	4
BAK 140	Baking and Pastry Foundations II ¹	4
BAK 170	Baking and Pastry Foundations III ¹	4
BAK 180	Custards and Frozen Desserts ¹	4
BAK 210	Modern Sugar and Chocolate Decor ¹	4
BAK 220	Wedding Celebration and Specialty Cakes ¹	4
BAK 240	The Craft of Artisan Breads ¹	4
BAK 250	Petit Fours, Candies and Classical Mignardise ¹	4
BAK 265	Comprehensive Retail Baking Operations	5
or CUL 200	Comprehensive Kitchen Operations for the Restaurant Industry	
BAK 280	Baking and Pastry Arts Industry Internship	6
CUL 101	Introduction to Culinary Arts ¹	4
CUL 102	Food Safety and Sanitation	2
CUL 104	Applied Math for Culinary Arts	4
CUL 230	Culinary Nutrition and Applied Techniques of Healthy Cooking ¹	4
CUL 270	Culinary Arts Capstone	5
HM 130	Hospitality Industry Supervision and Principles of Leadership	4
HM 150	Procurement, Ingredient Identification and Food Cost Control	3
HM 190	Dining Room Operations	5
HM 290	Career Success and E-Folio Presentation	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 and Viennoiserie ¹	
BAK 225 Entremets ¹	
BAK 230 Plated Desserts and Presentation ¹	
BAK 235S Classical French Pastries ¹	
BAK 245S Advanced Sugar Decor and Chocolate Sculpting ¹	
BAK 255S Artisan Breads with Heirloom Whole Grains ¹	
BAK 260 Advanced Wedding, Celebration, and Specialty Cakes ¹	
CUL 105 International Exchange Preparation	
CUL 225 Applied Harvesting and Food Preservation Principles ¹	
CUL 265S Advanced Skill Development and Culinary Competition Mastery ¹	
Total Credits	95-96

¹ Course carries a \$185 per credit fee for lab and consumable materials.

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.

Sample Plan

First Year

Course	Description	Credits
BAK 110	Baking and Pastry Foundations I	4
CUL 102	Food Safety and Sanitation	2
CUL 104	Applied Math for Culinary Arts	4
WR 121 or BA 214	Academic Composition or Business Communications	3-4
Credits		13-14

Winter

BAK 140	Baking and Pastry Foundations II	4
CUL 101	Introduction to Culinary Arts	4
HM 130	Hospitality Industry Supervision and Principles of Leadership	4
BAK 180	Custards and Frozen Desserts	4
Credits		16

Spring

BAK 170	Baking and Pastry Foundations III	4
HM 150	Procurement, Ingredient Identification and Food Cost Control	3

HM 190	Dining Room Operations	5
Credits		12

Summer

BAK 280	Baking and Pastry Arts Industry Internship	6
Credits		6

Second Year

Fall

CUL 230	Culinary Nutrition and Applied Techniques of Healthy Cooking	4
Choose one course from the Baking & Pastry Specialization List		4
BAK 250	Petit Fours, Candies and Classical Mignardise	4
BAK 220	Wedding Celebration and Specialty Cakes	4
Credits		16

Winter

Choose two course from the Baking & Pastry Specialization List		8
BAK 265 or CUL 200	Comprehensive Retail Baking Operations or Comprehensive Kitchen Operations for the Restaurant Industry	5
BAK 240	The Craft of Artisan Breads	4
Credits		17

Spring

CUL 270	Culinary Arts Capstone	5
BAK 210	Modern Sugar and Chocolate Decor	4
Choose one course from the Baking & Pastry Specialization List		4
HM 290	Career Success and E-Folio Presentation	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 skills, 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.

This program is accredited by the [American Culinary Federation](#).

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Describe and demonstrate the process of classical and contemporary baking and pastry techniques.
2. Apply flavor profiling, ingredient selection, nutrition, and presentation principles.
3. Use baking and pastry industry-specific equipment.
4. Apply food and beverage management, leadership, customer service, and interpersonal skills.
5. Apply food safety and sanitation practices.

6. Demonstrate basic measuring, conversion, food costing, and yield management practices.
7. Use baking and pastry industry-specific communication.

Entrance Requirements

Academic Entrance Requirements

- Completion of or concurrent enrollment in or
- Completion of or minimum placement Math Level 7

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

- Oregon Liquor Control Commission service permit: \$28.65
- Knives, uniforms, and additional supplies: approximately \$1,500

Enrollment Fees

- Specified courses: \$185 per credit fee for lab and consumable materials (see [program requirements](#) for courses with these fees indicated with: *courses*¹)

Course Requirements

Course	Title	Credits
Core Courses		
BAK 110	Baking and Pastry Foundations I ¹	4
BAK 140	Baking and Pastry Foundations II ¹	4
BAK 170	Baking and Pastry Foundations III ¹	4
BAK 180	Custards and Frozen Desserts ¹	4
BAK 210	Modern Sugar and Chocolate Decor ¹	4
or BAK 220	Wedding Celebration and Specialty Cakes	
or BAK 240	The Craft of Artisan Breads	
BAK 265	Comprehensive Retail Baking Operations	5
CUL 101	Introduction to Culinary Arts ¹	4
CUL 102	Food Safety and Sanitation	2
CUL 104	Applied Math for Culinary Arts	4
CUL 230	Culinary Nutrition and Applied Techniques of Healthy Cooking ¹	4
HM 130	Hospitality Industry Supervision and Principles of Leadership	4
HM 150	Procurement, Ingredient Identification and Food 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.

Sample Plan

First Term		Credits
BAK 110	Baking and Pastry Foundations I	4
CUL 102	Food Safety and Sanitation	2
CUL 104	Applied Math for Culinary Arts	4
WR 121 or BA 214	Academic Composition or Business Communications	3-4
Credits		13-14
Second Term		
BAK 140	Baking and Pastry Foundations II	4
CUL 101	Introduction to Culinary Arts	4
HM 130	Hospitality Industry Supervision and Principles of Leadership	4
BAK 180	Custards and Frozen Desserts	4
Credits		16
Third Term		
BAK 170	Baking and Pastry Foundations III	4
HM 190	Dining Room Operations	5
HM 150	Procurement, Ingredient Identification and Food Cost Control	3
Credits		12
Fourth Term		
BAK 210 or BAK 220 or BAK 240	Modern Sugar and Chocolate Decor or Wedding Celebration and Specialty Cakes or The Craft of Artisan Breads	4
BAK 265	Comprehensive Retail Baking Operations	5
CUL 230	Culinary Nutrition and Applied Techniques of Healthy Cooking	4
Credits		13
Total Credits		54-55

Culinary Arts - Associate of Applied Science (AAS)

Description

The Culinary Arts Associate of Applied Science is designed to expose students to the step-by-step process, from foundation to advanced skills, of classical and contemporary culinary techniques and to serve as a competency-based learning experience that prepares students for a successful career in the hospitality industry.

This program is accredited by the [American Culinary Federation](#).

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Synthesize the process of classical and contemporary cooking techniques and demonstrate proficiently.
2. Apply 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

- Completion of or concurrent enrollment in WR 121 Academic Composition or BA 214 Business Communications
- Completion of MTH 015 Basic Mathematics or minimum placement Math Level 7

ADDITIONAL PROGRAM COSTS (BEYOND STANDARD TUITION/FEES AND TEXTBOOKS)

Material Costs

- Oregon Liquor Control Commission service permit: \$28.65
- Knives, uniforms, and additional supplies: approximately \$1,500

Enrollment Fees

- Specified courses: \$185 per credit fee for lab and consumable materials (see [program requirements](#) for courses with these fees indicated with: courses¹)

Course Requirements

Course	Title	Credits
Core Requirements		
BAK 101	Introduction to Baking & Pastry ¹	4
CUL 102	Food Safety and Sanitation	2
CUL 104	Applied Math for Culinary Arts	4
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	Comprehensive Kitchen Operations for the Restaurant Industry	5
CUL 220	International Cuisine and Global Flavor Profiling ¹	4
CUL 230	Culinary Nutrition and Applied Techniques of Healthy Cooking ¹	4
CUL 240	Butchery ¹	4
CUL 270	Culinary Arts Capstone	5

CUL 280	Culinary Arts Industry Internship	6
HM 130	Hospitality Industry Supervision and Principles of Leadership	4
HM 150	Procurement, Ingredient Identification and Food Cost Control	3
HM 160	Wine and Specialty Beverage Management and Service ¹	3
HM 190	Dining Room Operations	5
HM 210	Menu Composition and Analysis	3
HM 290	Career Success and E-Folio Presentation	2
WR 121	Academic Composition	3-4
or BA 214	Business Communications	

Culinary Specialization List

Choose 16 credits from the following:		16
BAK 210	Modern Sugar and Chocolate Decor ¹	
BAK 220	Wedding Celebration and Specialty Cakes ¹	
BAK 235S	Classical French Pastries ¹	
BAK 240	The Craft of Artisan Breads ¹	
BAK 245S	Advanced Sugar Decor and Chocolate Sculpting ¹	
BAK 255S	Artisan Breads with Heirloom Whole Grains ¹	
CUL 105	International Exchange Preparation	
CUL 199	Selected Topics: Culinary Arts	
CUL 203	Food Truck Operations	
CUL 225	Applied Harvesting and Food Preservation Principles ¹	
CUL 235S	Farm-to-Table and Sustainable Cuisine Practices ¹	
CUL 242	Charcuterie ¹	
CUL 245S	Modernist Cuisine and the Evolution of Cooking 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 World Cuisines: Africa ¹	
CUL 276C	Regional World Cuisines: Caribbean ¹	
CUL 276F	Regional World Cuisines: France ¹	
CUL 276G	Regional World Cuisines: Germany ¹	
CUL 276I	Regional World Cuisines: Italy ¹	
CUL 276J	Regional World Cuisines: Asia ¹	
CUL 276S	Regional World Cuisines: Spain ¹	
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 102	Food Safety and Sanitation	2
CUL 104	Applied Math for Culinary Arts	4
CUL 110	Culinary Foundations I	4
WR 121 or BA 214	Academic Composition or Business Communications	3-4

Credits **13-14**

Winter

BAK 101	Introduction to Baking & Pastry	4
CUL 140	Culinary Foundations II	4
HM 130	Hospitality Industry Supervision and Principles of Leadership	4
HM 150	Procurement, Ingredient Identification and Food 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 Arts Industry Internship	6
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Credits **6**

Second Year

Fall

CUL 200	Comprehensive Kitchen Operations for the Restaurant Industry	5
CUL 220	International Cuisine and Global Flavor Profiling	4
CUL 230	Culinary Nutrition and Applied Techniques of Healthy Cooking	4
Choose one course from the Culinary Specialization List		4

Credits **17**

Winter

CUL 240	Butchery	4
HM 160	Wine and Specialty Beverage Management and Service	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 Presentation	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 skills, of classical and contemporary culinary techniques and to serve as a competency-based learning experience that prepares students for a successful career in the hospitality industry.

This program is accredited by the [American Culinary Federation](#).

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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

- Completion of or concurrent enrollment in WR 121 Academic Composition or BA 214 Business Communications
- Completion of MTH 015 Basic Mathematics or minimum placement Math Level 7

ADDITIONAL PROGRAM COSTS (BEYOND STANDARD TUITION/FEES AND TEXTBOOKS)

Material Costs

- Oregon Liquor Control Commission service permit: \$28.65
- Knives, uniforms, and additional supplies: approximately \$1,500

Enrollment Fees

- Specified courses: \$185 per credit fee for lab and consumable materials (see the Program Requirements tab for courses with these fees indicated with: courses¹)

Course Requirements

Course	Title	Credits
Core Requirements		
BAK 101	Introduction to Baking & Pastry ¹	4
CUL 102	Food Safety and Sanitation	2
CUL 104	Applied Math for Culinary Arts	4
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	Comprehensive Kitchen Operations for the Restaurant Industry	5
CUL 230	Culinary Nutrition and Applied Techniques of Healthy Cooking ¹	4
HM 130	Hospitality Industry Supervision and Principles of Leadership	4
HM 150	Procurement, Ingredient Identification and Food Cost Control	3
HM 190	Dining Room Operations	5
WR 121 or BA 214	Academic Composition Business Communications	3-4
Total Credits		50-51

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 104	Applied Math for Culinary Arts	4
CUL 110	Culinary Foundations I	4
CUL 102	Food Safety and Sanitation	2
WR 121 or BA 214	Academic Composition or Business Communications	3-4
Credits		13-14

Second Term		Credits
CUL 140	Culinary Foundations II	4
HM 130	Hospitality Industry Supervision and Principles of Leadership	4
HM 150	Procurement, Ingredient Identification and Food Cost Control	3
Credits		11

Third Term		Credits
CUL 170	Culinary Foundations III	4
CUL 180	Modern Garde Manger	4
HM 190	Dining Room Operations	5
Credits		13

Fourth Term		Credits
BAK 101	Introduction to Baking & Pastry	4
CUL 200	Comprehensive Kitchen Operations for the Restaurant Industry	5

CUL 230	Culinary Nutrition and Applied Techniques of Healthy Cooking	4
Credits		13
Total Credits		50-51

Hospitality Management - Associate of Applied Science (AAS)

Description

The Associate of Applied Science in Hospitality Management prepares students for immediate employment in hospitality occupations. The degree provides students required industry skills, including management, hospitality technology, food and beverage operations, fundamentals of business marketing, customer service, and financial analysis.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- Apply diligent management, leadership, and interpersonal skills.
- Apply thorough customer service skills.
- Demonstrate proficiency in the use of hospitality industry-specific technologies.
- Identify and apply rigorous food safety and sanitation practices.
- Understand and demonstrate business and financial management.
- Demonstrate basic measuring, conversion, food costing, and yield management practices.
- Demonstrate proficiency in the use of hospitality industry-specific communication.

ENTRANCE REQUIREMENTS

Academic Entrance Requirements

- Completion of or concurrent enrollment in WR 121 Academic Composition or BA 214 Business Communications
- Completion of MTH 015 Basic Mathematics or minimum placement Math Level 7

ADDITIONAL PROGRAM COSTS (BEYOND STANDARD TUITION/FEES AND TEXTBOOKS)

Material Costs

- Oregon Liquor Control Commission service permit: \$28.65
- Knives, uniforms, and additional supplies: approximately \$1,500

Enrollment Fees

- Specified courses: \$185 per credit fee for lab and consumable materials (see [program requirements](#) for courses with these fees indicated with: courses¹)

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 101	Introduction to Culinary Arts ¹	4
CUL 102	Food Safety and Sanitation	2
CUL 104	Applied Math for Culinary Arts	4
HM 101	Introduction to Hospitality	4
HM 130	Hospitality Industry Supervision and Principles of Leadership	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, Ingredient Identification and Food Cost Control	3
HM 160	Wine and Specialty Beverage Management and Service 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 Management Industry Internship	6
HM 290	Career Success and E-Folio Presentation	2
Level 3		
Choose 16 credits from the following:		16
BA 101	Introduction 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 Operations	
Total Credits		91-96

¹ Course carries a \$185 per credit fee for lab and consumable materials.

² BA 101 Introduction 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 are 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 to 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 (or Computer Competency Test)	0-4
CUL 104	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	or Business Communications	
Credits		12-17
Winter		
CUL 101	Introduction to Culinary Arts	4
CUL 102	Food Safety and Sanitation	2
HM 130	Hospitality Industry Supervision and Principles of Leadership	4
HM 160	Wine and Specialty Beverage Management and Service	3
Credits		13
Spring		
BA 217	Accounting Fundamentals	4
CIS 125E	Excel	4
HM 150	Procurement, Ingredient Identification and Food Cost Control	3
HM 210	Menu Composition and Analysis	3
Credits		14
Summer		
HM 280	Hospitality Management Industry 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	Introduction 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 Operations	
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 Presentation	2
Choose 12 credits from the following:		12
BA 101	Introduction 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 Operations	
Credits		14
Total Credits		91-96

Hospitality Management - Two-Year Certificate of Completion (CC2)

Description

The Hospitality Management Two-Year Certificate of Completion is designed to give students a foundation for careers in hospitality management.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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

- Completion of or concurrent enrollment in WR 121 Academic Composition or BA 214 Business Communications
- Completion of MTH 015 Basic Mathematics or minimum placement Math Level 7

ADDITIONAL PROGRAM COSTS (BEYOND STANDARD TUITION/FEES AND TEXTBOOKS)

Material Costs

- Oregon Liquor Control Commission service permit: \$28.65
- Knives, uniforms, and additional supplies: approximately \$1,500

Enrollment Fees

- Specified courses: \$185 per credit fee for lab and consumable materials (see [program requirements](#) for courses with these fees indicated with: courses¹)

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 101	Introduction to Culinary Arts ¹	4
CUL 102	Food Safety and Sanitation	2
CUL 104	Applied Math for Culinary Arts	4
HM 101	Introduction to Hospitality	4
HM 130	Hospitality Industry Supervision and Principles of Leadership	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, Ingredient Identification and Food Cost Control	3
HM 160	Wine and Specialty Beverage Management and Service 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/or math.

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.

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.

541-383-7552
Science Center, Bend Campus

Department: Science
Department Chair: Carol Higginbotham

Programs

Transfer

Associate of Arts Oregon Transfer

- [Chemistry - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 162)

Courses

CH 104 Introduction to Chemistry I (5 Credits)

Prerequisites: MTH 095 (or higher) or minimum placement Math Level 14. 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 199 Selected Topics: Chemistry (1-5 Credits)

Provides a learning experience in chemistry not currently available; this course is in development to be proposed as a permanent course.

CH 221 General Chemistry I (5 Credits)

Prerequisites: MTH 111 or MTH 112, or MTH 251 (or higher) or minimum placement Math Level 20.

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.

Sample Plan

First Term		Credits
CUL 104	Applied Math for Culinary Arts	4
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
HM 101	Introduction to Hospitality	4
LIB 100	Intro to Finding Information	1
WR 121 or BA 214	Academic Composition or 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	Hospitality Industry Supervision and Principles of Leadership	4
HM 160	Wine and Specialty Beverage Management and Service	3
Credits		13
Third Term		
BA 217	Accounting Fundamentals	4
HM 150	Procurement, Ingredient Identification and Food 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

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 to 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, such as medicine, physical therapy, or pharmacy. Chemists are readily employable after completing a bachelor's degree.

See the [Chemistry page](#) for more information.

Contact:

Carol Higginbotham (chigginbotham@cooc.edu)

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 241 Organic Chemistry I (5 Credits)**Prerequisites:** CH 223.

Builds on principles of general chemistry with an emphasis on the chemistry of carbon compounds for science and chemical engineering majors. Includes bond angles, molecular shape, Lewis structures, formal charge, electron orbitals, polar bonds, polar reactions, resonance, alkanes, alkenes, cycloalkanes, addition via carbocation, addition via cyclic intermediates, chirality, addition to alkynes, substitution, reaction mechanisms, and energy diagrams. The laboratory introduces standard lab techniques for separating, purifying and characterizing compounds on microscale and/or macroscale, while using record keeping methods acceptable in the discipline of chemistry.

CH 242 Organic Chemistry II (5 Credits)**Prerequisites:** CH 241.

Introduces additional principles of organic chemistry for science and chemical engineering majors. Includes substitution reactions, elimination reactions, radical reactions, conjugation and molecular orbital theory, aromaticity, infrared spectroscopy, mass spectroscopy, nuclear magnetic resonance spectroscopy, and synthesis. The laboratory introduces derivatization reactions, the effect of solvents, and instrumental techniques while using record keeping techniques acceptable in the discipline of chemistry.

CH 243 Organic Chemistry III (5 Credits)**Prerequisites:** CH 242.

Introduces additional principles of organic chemistry for chemistry, biology and chemical engineering majors. Includes electrophilic aromatic substitution, acidity and pKa of phenols, nucleophilic aromatic substitution, addition to a carbonyl, carboxylic acids and derivatives, enolate and enol nucleophiles, aldol and Claisen reactions and amines. The laboratory introduces synthetic methods and a synthesis project while using record keeping techniques acceptable in the discipline of chemistry.

CH 288 Special Studies: Chemistry (1-4 Credits)

Explores topics of current interest in the discipline.

CH 298 Independent Study: Chemistry (1-4 Credits)**Prerequisites:** Instructor approval required.**Recommended preparation:** Prior coursework in the discipline.

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

CH 299 Selected Topics: Chemistry (1-5 Credits)

Provides a learning experience in chemistry not currently available; this course is in development to be proposed as a permanent course.

GS 105 Physical Science: Chemistry (4 Credits)**Recommended preparation:** one year of high school algebra or equivalent or concurrent enrollment in MTH 060.

Provides an introduction to properties and structures of matter, chemical bonding, solutions, equilibrium, electrolytes, and acids and bases. Includes quantitative discussions of the mole, stoichiometry, and solution concentration.

Chemistry - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer with a chemistry emphasis is excellent preparation for baccalaureate degrees in chemistry and related disciplines, such as toxicology, atmospheric science, environmental science, and materials science.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommend: MTH 251		
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose at least three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose at least four courses from at least two prefixes		12-16
<u>Science/Math/Computer Science:</u> (p. 66)		
Choose at least four courses from at least two prefixes including at 12-20 least three laboratory courses in biological and/or physical science		
Recommend: CH 221, CH 222, CH 223, and PH 201 or PH 211		
Electives		
Choose enough electives to reach 90 credits		39
Recommend: MTH 252, MTH 253, MTH 254, 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

Oregon public universities with a chemistry major include: Eastern Oregon University, Oregon State University, 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
Health (3 credits with HHP or HHPA prefix) ¹	3
Discipline Studies Science/Math/Computer Science (recommend CH 221)	5
Mathematics (recommend MTH 251)	4
WR 121 Academic Composition	4
Credits	16

Second Term	Credits
Discipline Studies Science/Math/Computer Science (recommend CH 222)	5
Discipline Studies Science/Math/Computer Science (recommend PH 211)	5
Elective (recommend MTH 252)	4
WR 122 Argument, Research, and Multimodal or WR 227 Composition or Technical Writing	4
Credits	18

Third Term	Credits
Discipline Studies Science/Math/Computer Science (recommend CH 223)	5
Elective (recommend PH 212)	5
Elective (recommend MTH 253)	4
Oral Communication: (p. 60)	3-4
Credits	17-18

Fourth Term	Credits
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Elective (recommend PH 213)	5
Elective	3-5
Credits	14-18

Fifth Term	Credits
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Elective (recommend MTH 254)	4
Elective	3-5
Credits	13-17

Sixth Term	Credits
Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4

Discipline Studies Social Science	3-4
Elective	3-5
Credits	12-17
Total Credits	90-104

Communication

Communication offers courses in public speaking, small group communication, and interpersonal communication, as well as courses in media, communicating love, gender, intercultural communication, and argumentation. One-credit, workshop-style courses are also available for those who want to learn team skills, conflict management, listening skills, emotional intelligence, and the basics of free expression. A communications degree can lead to a career in teaching, the hospitality industry, journalism, broadcast and cyber media, human resources, business management, public relations, politics, law, or the arts.

See the [Communication page](#) for more information.

Contact:

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541-383-7226
Jefferson Hall, Bend Campus

Department: Fine Arts and Communication

Department Chair: [Lilli Ann Linford-Foreman \(lforeman@cocc.edu\)](mailto:lforeman@cocc.edu)

Programs

Transfer

Associate of Arts Oregon Transfer

- [Communication - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 165)

Courses

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 like those found in various workplaces.

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 288 Special Studies: Communication (1-4 Credits)

Explores topics of current interest in the discipline.

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.

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 288 Special Studies: Theater (1-4 Credits)

Explores topics of current interest in the discipline.

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 - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer with a focus in communication includes courses that are commonly required for the major and meets lower-division general education requirements at all Oregon public universities. A communications degree can lead to a career in teaching, the hospitality industry, journalism, broadcast and cyber media, human resources, business management, public relations, politics, law, or the arts.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
Recommend: COMM 111 or COMM 218		
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
Recommend: 200-level language courses for students seeking Bachelor of Arts		
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
<u>Science/Math/Computer Science:</u> (p. 66)		
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 ^{2,4} 39

Total Credits

90-106

- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² Students seeking to obtain a Bachelor of Arts should consider completing a foreign language through the 200 level (i.e., 203). 200-level foreign language courses count as an Arts and Letters requirement. 100-level foreign language courses count as electives and, depending on language placement, may be required.
- ³ Communication majors planning to pursue 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 communication majors seeking a bachelor's or more advanced degree. Some Oregon two-year and four-year institutions require four-credit communication courses, so students transferring may find it helpful to take a one-credit course, such as COMM 250 Listening, COMM 252 Team Skills, COMM 253 Conflict Management, or COMM 255 Free Expression and Public Assembly to supplement a three-credit communication course.

Oregon State University-Cascades offers a communication minor; contact the OSU-C admissions office for more information. OSU's (Corvallis) department of Speech Communication offers undergraduate programs leading to Bachelor of Arts (BA) or Bachelor of Science (BS) degrees with concentrations in communication or theatre arts. Additionally, OSU students can complete a minor either in communication or theatre arts. At the graduate level they participate in the Master of Arts in Interdisciplinary Studies program.

Oregon Institute of Technology's Communication Department offers a BS in Communication Studies or Professional Writing 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 two majors: Communication Studies and Social Media and Public Engagement.

The University of Oregon's School of Journalism and Communication offers majors in four areas: advertising, journalism, media studies, and public relations.

Western Oregon University's Communication Studies program offers a 60-credit-hour major and a 24-credit-hour minor in Speech Communication.

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 foreign language 101)		4
<u>Mathematics</u> : (p. 60)		4
Oral Communication (recommend COMM 111 or COMM 218)		3-4
WR 121	Academic Composition	4
Credits		15-16
Second Term		Credits
Elective (recommend foreign language 102)		4
<u>Health</u> : (p. 58)		3
Discipline Studies Social Science		4
WR 122	Argument, Research, and Multimodal	4
or WR 227	Composition or Technical Writing	
Credits		15
Third Term		Credits
Discipline Studies Social Science		4
Discipline Studies Science/Math/Computer Science		3-4
Elective (recommend foreign language 103)		4
Discipline Studies Arts and Letters		3-4
Elective (consider any course with a COMM prefix)		1-3
Credits		15-19
Fourth Term		Credits
Discipline Studies Social Science		4
Discipline Studies Lab Science		4
Discipline Studies Arts & Letters (recommend foreign language 201)		4
Elective (consider any course with a COMM prefix)		3-4
Credits		15-16
Fifth Term		Credits
Discipline Studies Arts & Letters (recommend foreign language 202)		4
Discipline Studies Lab Science		4
Electives (consider any course with a COMM prefix)		4
Elective		3-4
Credits		15-16
Sixth Term		Credits
Discipline Studies Lab Science		4
Elective (recommend foreign language 203)		4
Electives (consider any course with a COMM prefix)		4
Elective		3-4
Credits		15-16
Total Credits		90-98

Computer & Information Systems

Jobs related to computer technology, information systems, network, and security are on the rise. 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, web development, networking, and cybersecurity.

Graduates work in information technology for a wide variety of commercial businesses, education, government, e-commerce, publishing, and real estate. Careers typically include positions such as personal computer technician, desktop support, network administrator, web developer, draftsman, database administrator, system administrator, and related managerial and administrative roles.

See the [Computer and Information Systems page](#) for more information.

Contact:

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Pioneer Hall, Bend Campus

Department: Computer and Information Systems
Department Chair: Ken Swartwout

Programs

Career and Technical Education

Associate of Applied Science

- [Computer & Information Systems - Associate of Applied Science \(AAS\)](#) (p. 170)

Associate of Applied Science Option

- [Computer Aided Drafting \(CAD\) - Associate of Applied Science Option \(AASO\)](#) (p. 172)
- [Networking and Cybersecurity - Associate of Applied Science Option \(AASO\)](#) (p. 174)
- [Web Development - Associate of Applied Science Option \(AASO\)](#) (p. 175)

One-Year Certificate of Completion

- [Computer & Information Systems - One-Year Certificate of Completion \(CC1\)](#) (p. 177)
- [Computer Aided Drafting \(CAD\) - One-Year Certificate of Completion \(CC1\)](#) (p. 178)

Career Pathway Certificate of Completion

- [Cybersecurity - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 179)

Transfer

Associate of Science Oregon Transfer

- [Computer Science - Associate of Science Oregon Transfer \(ASOT\)](#) (p. 180)

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)

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 includes 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. Explores the training and productivity habits essential for work in IT-related fields. 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. Course objectives are broken down into three modules: Computer Fundamentals, Key Applications, and Living Online. Provides 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.

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)

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.

Introduces the most popular desktop database software, Microsoft Access. Prepares students for the latest Microsoft Office Specialist certification for Access exam which helps students validate the skills industries require. Create and modify database tables, forms, queries and reports. Focuses on optimizing databases for efficient data entry and generating comprehensive reports. Database design issues are discussed but not emphasized.

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 Microsoft Excel 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.

Explore features and techniques of both Microsoft Word and Microsoft Excel, focusing on skills that are common to IT and business users. Focus on skills needed to prepare for the Excel and Word Associate Microsoft Office Specialist Certifications.

CIS 133JS Introduction to JavaScript (4 Credits)

Prerequisites: CIS 122.

Recommended preparation: CIS 195.

Learn programming fundamentals and object-oriented concepts using vanilla JavaScript syntax. Add interactivity and custom behaviors to web applications by employing front-end JavaScript techniques combined with HTML and CSS.

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.

Learn HTML (for structure) and CSS (for style) while exploring the fundamentals of web development. Use different techniques to create webpage elements used by modern and successful websites. Style webpages that are functional, for both desktop and mobile users, and demonstrate best practices for usability and design.

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 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 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.

Gain a deeper understanding of HTML (for structure) and CSS (for style) while creating multi-page websites suitable for businesses and organizations. Explore web development's more advanced techniques useful for improving usability and user experience. Plan and design websites for desktop and mobile users.

CIS 297 CIS Professional Capstone (4 Credits)**Prerequisites with concurrency:** CIS 244.

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.

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:** MTH 231.

Emphasizes the development of data structures, algorithm analysis, recursion, and sorting. Also explores several basic programming constructs, inheritance, interfaces, exceptions, and files/streams. Covers software engineering methods, proper program development, and attention to program planning and documentation.

CS 188 Special Studies: Computer Science (1-4 Credits)

Explores topics of current interest in the computer science discipline.

CS 199 Selected Topics: Computer Science (1-4 Credits)

Provides a learning experience in computer science not currently available; this course is in development to be proposed as a permanent course.

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.

CS 288 Special Studies: Computer Science (1-4 Credits)

Explores topics of current interest in the computer science discipline.

CS 298 Independent Study: Computer Science (1-4 Credits)**Prerequisites:** Instructor approval required.**Recommended preparation:** Prior coursework in the discipline.

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

CS 299 Selected Topics: Computer Science (1-4 Credits)

Provides a learning experience in computer science not currently available; this course is in development to be proposed as a permanent course.

Computer & Information Systems - Associate of Applied Science (AAS) Description

The Computer and Information Systems Associate of Applied Science 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 for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing, and real estate. Careers typically include positions such as technician/customer support, network administrator, web developer, draftsman, database administrator, systems administrator, and related managerial and administrative roles.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Describe the methods for solving both hardware and software information technology problems.
2. Communicate via speech and writing with end users about a broad spectrum of information technology concepts.
3. Maintain currency in information technology 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 information technology processes as part of the systems development life cycle.
7. Present an information technology plan with specific examples of solutions for a small business.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10
- Basic computer competency or CIS 010 Computer Keyboarding and CIS 070 Introduction to Computers: Windows

Other Entrance Requirements

All enrolled program students may have to pass a criminal history check (CHC) as a condition of their acceptance into a worksite for cooperative work experience. 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 to 64GB portable storage (USB or SSD drive): \$20 to \$100
- A desktop or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office: approximately \$800
- Reliable high-speed internet access

Course Requirements

Course	Title	Credits
Core Courses		
CIS 101	Information Technology 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 of Public Speaking	3-4
or COMM 218	Interpersonal Communication	
or COMM 219	Small Group Communication	
Human Relations: (p. 76)		3-4
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Total Credits		95-98

Advising Notes

Planning is important. Most option courses are offered once per academic year and many need to be taken in sequence. Some core classes are offered once every two years. Students may take non-program support courses any term to build skills related to prerequisites.

This program is designed for students planning to enter their chosen careers 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	Information Technology Orientation	3
CIS 124	IT Fundamentals	4
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Credits		15
Second Term		Credits
BA 214 or WR 227	Business Communications or Technical Writing	3-4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 178 or CIS 179CL	Internet in Depth or Cloud Essentials	4
Credits		15-16
Third Term		Credits
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 of Public Speaking or Interpersonal Communication or Small Group Communication	3-4
Human Relations: (p. 76)		3-4
Credits		18-20
Fourth Term		Credits
CIS 135DB	Database Theory/SQL	4
CIS 179	Networking Essentials	4
CIS 279WC or CIS 179L	Windows Client or Linux Essentials	4
CIS Elective (must have CIS/CS prefix numbered 100 or higher)		4
Credits		16
Fifth Term		Credits
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		Credits
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		96-99

Computer Aided Drafting (CAD) - Associate of Applied Science Option (AASO)

Description

The Computer Aided Drafting Associate of Applied Science Option prepares students for entry-level employment in the drafting field. The program also integrates focused computer information systems skills in networking, web development, and hardware. Together, these courses provide a foundation for design, software use, and computer management.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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 information technology concepts.
6. Demonstrate currency in information technology knowledge and skills through continuous education and research.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10
- Basic computer competency or CIS 010 Computer Keyboarding and CIS 070 Introduction to Computers: Windows

Other Entrance Requirements

All enrolled program students may have to pass a criminal history checks (CHC) as a condition of their acceptance into a worksite for cooperative work experience. 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 or SSD drive): \$20 to \$100
- A desktop or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office: approximately \$800
- Reliable high-speed internet access

Course Requirements

Course	Title	Credits
Core Courses		
CIS 101	Information Technology 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 of Public Speaking	3-4
or COMM 218	Interpersonal Communication	
or COMM 219	Small Group Communication	
Human Relations: (p. 76)		3-4
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Total Credits		96-99

Advising Notes

Planning is important. Most option courses are offered once per academic year and may need to be taken in sequence. Some core classes are offered once every two years. Students may take non-program support courses any term to build skills related to prerequisites.

This program 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	Information Technology Orientation	3
CIS 124	IT Fundamentals	4
CIS 125A1	AutoCAD 1	4
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
Credits		15
Second Term		
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	or Cloud Essentials	
Credits		16
Third Term		
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		
CIS 135DB	Database Theory/SQL	4
CIS 135S1	SolidWorks 1	4
CIS 179	Networking Essentials	4
COMM 111	Fundamentals of Public Speaking	3-4
or COMM 218	or Interpersonal Communication	
or COMM 219	or Small Group Communication	
Credits		15-16

Fifth Term

CIS 135A1	AutoDESK Revit 1	4
CIS 135S2	SolidWorks 2	4
CIS 244	Information Systems Analysis	4
CIS 279WC or CIS 179L	Windows Client or Linux Essentials	4

Credits **16**

Sixth Term

BA 214 or WR 227	Business Communications or Technical Writing	3-4
CIS 122	Introduction to Programming	4
CIS 135A2	AutoDESK Revit 2	4
CIS 297	CIS Professional Capstone	4
Human Relations: (p. 76)		3-4

Credits **18-20**

Total Credits **96-99**

Networking and Cybersecurity - Associate of Applied Science Option (AASO)

Description

The Computer and Information Systems 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 for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing, and real estate. Careers typically include positions such as personal computer technician, desktop support, network administrator, web developer, draftsman, database administrator, system administrator, and related managerial and administrative roles.

The Networking and Cybersecurity option prepares students for entry-level positions in network administration and network security. Students who have completed the option will 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.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Demonstrate the ability to plan, execute, and manage the most current version of both the Windows Server and Windows client 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 information technology 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
- Completion of WR 065 Rhetoric and Critical Thinking II (or higher) or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra (or higher) or minimum placement Math Level 10
- 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:

- 16 to 64 GB portable storage (USB drive or SSD drive): \$20 to \$100
- A desktop or laptop computer capable of running the latest version of Windows operating system and the latest version of Microsoft Office: approximately \$800
- Reliable high-speed internet access

Course Requirements

Course	Title	Credits
Core Courses		
CIS 101	Information Technology 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 or CIS 179CL	Internet in Depth Cloud Essentials	4
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
CIS 244	Information Systems Analysis	4
CIS 279WC or CIS 179L	Windows Client Linux Essentials	4
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
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or WR 227	Technical Writing	
COMM 111	Fundamentals of Public Speaking	3-4
or COMM 218	Interpersonal Communication	
or COMM 219	Small Group Communication	
Human Relations: (p. 76)		3-4
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Total Credits		95-98

Advising Notes

Core courses are all offered two to three quarters each academic year. All 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	Information Technology Orientation	3
CIS 124	IT Fundamentals	4
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Credits		15
Second Term		
BA 214 or WR 227	Business Communications or Technical Writing	3-4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4

CIS 178 or CIS 179CL	Internet in Depth or Cloud Essentials	4
Credits		15-16
Third Term		
CIS 122	Introduction to Programming	4
CIS 131	Software Applications	4
CIS 179	Networking Essentials	4
COMM 111 or COMM 218 or COMM 219	Fundamentals of Public Speaking or Interpersonal Communication or Small Group Communication	3-4
Human Relations: (p. 76)		3-4
Credits		18-20
Fourth Term		
CIS 135DB	Database Theory/SQL	4
CIS 151C	Cisco Internetworking	4
CIS 195	Web Development I	4
CIS 279WC or CIS 179L	Windows Client or 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 2790P	Cybersecurity Operations	4
CIS 279SE	Security+	4
CIS 284EH	Ethical Hacking	4
Credits		16
Total Credits		96-99

Web Development - Associate of Applied Science Option (AASO)

Description

The Computer Information Systems 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 for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing and real estate. Careers typically include positions such as personal computer 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 professions require project management and communication skills.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Construct websites that demonstrate best practices for function, design, and usability.
2. Integrate functional client-side programs within a website.
3. Develop effective server-side programs.
4. Communicate effectively with clients, customers, and coworkers about web development topics.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10
- 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 desktop or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office: approximately \$800

Course Requirements

Course	Title	Credits
Core Courses		
CIS 101	Information Technology 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 of Public Speaking	3-4
or COMM 218	Interpersonal Communication	
or COMM 219	Small Group Communication	
Human Relations: (p. 76)		3-4
MTH 102	Applied Technical Mathematics (or one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Total Credits		95-99

Advising Notes

Planning is important. Most option courses are offered once per academic year and many need to be taken in sequence. Some core classes are offered once every two years. Students may take non-program support courses any term to build skills related to prerequisites.

This program 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	Information Technology Orientation	3
COMM 111 or COMM 218 or COMM 219	Fundamentals of Public Speaking or Interpersonal Communication or Small Group Communication	3-4
MTH 102	Applied Technical Mathematics (or one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Credits		14-15
Second Term		Credits
BA 214 or WR 227	Business Communications or Technical Writing	3-4
CIS 124	IT Fundamentals	4
CIS 125G or CIS 125I	Photoshop or Adobe Illustrator	4
CIS 178 or CIS 179CL	Internet in Depth or Cloud Essentials	4
Credits		15-16
Third Term		Credits
CIS 122	Introduction to Programming	4
CIS 131	Software Applications	4
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
Human Relations: (p. 76)		3-4
Credits		19-20
Fourth Term		Credits
CIS 133JS	Introduction to JavaScript	4
CIS 135DB	Database Theory/SQL	4
CIS 179	Networking Essentials	4
CIS 195	Web Development I	4
Credits		16
Fifth Term		Credits
CIS 133P	Introduction to PHP	4
CIS 179L or CIS 279WC	Linux Essentials or Windows Client	4
CIS 197	CMS Web Development: WordPress	4
CIS 244	Information Systems Analysis	4
Credits		16
Sixth Term		Credits
CIS 125WA or CIS 125DV	Web Animation or 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		96-99

Computer & Information Systems - One-Year Certificate of Completion (CC1)

Description

The Computer and Information Systems One-Year Certificate of Completion provides foundational skills in computer concepts, software applications, networking, and the internet. Students can apply all certificate course credits to the Associate of Applied Science in Computer and Information Systems.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Develop problem-solving skills for working with software, hardware, and networks.
2. Demonstrate the ability to communicate effectively with clients, customers, and coworkers about a broad spectrum of information technology topics.
3. Apply best practices in the acquisition and use of hardware and software.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10
- Basic computer competency or CIS 010 Computer Keyboarding and CIS 070 Introduction to Computers: Windows

Other Entrance Requirements

All enrolled program students may have to pass a criminal history check (CHC) as a condition of their acceptance into a worksite for cooperative work experience. 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 to 64 GB portable storage (USB or SSD drive): \$20 to \$100
- A desktop or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office: approximately \$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		
<u>Human Relations:</u> (p. 76)		3-4
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Total Credits		47-48

Advising Notes

Planning is important. Most option courses are offered once per academic year and many need to be taken in sequence. Some core classes are offered once every two years. Students may take non-program support courses any term to build skills related to prerequisites.

This program is designed for students planning to enter their chosen careers 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 124	IT Fundamentals	4
<u>Human Relations:</u> (p. 76)		3-4
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Credits		15-16
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 or 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		47-48

Computer Aided Drafting (CAD) - One-Year Certificate of Completion (CC1)

Description

The Computer Aided Drafting (CAD) certificate 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.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- Integrate fundamental theoretical and conceptual considerations in design process and problem solving.
- Present professional demeanor and attitude individually and collectively as a team member.
- Recognize and follow professional protocol for industry standards appropriate to course level.
- 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
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10
- Basic computer competency or CIS 010 Computer Keyboarding and CIS 070 Introduction to Computers: Windows

Other Entrance Requirements

All students enrolled in the program (which includes options for cooperative work experience) may have to pass a criminal history checks (CHC) as a condition of their acceptance into a worksite. 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 or SSD drive): \$20 - \$100
- A desktop or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office: approximately \$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		
<u>Human Relations:</u> (p. 76)		3-4
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Total Credits		47-48

Advising Notes

Planning is important. Most option courses are offered once per academic year and many need to be taken in sequence. Some core classes are offered once every two years. Students may take non-program support courses any term to build skills related to prerequisites.

This program 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		Credits
Fall		
CIS 120	Computer Concepts	4
CIS 125A1	AutoCAD 1	4

CIS 135S1	SolidWorks 1	4
CIS 125V	Visio	4
Credits		16

Winter

CIS 125A2	AutoCAD 2	4
CIS 135S2	SolidWorks 2	4
CIS 135A1	AutoDESK Revit 1	4
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
Credits		16

Spring

CIS 135A2	AutoDESK Revit 2	4
CIS 135C1	AutoCAD Civil 3D	4
<u>Human Relations:</u> (p. 76)		3-4
WR 121	Academic Composition	4
Credits		15-16
Total Credits		47-48

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.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Describe the function of the network layers as specified by the Open Systems Interconnection 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, advanced malware protection, web security appliance, email security appliance.
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:

- High school diploma or GED
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10
- CIS 120 Computer Concepts or equivalent skills

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

Required:

- 16 to 64 GB portable storage (USB or SSD drive): \$20 to \$100

Recommended:

- A desktop or laptop computer capable of running the latest version of the Windows operating system, virtual machines, and the latest version of Microsoft Office: approximately \$800
- Reliable high-speed internet access
- Industry certifications for each class (students may sit for certification testing at the conclusion of each course) range in price from \$200 to \$350
 - CCNA Cyber Ops: approximately \$200 - \$350
 - Certified Ethical Hacker: 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 2790P	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 2790P	Cybersecurity Operations	4
Credits		8

Second Term

CIS 279SE	Security+	4
CIS 284EH	Ethical Hacking	4
Credits		8
Total Credits		16

Computer Science - Associate of Science Oregon Transfer (ASOT)

Description

The Associate of Science Oregon Transfer with a focus in computer science meets lower-division general education requirements of baccalaureate degree programs of any Oregon public university and provides junior status for registration purposes.

The focus area was created through collaboration between members of the Oregon Council of Computer Chairs, which includes Oregon community college faculty/administrators and Oregon public university computer science chairs/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 institution 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 soon as possible.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

While this program has no formal entrance requirement, individual courses may have prerequisites which must be met before enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
MTH 251	Calculus I (or higher)	4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4

Recommend: WR 227

General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose at least three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose at least four courses from at least two prefixes		12-16
<u>Science/Math/Computer Science:</u> (p. 66)		
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
Total Credits		90-104

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 offers a Bachelor of Science in Computer Science with tracks in software engineering or software entrepreneurship. 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: CS 260 Data Structures, MTH 231 Discrete Mathematics, BA 217 Accounting Fundamentals, BA 250 Entrepreneurship at COCC; CS 290 Web Development, CS 325 Algorithm Analysis, CS 340 Introduction to Databases, SE 201 Software Development 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.
- Additional Requirements:
 - None

Sample Plan

First Term		Credits
CS 160	Computer Science Orientation	4
<u>Health:</u> (p. 58)		3
MTH 251	Calculus I	4
WR 121	Academic Composition	4
Credits		15
Second Term		Credits
CS 161	Computer Science I	4
MTH 252	Calculus II	4
<u>Oral Communication:</u> (p. 60)		3-4
Writing (recommend WR 227)		4
Credits		15-16
Third Term		Credits
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		Credits
CS 260	Data Structures	4
Discipline Studies Arts & Letters		3-4
Discipline Studies Social Science		3-4
Elective		3-4
Elective		3-4
Credits		16-20
Fifth Term		Credits
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
Sixth Term		Credits
Discipline Studies Science/Math/Computer Science		3-5
Elective		4
Elective		3-4
Elective		3-4
Elective		3-4
Credits		16-21
Total Credits		90-110

Criminal Justice

Criminal justice involves the study of crime from a systems perspective. Topics include law and due process, investigation, evidence, corrections, ethics, and crime in society. The College offers courses and programs in criminal justice to serve both students who are preparing to transfer for a bachelor's degree and for students seeking immediate employment. Careers include law enforcement officers, corrections officers, security officers, lab workers, paralegals, private investigators, and social workers.

See the [Criminal Justice page](#) for more information.

Contact:

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Modoc Hall, Bend Campus

Department: Social Science

Department Chair: [Sara Henson \(shenson@cocc.edu\)](mailto:shenson@cocc.edu)

Programs

Career and Technical Education

Associate of Applied Science

- [Criminal Justice - Associate of Applied Science \(AAS\)](#) (p. 183)

Transfer

Associate of Arts Oregon Transfer

- [Criminal Justice - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 185)

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)

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 203 Critical Incident Management for Criminal Justice Professionals (3 Credits)

Provides an introduction to concepts of critical incident management for criminal justice professionals including: crisis intervention, building crisis intervention skills and evaluation of personal coping skills and emotional reactions.

CJ 204 Controversies in Criminal Justice (3 Credits)

Defines, describes and evaluates the crises and conflicts which face law enforcement agencies today. Includes 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 288 Special Studies: Criminal Justice (1-4 Credits)

Explores topics of current interest in the discipline.

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.

CJ 299 Special Topics: Criminal Justice (1-4 Credits)

Presents selected topics of study in criminal justice offered on a temporary or experimental basis.

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. The Associate of Applied Science in Criminal Justice prepares students to begin a career upon graduation.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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 before enrollment.

Course Requirements

Course	Title	Credits
Support Courses		
Choose one course from the following: ¹		3-4
	<u>Computation:</u> (p. 76)	
	<u>Mathematics:</u> (p. 60)	
COMM 218	Interpersonal Communication	3
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	Co-op Work Experience Criminal Justice	2
CJ Electives		15-18
Choose from: CJ 110, CJ 123, CJ 188, CJ 199, CJ 203, CJ 204, CJ 207, CJ 210, CJ 211, CJ 214, CJ 220, CJ 222, CJ 230, CJ 234, CJ 281, CJ 282		

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) ²		3-4
Recommend: HHP 252A, HHP 231, HHP 242, HHP 258, HHP 266, HHP 295.		
PSY 233	Psychology of Violence & Aggression	4
SOC 201	Introduction to Sociology	4
Two Additional Psychology Courses		8
General Electives: Choose enough credits to reach degree minimum 92 credits. ³		13
Total Credits		92-99

¹ Choose one course from either the [related instruction computation list](#) (p. 75) or the [foundational requirements mathematics list](#) (p. 58).

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 Photography I, ART 162 Photography II, ART 163 Photography III, ART 265 Digital Photography
- 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
- Communication
- 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
Choose one course from the following:		3-4
<u>Computation:</u> (p. 76)		
<u>Mathematics:</u> (p. 60)		
CJ 100	Survey of the Criminal Justice System	3
CJ 101	Introduction to Criminology	4
WR 121	Academic Composition	4
Credits		14-15
Second Term		
CJ 120	Judicial Process	3
CJ 153	Ethical Issues in Criminal Justice	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
General Elective		3-4
Health (3-4 credits with HHP or HHPA prefix)		3-4
Credits		15-18
Fourth Term		
CJ 243	Drugs and Crime in Society	3
CJ Elective		3-4
Discipline Studies (no CJ prefix)		4
General Elective		3-4
SOC 201	Introduction to Sociology	4
Credits		17-19
Fifth Term		
CJ 253	Corrections	4
CJ Elective		3-4
CJ Elective		3-4
General Elective		3-4
PSY 233	Psychology of Violence & Aggression	4
Credits		17-20
Sixth Term		
CJ 280	Co-op Work Experience Criminal Justice	2
CJ Elective		3-4
Discipline Studies Social Science (no CJ prefix)		4
General Elective		3
Psychology Course		4
Credits		16-17
Total Credits		92-102

Criminal Justice - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer degree with an emphasis in criminal justice prepares students to transfer into bachelor's programs at the junior level.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline Studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
Recommend: CJ 100, 101, 110		
<u>Science/Math/Computer Science:</u> (p. 66)		
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.		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 (or higher)	4
Elective ²	3-4
Elective (recommend CJ 120) ²	3
<u>Oral Communication:</u> (p. 60)	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. The Dental Assisting program trains students in the broad range of clinical skills, including assisting the dentist during restorative and surgical procedures, performing radiographic imaging, fabricating temporary crowns, maintaining dental/medical records, patient scheduling, disinfection and instrument processing procedures, and many others. Because the Dental Assisting program 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.

See the [Dental Assisting page](#) for more information.

Contact:

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Health Careers Center, Bend Campus

Department: Allied Health

Department Chair: [Shannon Waller](#) (swaller@cocc.edu)

Programs

Career and Technical Education

One-Year Certificate of Completion

- [Dental Assisting - One-Year Certificate of Completion \(CC1\)](#) (p. 187)

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: AH 105 (or course from the foundational studies math list); BA 214 or WR 121; CIS 120 or Computer Competency Test; HHP 252; Choose one of the following Psychology Courses: PSY 101, PSY 201, PSY 215 or PSY 216; Choose one from the following HR courses: AH 115 or BA 178 or COMM 115 or COMM 218 or COMM 219.

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 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 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)

Provides a learning experience in dental assisting not currently available; this course is in development to be proposed as a permanent course.

DA 299 Selected Topics: Dental Assisting (1-4 Credits)

Provides a learning experience in dental assisting not currently available; this course is in development to be proposed as a permanent course.

Dental Assisting - One-Year Certificate of Completion (CC1)

Description

The Dental Assisting One-Year Certificate of Completion trains individuals in a broad range of clinical and administrative skills, such as preparing patients for dental treatment, assisting a dentist with patient care, performing expanded functions procedures, taking dental radiographs and dental impressions, performing disinfection and sterilization procedures, scheduling patients and appointment procedures, and creating and maintaining legal records. Graduates are prepared for the Dental Assisting National Board examinations and the Oregon Expanded Function Dental Assistant certificate.

The program is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental

Accreditation can be contacted at 312-440-4653, at 211 East Chicago Avenue, Chicago, IL 60611, or through the [commission's website](#).

Primary program goals are for each student to:

1. Successfully complete the program
2. Obtain professional credentials
3. Find satisfying employment in dentistry

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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
- AH 105 Calculations for Allied Health (or a course from the foundational requirements math list)
- BA 214 Business Communications or WR 121 Academic Composition
- CIS 120 Computer Concepts or computer competency test
- HHP 252 First Aid & AHA Basic Life Support Provider CPR
- Choose one of: AH 115 Cultural Responsiveness in Allied Health, BA 178 Customer Service, COMM 115 Introduction to Intercultural Communication, COMM 218 Interpersonal Communication, or COMM 219 Small Group Communication
- 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 obtain program director approval
- Criminal history check and 10-panel drug screen with vendor chosen by the College as a condition of acceptance into the program; for more information see the [program page](#)
- Documentation of current immunizations: TB blood titer, MMR, hepatitis B (series of 3 vaccines), varicella, Tdap, flu
- American Heart Association Basic Life Support for Healthcare Providers CPR card must remain current throughout the Dental Assisting program; for CPR class options, see the [Continuing Education website](#)

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
- CPR card: \$20 to \$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 Dental Assisting cohort

Course Requirements

Course	Title	Credits
Prerequisites Courses		
AH 105	Calculations for Allied Health (or one course from the foundational requirements math list)	3-4
BA 214	Business Communications	3-4
or WR 121	Academic Composition	
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
HHP 252	First Aid & AHA Basic Life Support Provider CPR	3
Choose one from the following:		3-4
PSY 101	Applied Psychology	
PSY 201	Mind and Brain	
PSY 215	Developmental Psychology	
PSY 216	Social Psychology	
Choose one human relations course from the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
BA 178	Customer Service	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
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		69-77

Advising Notes

Documents required for entry into the Dental Assisting (DA) 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.

DA program courses begin once per year in Fall term. Students wishing to register in the Fall term 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](#). After successful registration into the program, DA courses must be taken together and sequentially. Please see the [Dental Assisting page](#) for more information, or contact the program director and/or [CAP Services](#).

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

Summer		Credits
AH 105	Calculations for Allied Health (or one course from the foundational requirements math list)	3-4
BA 214 or WR 121	Business Communications or Academic Composition	3-4
CIS 120	Computer Concepts	0-4
HHP 252	First Aid & AHA Basic Life Support Provider CPR	3
Choose one human relations course from the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
BA 178	Customer Service	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
Choose one of the following:		3-4
PSY 101	Applied Psychology	
PSY 201	Mind and Brain	
PSY 215	Developmental Psychology	

PSY 216	Social Psychology	
Total Credits		15-23
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		69-77

Economics

Economics studies individuals' values, choices, and behaviors connected to the production, distribution, and consumptions of goods and services. The field is composed of microeconomics (a branch that studies how individuals, households, and businesses allocate scarce resources) and macroeconomics (a branch that studies whole economic systems).

Additional economics courses expand upon these ideas. International economics provides an introductory survey of globalization's economic, political, social, and cultural dimensions. 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 students seeking an Associate of Arts Oregon Transfer or Business-Associate of Science Oregon Transfer to meet the state of Oregon transfer degree requirements.

See the [Economics page](#) for more information.

Contact:

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Modoc Hall, Bend Campus

Department: Social Sciences
Department Chair: Ken Ruettgers

Programs

Transfer

Associate of Arts Oregon Transfer

- [Economics - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 190)

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: WR 121 or minimum placement WR/Comm Level 9 and MTH 111 or MTH 112 or MTH 251 (or higher) or minimum placement Math Level 20.

Introduces microeconomics, the study of how individuals and firms make choices in the face of scarcity. Builds economic intuition about the consequences of consumption and production decisions. Examines personal decision making as well as economic history to help facilitate critical thinking and analysis. Considers 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. Examples from both personal and corporate finance link this course to practical real-world applications. Need not be taken in sequence.

EC 202 Macroeconomics (4 Credits)

Recommended preparation: WR 121 or minimum placement WR/Comm Level 9 and MTH 111 or MTH 112 or MTH 251 (or higher) or minimum placement Math Level 20.

Introduces macroeconomics, a branch of economics that focuses on the behavior and collective decision-making of an economy as a whole and studies the role of government in determining the pace of economic growth, maximum sustainable employment, and stable inflation. Examines how the governments use taxes, spending, laws and policies to influence important domestic issues such as levels of employment, healthcare, education, debt, wealth, poverty and inequality. Examines concepts like inflation, unemployment, interest rates and the behavior of governments and central banks during boom and bust cycles. Provides tools to understand individual behaviors such as saving, spending, investing and voting. Explores various theories, models and applications relating to business cycles, productivity, technological advancement, and globalization. Need not be taken in sequence.

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 095 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 288 Special Studies: Economics (1-4 Credits)

Explores topics of current interest in the discipline.

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.

EC 299 Selected Topics: Economics (4 Credits)

Provides a learning experience in economics not currently available; this course is in development to be proposed as a permanent course.

Economics - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer with a focus in economics provides lower-division general education and major courses to prepare for a bachelor's degree in economics. Courses in this program are a strong 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 that could lead to graduate or law school.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits	¹	3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommend: MTH 111		
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4

<u>Writing:</u> (p. 60)		
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. 63)
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).

Arts and Letters: (p. 61)
Choose three courses from at least two prefixes 9-12
Recommend: PHL 203, 200-level language courses

Social Science: (p. 68)
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. 66)
Choose four laboratory courses in biological and/or physical science 2-20
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 Bachelor's of Arts should consider completing three terms of 200-level language courses. 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 Bachelor's of Science (BS) should consider taking more math, social science, and science courses. Language is not necessary for the BS but would be valuable for students with a major or emphasis in international economics. For 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

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	Argument, Research, and Multimodal Composition or Technical Writing	4
or WR 227		
Credits		16

Third Term

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	
<u>Oral Communication:</u> (p. 60)	3-4	
Credits		16-17

Fourth Term

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

Central Oregon Community College offers a number of courses and programs for students seeking careers in education and related fields.

For students with an interest in early childhood education, including the early primary elementary years, the College offers courses and programs with a foundation in the theoretical, social, historical, and legal aspects of early childhood programming. For students considering licensure for K-12 teaching opportunities, transfer programs prepare students for direct work with young children in classroom settings, learning environments outside of schools, and transfer to four-year and licensure-based programs.

Please see the [Education](#) page for more information.

Contact:

Dr. Amy Howell (ahowell@cooccc.edu)

541-383-7784

Modoc Hall, Bend Campus

Department: Social Sciences

Department Chair: Ken Ruetters

Programs

Career and Technical Education

Associate of Applied Science

- [Early Childhood Education - Associate of Applied Science \(AAS\)](#) (p. 194)

One-Year Certificate of Completion

- [Equity in Education - One-Year Certificate of Completion \(CC1\)](#) (p. 196)

Career Pathway Certificate of Completion

- [Child, Family and Community Studies - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 198)
- [Developmentally Appropriate Learning Environments - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 199)

Transfer

Associate of Arts Oregon Transfer

- [Early Childhood Education - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 200)
- [Education - Elementary - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 201)
- [Education - Secondary - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 203)

Courses

ED 101 Introduction to Education Practicum and Seminar (3 Credits)

Recommended to be taken with: WR 121.

Provides 60 hours of K-12 classroom experience to help students decide early whether teaching is a good fit. Provides weekly reflection and discussion in seminar related to the course content and field placement observations. Requires a criminal history check for placement in a K-12 classroom.

ED 103 Outdoor Teacher Training (1 Credit)

Offers experience in an outdoor learning environment. Includes training to lead a cabin group of students through a three to five day camp session. Covers leading outdoor education sessions, campfire programming, and team-building activities. Requires a criminal history check, recording observations, and completing reflection assignments.

ED 110 Education Theory in Action (1 Credit)

Recommended to be taken with: ED 112 or ED 200 or ED 216 or ED 219 or ED 253.

Provides experience in a K-12 classroom. Applies course content and learning theories in an interactive learning environment. Places students in classroom with mentor teacher guidance. Requires criminal history check. May be repeated to add classroom experience to ED 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 114 Mathematics for Early Learning Educators (4 Credits)

Prerequisites: MTH 015 (or higher) or minimum placement Math Level 7. Covers core concepts of mathematics recommended by state and national guidelines for early childhood educators. Facilitates development of the skills and dispositions needed to design, teach, and support classroom curriculum for mathematics to children through six years of age.

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 195 Early Childhood Education/Education Conference (1 Credit)

Attend the annual Early Learning Conference, held in collaboration with the Central Oregon Chapter of the Oregon Association for the Education of Young Children and community education partners on COCC's Bend Campus. Includes latest education research, teaching strategies, culturally responsive pedagogy, and other topics presented by leading working educators. Participate and reflect on the conference sessions attended.

ED 199 Selected Topics: Early Childhood Education (1-4 Credits)

This course is in development.

ED 200 Introduction to Education (3 Credits)

Surveys education field and foundations, especially the teaching profession and education's societal role. Explores philosophical, economic, legal, ethical, historical, psychological, and social foundations of teaching and learning. Provides overview of educational methods and approaches. Addresses field specializations and prospective teacher training requirements.

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 Foundations of Education (3 Credits)**Recommended preparation:** WR 121.

Analyzes the system of education in a democratic society. 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.

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.

Early Childhood Education - Associate of Applied Science (AAS) Description

The Early Childhood Education Associate of Applied Science 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 to work as a paraprofessional in public schools.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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 learning and growth 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 (ECE) courses.

Other Entrance Requirements

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 (\$0 to \$70)
- Cost of mileage to and from field placement/practicum sites

Course Requirements

Course	Title	Credits
Core Courses		
ED 140	Introduction to Early Childhood Education	4

ED 150	Environments & Curriculum in Early Childhood Education	4
ED 151	Observation & Guidance in Early Childhood Education Learning	4
ED 152	Family, School and Community Relationships in ECE	3
ED 172	Language and Literacy in Early Childhood Education	3
ED 173	Movement, Music and the Arts in Early Childhood Education	3
ED 174	Math, Science, and Technology in Early Childhood Education	3
ED 219 or ED 224	Multicultural Issues in Education Settings Anti-Bias Curriculum in Education	3-4
ED 250	Advanced Curriculum Development & Teaching Methods in Early Childhood Education	4
ED 261 & ED 262	Early Childhood Education Practicum I and Early Childhood Education 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 12 credits from the following list.		12
ED 141	Youth Mentoring and Advocacy	
ED 176	Supporting Social, Emotional, and Mental Health in Early Childhood	
ED 216	Foundations of Education	
ED 235	Teaching and Learning in a Digital Age	
ED 240	Purposeful Learning and Active Exploration through Play	
ED 245	Trauma Sensitive Classrooms	
ED 253	Learning Across the Lifespan	
ED 290	English Language Development in the Primary 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	Nutrition, Health and Safety for Young Children ¹ Human Nutrition Nutrition for Health	3-4
PSY 201	Mind and Brain	4
Choose one math course from the following:		3-4
BA 104	Business Math	
ED 114	Mathematics for Early Learning Educators	
MTH 105	Math in Society	
Or one course from the foundational requirements math list		
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		90-98

¹ Students who may eventually complete a bachelor's degree should take FN 225 Human Nutrition.

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.

The College's Early Childhood Education 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-Cascades and George Fox, the Associate of Applied Science (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, see the articulation agreement on the [SOU website](#).

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. Students who are considering the Elementary Education Licensure program through OSU-Cascades may be able to apply several course. Please connect with your advisor to explore options as well as additional classes which may be of benefit, such as College Success courses and LIB 100 Intro to Finding Information.

For current and potential students who have obtained a Child Development Associate or Step 7 or higher on the Oregon Registry and who wish to apply this toward their AAS or certificates in Early Childhood Education, please speak with the program director, [Amy Howell](mailto:ahowell@cooc.edu) (ahowell@cooc.edu), to discuss options and next steps.

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 student handbook on the [Early Childhood Education website](#) for an explanation of each of the above policies.

Sample Plan

First Term		Credits
ED 140	Introduction to Early Childhood Education	4
WR 121	Academic Composition	4
Choose one math course from the following:		3-4
BA 104	Business Math	
ED 114	Mathematics for Early Learning Educators	
MTH 105	Math in Society	
Or one course from the foundational requirements math list		
Credits		11-12
Second Term		
ED 150	Environments & Curriculum in Early Childhood Education	4
ED 243 or FN 225 or HHP 266	Nutrition, Health and Safety for Young Children or Human Nutrition or Nutrition for Health	3-4
ED 152	Family, School and Community Relationships in ECE	3
WR 122 or WR 227	Argument, Research, and Multimodal Composition or Technical Writing	4
Credits		14-15
Third Term		
ED 173	Movement, Music and the Arts in Early Childhood Education	3
ED 174	Math, Science, and Technology in Early Childhood Education	3
ED 219 or ED 224	Multicultural Issues in Education Settings or Anti-Bias Curriculum in Education	3-4
PSY 201	Mind and Brain	4
Credits		13-14
Fourth Term		
ED 151	Observation & Guidance in Early Childhood Education Learning	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 or Introduction to Children's Literature	3-4
ED 269	Exceptional Children in Early Childhood Education	3
ED 172	Language and Literacy in Early Childhood Education	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	Early Childhood Education Practicum I	3

ED elective	3-4
Credits	13-16
Seventh Term	
Discipline Studies Course	3-5
ED 262	Early Childhood Education Practicum II
ED elective	3-4
ED elective (if needed)	3-4
Credits	12-16
Total Credits	90-102

Equity in Education - One-Year Certificate of Completion (CC1)

Description

The Equity in Education One-Year Certificate of Completion provides skills and dispositions necessary to recognize and develop inclusive and culturally conscious practices. The program aligns with recommendations and guidelines from professional organizations dedicated to developmentally appropriate and culturally conscious practices in educational settings, 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.

The certificate is designed for students who are:

- wishing to work as early childhood educators in settings within diverse communities, such as Head Start,
- working toward the Associate of Applied Science in Early Childhood Education and seeking a focus in equity in education,
- early learning advocates and professionals with degrees and certificates seeking additional expertise,
- early childhood and elementary pre-service teachers intending to transfer to higher-education programs with a focus on equity and inclusive practices in educational institutions.

Additionally, this one-year certificate may be used as continuing education for licensed teachers.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- Examine and challenge systems of oppression that can exist within educational institutions.
- Explain the implications of bias on children's learning and development.
- Assess curriculum and programming for bias and evidence of inclusive practices and access.
- Explain the purpose and process of observing and documenting learning environments and programming components for developmentally appropriate and culturally responsive pedagogy.
- Prepare for increasingly diverse classrooms by evaluating self and society for equitable practices that support children and families participating in education systems.
- 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 before enrollment.

Other Entrance Requirements

Required:

- Students enrolled in ECE classes must have a current background check through the Oregon Department of Education-Early Learning/ Office of Child Care Criminal Background Check Registry as well as an immunization verification form. In order to maintain good standing in the 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	Introduction to Early Childhood Education	4
ED 152	Family, School and Community Relationships in ECE	3
ED 219 or ED 224	Multicultural Issues in Education Settings Anti-Bias Curriculum 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	English Language Development in the Primary Classroom	
Support Courses		
WR 121	Academic Composition	4
Choose one math course from the following:		3-4
BA 104	Business Math	
ED 114	Mathematics for Early Learning Educators	
MTH 105	Math in Society	
Or choose one course from the foundational requirements math list		
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	Second Year Mandarin Chinese I	
CHN 202	Second Year Mandarin Chinese II	
CHN 203	Second Year 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 Native Language I
KIK 202	Second Year Kiksht Native Language II
KIK 203	Second Year Kiksht Native Language III
SOC 212	Race, Class, and Gender
SOC 222	Sociology of Family and Intimate Relationships
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

Total Credits

37-40

Advising Notes

Students pursuing the ECE certificate should work closely with their academic advisor to align courses with additional certificate and degree goals, including the AAS, AAOT, and transfer goals. Students who are considering the Elementary Education Licensure program through OSU-Cascades may be able to apply several courses. Please connect with your advisor to explore options as well as additional classes, such as college success courses, ED 243 Nutrition, Health and Safety for Young Children and LIB 100 Intro to Finding Information, which may be of benefit.

For current and potential students who have obtained a Child Development Associate or Step 7 or higher on the Oregon Registry and who wish to apply this toward their AAS or certificates in Early Childhood Education, please speak with the program director, [Amy Howell](mailto:ahowell@coocc.edu) (ahowell@coocc.edu), to discuss options and next steps.

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	Introduction to Early Childhood Education	4
ED 152	Family, School and Community Relationships in ECE	3
WR 121	Academic Composition	4
Choose one course from the following:		3-4
BA 104	Business Math	
ED 114	Mathematics for Early Learning Educators	
MTH 105	Math in Society	
Or choose one course from the foundational requirements math list		
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 or Anti-Bias Curriculum 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

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 learning environments, education-focused organizations, and human service settings. The certificate is a step along the pathway to the Early Childhood Education Associate of Applied Science. Students apply theories and applications to a broader perspective, including settings outside of school.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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:

- A current background check through the Oregon Department of Education Early Learning Division/Office of Child Care Central Background Registry
- Some field placement sites may require documentation of current immunizations.

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

Material Costs

- Background check: \$0 to \$70
- Cost of mileage to and from field placement/practicum sites

Course Requirements

Course	Title	Credits
Core Courses		
ED 140	Introduction to Early Childhood Education	4
ED 151	Observation & Guidance in Early Childhood Education Learning	4
ED 152	Family, School and Community Relationships in ECE	3
ED 176 or ED 245	Supporting Social, Emotional, and Mental Health in Early Childhood Trauma Sensitive Classrooms	3
ED 219 or ED 224	Multicultural Issues in Education Settings Anti-Bias Curriculum in Education	3-4
ED 265	Children at Risk	3
Other Required Courses		
FN 225 or HHP 266	Human Nutrition Nutrition for Health	3-4
PSY 201 or PSY 215	Mind and Brain Developmental Psychology	4
SOC 201	Introduction to Sociology	4
Total Credits		31-33

Advising Notes

Students intending to seek higher degrees or career opportunities in settings serving children and families may use the certificate to demonstrate coursework and field placement experience. Credits will apply toward the Head Start Re-authorization Act for highly qualified lead and assistant teachers and family advocates. Students considering the Human Development and Family Studies (HDFS) program through OSU-Cascades may use several courses (ED 140 Introduction to Early Childhood Education, PSY 202 Mind and Society, SOC 201 Introduction to Sociology, FN 225 Human Nutrition) to meet HDFS program requirements. Students who are considering the elementary education licensure program through OSU-Cascades may be able to apply several courses. Connect with your advisor to explore options and additional classes which may be of benefit, such as college success courses, ED 243 Nutrition, Health and Safety for Young Children, and LIB 100 Intro to Finding Information.

For current and potential students who have obtained a Child Development Associate or Step 7 or higher on the Oregon Registry and who wish to apply this toward their AAS or certificates in Early Childhood Education, please speak with the program director, [Amy Howell](mailto:ahowell@cooc.edu) (ahowell@cooc.edu), to discuss options and next steps.

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 Early Childhood Education	4
FN 225 or HHP 266	Human Nutrition or Nutrition for Health	3-4
PSY 201 or PSY 215	Mind and Brain or Developmental Psychology	4
Credits		11-12
Second Term		
ED 151	Observation & Guidance in Early Childhood Education Learning	4
ED 176 or ED 245	Supporting Social, Emotional, and Mental Health in Early Childhood or Trauma Sensitive Classrooms	3
ED 265	Children at Risk	3
Credits		10
Third Term		
ED 152	Family, School and Community Relationships in ECE	3
ED 219 or ED 224	Multicultural Issues in Education Settings or Anti-Bias Curriculum in Education	3-4
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 Career Pathway Certificate of Completion is designed to support students seeking careers in early-learning settings.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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 before enrollment.

Other Entrance Requirements

The program requires a current background check through the Oregon Department of Education-Early Learning Division/Office of Child Care Criminal Background Registry.

Some field placement sites may require documentation of current immunizations.

Course Requirements

Course	Title	Credits
Core Courses		
ED 140	Introduction to Early Childhood Education	4
ED 150	Environments & Curriculum in Early Childhood Education	4
ED 151	Observation & Guidance in Early Childhood Education Learning	4
ED 152	Family, School and Community Relationships in ECE	3
Choose two courses from the following:		6
ED 112	Children's Lit & Curriculum	
ED 172	Language and Literacy in Early Childhood Education	
ED 173	Movement, Music and the Arts in Early Childhood Education	
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 Re-authorization 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 Oregon State University may apply many of the Developmentally Appropriate Learning Environments (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](#) (p. 194), and it invites students to apply theories and applications toward early learning environments. Students who are

considering the Elementary Education Licensure program through OSU-Cascades may be able to apply several course. Please connect with your advisor to explore options and additional classes which may be of benefit, such as College Success courses, ED 243 Nutrition, Health and Safety for Young Children, and LIB 100 Intro to Finding Information.

For current and potential students who have obtained a Child Development Associate or Step 7 or higher on the Oregon Registry and who wish to apply this toward their AAS or certificates in Early Childhood Education, please speak with the program director, [Amy Howell](mailto:ahowell@coocc.edu) (ahowell@coocc.edu), to discuss options and next steps.

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 Early Childhood Education	4
ED 150	Environments & Curriculum in Early Childhood Education	4
Choose one course from the following:		3
ED 112	Children's Lit & Curriculum	
ED 172	Language and Literacy in Early Childhood Education	
ED 173	Movement, Music and the Arts in Early Childhood Education	
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		Credits
ED 151	Observation & Guidance in Early Childhood Education Learning	4
ED 152	Family, School and Community Relationships in ECE	3
Choose one course from the following:		3
ED 112	Children's Lit & Curriculum	
ED 172	Language and Literacy in Early Childhood Education	
ED 173	Movement, Music and the Arts in Early Childhood Education	
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 Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer with a focus in early childhood education 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.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommend: MTH 211, MTH 212, MTH 213		
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
	or WR 227 Technical Writing	
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
<u>Science/Math/Computer Science:</u> (p. 66)		
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 Foundations of Education, ED 219 Multicultural Issues in Education Settings, and ED 253 Learning Across the Lifespan count toward the recommended courses for students pursuing the Master of Arts in Teaching at OSU-Cascades.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

Students intending to transfer to Oregon State University-Cascades program in Human Development and Family Sciences should meet with an education advisor early in the course of study.

Students who are considering the Elementary Education Licensure program through OSU-Cascades may be able to apply several courses. Students should connect with an advisor to explore options and additional classes which may be of benefit, such as College Success courses, ED 243 Nutrition, Health and Safety for Young Children, and LIB 100 Intro to Finding Information.

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
<u>Mathematics:</u> (p. 60)		4
WR 121	Academic Composition	4
Credits		14-15
Second Term		Credits
Discipline Studies Science/Math/Computer Science		3-5
Elective		3-4
Elective		3-4
<u>Oral Communication:</u> (p. 60)		3-4
WR 122 or WR 227	Argument, Research, and Multimodal Composition or Technical Writing	4
Credits		16-21
Third Term		Credits
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		Credits
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		Credits
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		Credits
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

Education - Elementary - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer degree with a focus in elementary education is designed for students who wish to transfer to a four-year university and to become an elementary teacher or to pursue a career in education. Recommended courses explore topics related to student learning, teaching strategies, and requirements to become a professional educator. 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.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
Recommend: HHP 295		
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommend: MTH 211		
<u>Oral Communication:</u> (p. 60)		

Choose one course 3-4

Recommend: COMM 111

Writing: (p. 60)

WR 121 Academic Composition 4

WR 122 Argument, Research, and Multimodal Composition 4
or WR 227 Technical Writing

Recommend: WR 122

General Education/Discipline studies

Cultural Literacy: (p. 63)

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

Arts and Letters: (p. 61)

Choose three courses from at least two prefixes² 9-12

Recommend: ART 101 or ART 131, ENG 104 or ENG 105 or ENG 106, and ED 112 or ENG 221

Social Science: (p. 68)

Choose four courses from at least two prefixes 12-16

Recommend: GEOG 107 or GEOG 201, HST 201 or HST 202 or HST 203, PS 201, and PSY 201 or PSY 202

Science/Math/Computer Science: (p. 66)

Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science 12-20

Recommend: BI 101 or BI 102 or BI 103, and GS 104 or GS 105 or GS 106, and MTH 212³

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 101 and/or ED 210, ED 216, ED 219, ED 253, ED 269, and MTH 213

Other courses to consider: ED 103, ED 110, ED 141, ED 195, ED 200, ED 290, HD 100CS, and LIB 100⁴

Total Credits 90-106

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

² Take CLEP test if fluent in a second language for potential credit to replace one or more courses.

³ Students should take one biology course, one general science course and the third course can be any of the six recommended courses listed.

⁴ ED 110 Education Theory in Action and ED 195 Early Childhood Education/Education Conference are repeatable and are recommended to be taken more than once.

Advising Notes

In Oregon, students may achieve an initial license to teach through a baccalaureate program or a graduate-level program. Students prepare to teach at different grade levels of authorization, depending on their background, interests, and program requirements. It is important to work closely with an advisor to ensure that the degree contains the necessary prerequisite coursework for the desired licensure program.

It is recommended that students meet early and often with an education advisor to select the courses that will transfer efficiently.

Students should plan to confirm with each school they are considering to ensure that the latest transfer information is used when designing their program.

Contact an advisor to explore options for completing a teaching licensure program. There are currently several options in Central Oregon and many throughout the state.

For more information on teacher preparation programs in Oregon, see the [Oregon Teacher Standard and Practices Commission](#) website. Students may also wish to review the College's [advising guide for teacher education](#).

Students with experience or an interest in a second language 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. If students have prior knowledge of a second language, they may consider taking a CLEP test to see if their score could translate into college credit. Ask your advisor for more information about this testing opportunity.

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 ED 101 or ED 200)	3
Elective (consider ED 110 as a complement to ED 200)	1
Elective (consider HD 100CS)	3
Elective (consider LIB 100)	1
Discipline Studies Lab Science (recommend BI 101 or BI 102 or BI 103)	4
WR 121 Academic Composition	4
Credits	16

Second Term	Credits
Discipline Studies Lab Science (recommend GS 104 or GS 105 or GS 106)	4
Elective (recommend ED 219)	3
Elective (consider ED 110 as a complement course to ED 219)	1
Oral Communication (recommend COMM 111)	4
WR 122 Argument, Research, and Multimodal Composition	4
Credits	16

Third Term	Credits
Discipline Studies Arts & Letters (recommend ED 112 or ENG 221)	3
Discipline Studies Lab Science (recommend BI 101 or BI 102 or BI 103 or GS 104 or 105 or GS 106)	4
Elective (consider ED 110 as a complement field placement course to ED 112)	1
Elective (recommend ED 216)	3
Elective (consider ED 195)	1

Health (recommend HHP 295)	3
Credits	15
Fourth Term	
Discipline Studies Social Science (recommend HST 201 or HST 202 or HST 203 to prepare for licensure exam)	4
Discipline Studies Social Science (recommend PSY 201 or PSY 202)	4
Elective (recommend ED 210)	3
Mathematics (recommend MTH 211)	4
Credits	15
Fifth Term	
Discipline Studies Social Science (recommend GEOG 107 or GEOG 201)	4
Discipline Studies Arts & Letters (recommend ENG 104 or ENG 105 or ENG 106)	4
Elective (recommend ED 253)	3
Elective (consider ED 110 field placement course as a complement to ED 253)	1
Discipline Studies Science/Math/Computer Science (recommend MTH 212)	4
Credits	16
Sixth Term	
Discipline Studies Social Science (recommend PS 201)	4
Discipline Studies Arts & Letters (recommend ART 101 or ART 131)	3
Elective (consider ED 195)	1
Elective (recommend ED 269)	3
Elective (recommend MTH 213)	4
Credits	15
Total Credits	93

Education - Secondary - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer with a focus in secondary education is designed for students who wish to transfer to a four-year university and to become a middle or high school teacher or to pursue a career in education. The degree includes courses related to the education field and to a specific subject area that a student will want to teach. Students should work closely with an education advisor and potential transfer universities to select appropriate courses for an efficient transfer process.

Statewide General Education Student Learning Outcomes

Please see the [General Education](#) page (p. 58) for statewide general education student learning outcomes.

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		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
Recommend: HHP 295		
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes ²		9-12
Recommend: ED 112 or ENG 221 and/or Endorsement focus area if applicable		
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes ²		12-16
Recommend: ED 216 and ED 219 and two Social Science courses in area of Endorsement if possible		
<u>Science/Math/Computer Science:</u> (p. 66)		
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 101, 103, ED 110, ED 141, ED 200, ED 210, ED 253, ED 269, HD 100, LIB 100, PSY 201 or 202		
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, and completing student teaching. Students interested in teaching high school subject areas need to be experts in the content area they intend to teach and will be required to pass subject matter exams. Passing exams allows for the necessary endorsement (the subjects which a teacher is approved to teach). A student will typically 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.

Students should consult with an education advisor as early as possible to discuss program options and to 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.

Students may also wish to review the College's [advising guide for teacher education](#).

Students who plan to major in the subject area they intend to teach should refer to the catalog page that aligns with that subject area (i.e., math, biology, literature, history, etc.).

Students with experience or an interest in a second language 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. If students have prior knowledge of a second language, they may consider taking a CLEP test to see if their score could translate into college credit. Ask your advisor for more information about this testing opportunity.

Resources:

- [Oregon Department of Education](#)
- [Oregon Educator Licensure Assessments](#)
- [Oregon Teacher Standards and Practices Commission](#)

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 ED 101 or ED 200)		3
Elective (recommend ED 110 as a compliment to ED 200)		1
Discipline Studies Social Science		3-4
<u>Mathematics:</u> (p. 60)		4
WR 121	Academic Composition	4
Credits		15-16
Second Term		Credits
Discipline Studies Social Science (recommend ED 219)		3
Elective		3
Elective		3
<u>Oral Communication:</u> (p. 60)		3-4
WR 122 or WR 227	Argument, Research, and Multimodal Composition or Technical Writing	4
Credits		16-17
Third Term		Credits
Discipline Studies Arts & Letters		3-4
Discipline Studies Lab Science		3-5
Discipline Studies Social Science (recommend ED 216)		3
Elective		3

Health (recommend HHP 295)	3
Credits	
15-18	
Fourth Term	
Discipline Studies Arts & Letters (recommend ED 112 or ENG 221)	3
Discipline Studies Lab Science	3-5
Elective	3
Elective	3
Elective	3
Credits	
15-17	
Fifth Term	
Discipline Studies Arts & Letters	3-4
Discipline Studies Lab Science	3-5
Discipline Studies Social Science	3-4
Elective (recommend ED 210)	3
Elective	3
Credits	
15-19	
Sixth Term	
Discipline Studies Science/Math/Computer Science	3-5
Elective	3
Elective	3
Elective	3
Elective	3
Credits	
15-17	
Total Credits	
91-104	

Emergency Medical Services

Emergency Medical Services (EMS) provides comprehensive training for students interested in working in the health care field of emergency first responder that ranges from emergency medical technician to paramedic. EMS graduates work in a variety of settings, including fire departments, private and public ambulance services, hospital emergency departments, emergency communication systems, law enforcement agencies, search and rescue, recreation, the US Forest Service as smokejumpers, and some rural clinical environments. Paramedics provide many services to their communities and often work in teams where communication and technical skills are expected.

See the [Emergency Medical Services](#) page for more information.

Contact:

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Cascades Hall, Bend Campus

Department: Natural and Industrial Resources

Department Chair: Paula Simone (psimone@cocc.edu)

Programs

Career and Technical Education

Associate of Applied Science

- [Paramedicine - Associate of Applied Science \(AAS\)](#) (p. 206)

One-Year Certificate of Completion

- [Emergency Medical Technician - One-Year Certificate of Completion \(CC1\)](#) (p. 209)

Courses

EMT 151 Emergency Medical Technician Part A (5 Credits)

Prerequisites: Department approval, WR 065 (or higher) or minimum placement Wr/COMM Level 9; and MTH 015 (or higher) or minimum placement Math Level 7.

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 history 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 for the Emergency Medical Provider (3 Credits)

Covers intervention in behavioral crises caused by crises of sudden death, suicide, rape, murder, vehicle accidents, disease, trauma, and child abuse. Includes resources, supporting behavioral patterns, and handling emotional stress of the patient as well as coping with emotional conflict within one's self.

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.

Paramedicine - Associate of Applied Science (AAS)

Description

The Paramedicine Associate of Applied Science 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. It 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 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, hospital emergency departments, emergency communication systems, law enforcement agencies, search and rescue, recreation, the US Forest Service as smokejumpers, and some rural clinical environments. Paramedics provide many services to their communities and often work in teams where communication and technical skills are expected.

The program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Committee

on Accreditation of Educational Programs for the Emergency Medical Services Professions.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Apply paramedic industry standards in the areas of emergency medical services operations, trauma, general medical emergencies, airway management, and cardiac care.
2. Use medical communication effectively.
3. Develop professional client relationships.
4. Practice ethical and professional medical standards.
5. Perform advanced life support safely in diverse conditions.

Entrance Requirements

Academic Entrance Requirements

Required:

- Successfully complete the application process and be accepted into the program.

Recommended:

- It is strongly recommended that candidates planning to enroll in the program have a strong background in high school or college math and chemistry, which will enhance the student's success in anatomy and physiology and college-level math.

Other Entrance Requirements

- High school diploma or GED
- Students must be at least 18 years of age to begin any EMT class and to be eligible test for state and national exams.
- A current CPR for Health Care Providers card, which must remain current throughout EMT basic and paramedic classes, is required before placement into EMT or paramedic courses.
- Uploaded and verified required immunizations as set forth in clinical agreement with St. Charles hospital system, including hepatitis B, current TB, MMR, annual influenza, tetanus within previous 10 years, varicella.
- Prerequisite courses and those used to calculate points for selection can be found on the [Emergency Medical Service page](#).
- All 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.
- Before 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. See the [Emergency Medical Services page](#) and/or program handbook for more information.

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

- CPR for Healthcare Provider card: \$79
- Background check: \$55
- Drug screen: \$55.
- Verified Credentials, Inc. immunization upload: \$15.
- My Clinical Exchange upload for St. Charles: \$36.50
- Immunizations: \$20 to \$200
- Materials (stethoscope, field manual, uniforms, etc.): \$50 to \$250
- Testing fees, including National Registry computer exams, practical skills testing, fingerprint/background, and possible travel outside the area for paramedic testing: \$250 to \$1,000

Course Requirements

Course	Title	Credits
Support Courses		
AH 105	Calculations for Allied Health (or one course from the foundational requirements math list) ¹	3-4
Choose one of the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
HS 208	Multicultural Issues in Human Services	
HHP 242	Stress Management	3
or HHP 266	Nutrition for Health	
or HHP 295	Health and Fitness	
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	Emergency Medical Technician Part A	5
EMT 152	Emergency Medical Technician Part B	5
EMT 170	Emergency Response Communication/Documentation	2
EMT 171	Emergency Response Patient Transport	2
EMT 195	Crisis Intervention for the Emergency Medical Provider	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
FIRE 101	Introduction to Emergency Services	4

FIRE 130	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:		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	Psychology of Risk and Adventure	
PSY 101	Applied Psychology	
PSY 201	Mind and Brain	
PSY 202	Mind and Society	
PSY 216	Social Psychology	
SOC 201	Introduction to Sociology	
EMT Basic Oregon Certification		
Total Credits		95-99

¹ Students planning to transfer should take MTH 105 Math in Society or MTH 111 College Algebra

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.

Advising Notes

Students should contact the Admissions and Records office to obtain details for paramedic course selection and application process.

Speak with an advisor before registration for a list of recommended courses in categories that offer more than one option, such as the general education requirement.

Speak with the program director to make to understand 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 program director 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 Paramedic 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 program. 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 Emergency Medical Technician Part A and EMT 152 Emergency Medical Technician Part B, students must pass the National Registry exam and be certified in the state of Oregon before continuing in 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	Emergency Medical Technician Part A	5
EMT 170	Emergency Response Communication/Documentation	2
EMT 171	Emergency Response Patient Transport	2
FIRE 101	Introduction to Emergency Services	4
Credits		17

Winter

BI 232	Human Anatomy and Physiology II	4
EMT 152	Emergency Medical Technician Part B	5
EMT 195	Crisis Intervention for the Emergency Medical Provider	3
Paramedic Elective		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	Psychology of Risk and Adventure	
PSY 101	Applied Psychology	

PSY 201	Mind and Brain	
PSY 202	Mind and Society	
PSY 216	Social Psychology	
SOC 201	Introduction to Sociology	
Choose one of the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
HS 208	Multicultural Issues in Human Services	

Credits **18-21**

Spring

AH 105	Calculations for Allied Health (or one course from the foundational requirements math list)	3-4
AH 111	Medical Terminology I	3
BI 233	Human Anatomy and Physiology III	4
FIRE 130	Rescue Practices	3
HHP 242 or HHP 266 or HHP 295	Stress Management or Nutrition for Health or Health and Fitness	3
WR 121	Academic Composition	4

Credits **20-21**

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
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Credits **4**

Total Credits **95-99**

technicians (EMT). 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 Associate of Applied Science in Paramedicine, so students who wish can continue seamlessly to paramedicine. Jobs for EMT graduates include positions in municipal paid departments and the wildland fire community for the US Forest Service, Bureau of Land Management, Oregon Department of Forestry, and Bureau of Indian Affairs.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Apply emergency medical technician industry standards in the areas of emergency medical services operations, trauma, general medical emergencies, airway management, and cardiac care.
2. Use medical communication effectively.
3. Develop professional client relationships.
4. Practice ethical and professional medical standards.
5. Perform basic life support safely in diverse conditions.

Entrance Requirements

Academic Entrance Requirements

The following are recommended so students can complete the certificate in one year:

- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 015 Basic Mathematics or higher or minimum placement Math Level 7

Other Entrance Requirements

Required:

- High school diploma or GED.
- Students must be 18 years old or older before beginning any EMT class.
- A current Health Care Provider CPR card is required prior to placement into EMT and paramedic courses; must remain current throughout program.
- Uploaded and verified required immunizations as set forth in clinical agreement with St. Charles hospital system.
- All students enrolled in the program must pass a background check as a condition of 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.
- Before 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.

Emergency Medical Technician - One-Year Certificate of Completion (CC1)

Description

The Emergency Medical Technician One-Year Certificate of Completion is designed for students seeking entry-level jobs as emergency medical

ADDITIONAL PROGRAM COSTS (BEYOND STANDARD TUITION/FEES AND TEXTBOOKS)

Material Costs

- CPR for Healthcare Provider card: \$79
- Background check: \$55
- Drug screen: \$55.
- Verified Credentials, Inc. immunization upload: \$15.
- My Clinical Exchange upload for St. Charles: \$36.50
- Immunizations: \$20 to \$200
- Materials (stethoscope, field manual, uniforms, etc.): \$50 to \$250
- Testing fees, including National Registry computer exams, practical skills testing, fingerprint/background, and possible travel outside the area for paramedic testing: \$250 to \$1,000

Course Requirements

Course	Title	Credits
Support Courses		
AH 105	Calculations for Allied Health (or one course from the foundational requirements math list) ¹	3-4
Choose one from the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
HS 208	Multicultural Issues in Human Services	
HHP 242	Stress Management	3
or HHP 266	Nutrition for Health	
or HHP 295	Health and Fitness	
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	Emergency Medical Technician Part A	5
EMT 152	Emergency Medical Technician Part B	5
EMT 170	Emergency Response Communication/Documentation	2
EMT 171	Emergency Response Patient Transport	2
EMT 195	Crisis Intervention for the Emergency Medical Provider	3
FIRE 101	Introduction to Emergency Services	4
FIRE 130	Rescue Practices	3
EMS Elective:		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	Psychology of Risk and Adventure	

PSY 101	Applied Psychology
PSY 201	Mind and Brain
PSY 202	Mind and Society
PSY 216	Social Psychology
SOC 201	Introduction to Sociology

Total Credits **55-59**

¹ Students planning to transfer should take MTH 105 Math in Society or MTH 111 College Algebra

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 to complete 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

First Year		
Summer		Credits
AH 105	Calculations for Allied Health (or one course from the foundational requirements math list)	3-4
Choose one from the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
HS 208	Multicultural Issues in Human Services	
HHP 242	Stress Management	3
or HHP 266	or Nutrition for Health	
or HHP 295	or Health and Fitness	
WR 121	Academic Composition	4
Credits		13-15
Second Year		
Fall		
BI 231	Human Anatomy and Physiology I	4
EMT 151	Emergency Medical Technician Part A	5
EMT 170	Emergency Response Communication/Documentation	2
FIRE 101	Introduction to Emergency Services	4
Credits		15
Winter		
BI 232	Human Anatomy and Physiology II	4
EMS Elective		3-5
EMT 152	Emergency Medical Technician Part B	5

EMT 195	Crisis Intervention for the Emergency Medical Provider	3
Credits		15-17
Spring		
AH 111	Medical Terminology I	3
BI 233	Human Anatomy and Physiology III	4
EMT 171	Emergency Response Patient Transport	2
FIRE 130	Rescue Practices	3
Credits		12
Total Credits		55-59

Engineering & Physics

While there are slight differences between programs of each branch of engineering and physics, the College provides courses common to all programs. All engineering and physics programs share a common core of math, science, and skills courses. Writing, reading, and mathematics skills are essential. These programs require a high degree of mathematical proficiency, and calculus is required for all transfer programs.

See the [Engineering and Physics page](#) for more information.

Contact:

Wendi Wampler (wwampler@coocc.edu)

541-318-3776

Science Center, Bend Campus

Department: Science

Department Chair: [Carol Higginbotham](mailto:chigginbotham@coocc.edu) (chigginbotham@coocc.edu)

Programs

Transfer

Associate of Science

- [Engineering Emphasis - Associate of Science \(AS\)](#) (p. 213)

Associate of Arts Oregon Transfer

- [Physics - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 212)

Courses

ENGR 100 Introduction to Engineering I (3 Credits)

Prerequisites: MTH 111 or higher or minimum placement into Math Level 20.

Explores the spectrum of engineering programs along with professional and academic expectations. Builds basic team skills in a problem solving environment. Identifies significant academic tools and resources to advance critical thinking skills. Analyzes and fabricates possible solutions to engineering challenges.

ENGR 102 Introduction to Engineering II (3 Credits)

Prerequisites: MTH 111 or higher or minimum placement into Math Level 20.

Recommended preparation: ENGR 100 and MTH 112.

Explores design strategies and design thinking to define multiple options to engineering problems that satisfy technical and social requirements. Practices professional engineering and communication skills that contribute to the success of teams. Applies appropriate hardware and software tools to implement one or more solutions to a design problem.

ENGR 103 Introduction to Engineering III (3 Credits)

Prerequisites: MTH 111 or higher minimum placement into Math Level 20.

Recommended preparation: ENGR 100 and ENGR 102.

Introduces fundamental computational concepts and practices with algorithmic thinking in the context of engineering problem solving. Explores problem-solving skills, algorithm design, debugging, and writing programs using universal design principles. Examines limitations in these problem solutions related to social or structural inequities. Applies these skills and insights through applications to engineering problems.

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.

ENGR 288 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 298 Independent Study: Engineering (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

ENGR 299 Selected Topics: Engineering (1-6 Credits)

Provides a learning experience in engineering not currently available; this course is in development to be proposed as a permanent course.

GS 104 Physical Science: Physics (4 Credits)

Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 060.

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 060.

Introduces astronomy, including the Solar System, stellar systems, and cosmology. Some individual observing may be required.

PH 199 Selected Topics: Physics (1-5 Credits)

Provides a learning experience in physics not currently available; this course is in development to be proposed as a permanent course.

PH 201 General Physics I (5 Credits)

Recommended to be taken with: MTH 111.

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.

PH 202 General Physics II (5 Credits)

Recommended to be taken with: MTH 112.

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.

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 298 Independent Study: Physics (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

PH 299 Selected Topics: Physics (1-5 Credits)

This course is in development.

Physics - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer 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 need to take additional courses after transferring.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 58)		

Choose 3 credits ¹	3
Mathematics: (p. 60)	
Choose one course	4
Recommend: MTH 251	
Oral Communication: (p. 60)	
Choose one course	3-4
Writing: (p. 60)	
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. 63)	
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).	
Arts and Letters: (p. 61)	
Choose three courses from at least two prefixes	9-12
Social Science: (p. 68)	
Choose four courses from at least two prefixes	12-16
Science/Math/Computer Science: (p. 66)	
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 100, ENGR 103, ENGR 201, ENGR 202, ENGR 211, ENGR 212, ENGR 213, 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**

Engineering Emphasis - Associate of Science (AS)

Description

The Engineering Emphasis Associate of Science provides 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 energy systems engineering. Some engineering majors and branches may require additional courses not offered at Central Oregon Community College.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met before 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 of Public Speaking	4
Writing		
WR 121	Academic Composition	4
WR 227	Technical Writing	4
General Education/Discipline studies		
<u>Arts and Letters:</u> (p. 61)		
Choose two courses from the Discipline Studies list		6-8
<u>Social Science:</u> (p. 68)		
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 100	Introduction to Engineering I	3
ENGR 102	Introduction to Engineering II	3
ENGR 103	Introduction to Engineering III	3
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
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		101-105

Advising Notes

Most engineering majors have few if any true electives, and students must sequence courses intentionally. The elective category should be used to tailor the program to a specific engineering major or branch. General guidelines follow; students are recommended to research requirements directly.

Chemical: CH 223 General Chemistry III and MTH 253 Calculus III. Note that Oregon State University requires a year-long sequence before 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		Credits
Fall		
COMM 111	Fundamentals of Public Speaking	4
ENGR 100	Introduction to Engineering I	3
HHP 295	Health and Fitness	3
MTH 251	Calculus I	4
WR 121	Academic Composition	4
Credits		18
Winter		
CH 221	General Chemistry I	5
ENGR 102	Introduction to Engineering II	3
MTH 252	Calculus II	4
PH 211	General Physics I	5
Credits		17
Spring		
ENGR 103	Introduction to Engineering III	3
CH 222	General Chemistry II	5
MTH 253	Calculus III	4
PH 212	General Physics II	5
Credits		17
Second Year		
Fall		
ENGR 211	Statics	4
MTH 256	Applied Differential Equations	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 254	Vector Calculus I	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		102-105

Exercise Science

Exercise science is the study of human body movements 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.

See the [Exercise Science page](#) for more information.

Contact:

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Department: Health and Human Performance
Department Chair: [Jessica Russell \(jlussell@cocc.edu\)](mailto:jlussell@cocc.edu)

Programs

Transfer

Associate of Arts Oregon Transfer

- [Exercise Science/Kinesiology - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 218)
- [Pre-Physical Therapy - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 220)

Courses

HHP 131 Introduction to Exercise/Sport Science (3 Credits)

Recommended preparation: WR 065 or WR 121 or minimum placement Wr/Comm Level 9.

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: Health & Human Performance (1-4 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 WR 121 or minimum placement Wr/Comm Level 9.

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.

Introduces the science of human movement (kinesiology). Explores the anatomical elements, such as muscle action and joint structure and function involved in the gross motor movement. Emphasizes structural anatomy, primary movers of each joint, and muscle utilization for specific sport actions.

HHP 261 Exercise Physiology (4 Credits)

Recommended preparation: MTH 015 (or higher) or minimum placement Math Level 7 and WR 065 or WR 121 or minimum placement Wr/Comm Level 7.

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 288 Special Studies: Health & Human Performance (1-4 Credits)

Explores topics of current interest in the discipline.

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 (1-6 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 108 Introduction to Canoeing (1 Credit)

Introduces the sport of canoeing, including the selection of appropriate gear, effective paddling techniques, and canoe maneuvers on lakes and other calm-water venues. Develops an understanding of the use of canoeing as a recreational activity and further develops a sense of the canoe as a method of outdoor/wilderness travel. Students do not need any previous paddling experience. Canoes, paddles, and personal flotation devices will be provided.

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 188 Special Studies: Health and Human Performance (1-4 Credits)

Describe current topics associated with health and human performance.

HHPA 199 Selected Topics: Health and Human Performance (1-4 Credits)

This course is in development.

HHPA 288 Special Studies: Health and Human Performance (1-4 Credits)

Describe current topics associated with health and human performance.

HHPA 299 Selected Topics: Health and Human Performance (1-4 Credits)

Provides a learning experience in health and human performance not currently available; this course is in development to be proposed as a permanent course.

Exercise Science/Kinesiology - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Art 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 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 sample plan is a suggested course of study for students interested in pursuing a bachelor's degree in exercise science/kinesiology.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

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		
<u>Health:</u> (p. 58)		
Choose 3 credits	¹	3
Recommend: HHP 295		
<u>Mathematics:</u> (p. 60)		
Choose one course		4

Recommend: MTH 111

Oral Communication: (p. 60)	
Choose one course	3-4

Writing: (p. 60)	
WR 121 Academic Composition	4
WR 122 Argument, Research, and Multimodal Composition or WR 227 Technical Writing	4

General Education/Discipline Studies

Cultural Literacy: (p. 63)	
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One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).

Arts and Letters: (p. 61)	
Choose three courses from at least two prefixes	9-12

Social Science: (p. 68)	
Choose four courses from at least two prefixes	12-16

Recommend: HHP 100, HHP 270, PSY 201, SOC 201

Science/Math/Computer Science: (p. 66)	
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Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science	12-20
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Recommend: BI 231, BI 232, BI 233, HHP 261

Electives ²	
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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
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Recommend: HHP 131, HHP 259, HHP 260, HHP 262, and MTH 112

Total Credits	90-106
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¹ HHPA activity courses (1 credit each) are not to be duplicated.

² Related courses to consider: HHPA courses, HHP 212A AHA Basic Life Support for Providers 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- Exercise Science

Advising Notes

Nearby public universities with either an exercise science/kinesiology closely related major include:

- 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.

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 Argument, Research, and Multimodal or WR 227 Composition or 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. 60)	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

Elective (recommend HHP 280A and 280B)	2
Credits	14-15
Total Credits	91-95

Pre-Physical Therapy - Associate of Arts Oregon Transfer (AAOT)

Description

Students interested in pursuing professional degrees to become a physical therapist are required to complete a bachelor's degree, preferably in a related area (typically 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 degree with an emphasis on pre-physical therapy coursework.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
Recommended: HHP 131		
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommended: MTH 111 ²		
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline Studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
Recommend: PSY 201, PSY 219, HHP 100, HHP 270		
<u>Science/Math/Computer Science:</u> (p. 66)		
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	39
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: BI 101 (or BI 211), BI 234, CH 222, CH 223, HHP 260, HHP 261, MTH 112, MTH 243, PH 201, PH 202, PH 203 ^{3, 4}	
Total Credits	90-106

- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² Most doctorate of physical therapy (DPT) programs require completing MTH 112 and MTH 243. Work with your advisor to select appropriate MTH courses.
- ³ The recommended elective courses are for students to explore the field of physical therapy. These courses are either preferred or required for applications to most DPT programs. Work with your advisor to identify the exact requirements for the particular schools you may apply to.
- ⁴ Refer to advising notes and your assigned advisor for suggestions for a baccalaureate major.

Advising Notes

Pacific University and George Fox are the two Doctorate of Physical Therapy (DPT) programs in Oregon. These recommendations are based on their application prerequisites. Students pursuing other schools must look at the 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](#) is a helpful tool in identifying colleges across the U.S. which offer Doctorate of Physical Therapy degrees 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	
WR 121	Academic Composition	4
Mathematics (recommend MTH 111)		4

Discipline Studies Science/Math/Computer Science (recommend BI 231)	4
Health (3 credits with HHP prefix; recommend HHP 131; see elective recommendations and advising notes)	3

Credits 15

Second Term

WR 122 or WR 227	Argument, Research, and Multimodal Composition or Technical Writing	4
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Discipline Studies Social Science (recommend PSY 201)	4
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Discipline Studies Science/Math/Computer Science (recommend BI 232)	4
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Elective (recommend MTH 112)	4
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Credits 16

Third Term

Discipline Studies Arts & Letters	3-4
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Discipline Studies Science/Math/Computer Science (recommend BI 233) ⁴	4
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Discipline Studies Social Science (recommend HHP 270)	3
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Elective (recommend HHP 260)	4
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Credits 14-15

Fourth Term

Discipline Studies Arts and Letters	3-4
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Discipline Studies Science/Math/Computer Science (recommend CH 221) ⁴	5
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Discipline Studies Social Science (recommend HHP 100)	4
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Elective (recommend HHP 261)	4
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Credits 16-17

Fifth Term

Discipline Studies Social Science (recommend PSY 219)	4
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Elective (recommend CH 222)	5
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Elective (recommend BI 101 or BI 234)	4
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Oral Communication	3-4
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Credits 16-17

Sixth Term

Discipline Studies Arts and Letters	3-4
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Elective (recommend CH 223)	5
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Elective	5
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Credits 13-14

Total Credits 90-94

Fire Science

Firefighting is the field of first responders who specialize in the prevention and suppression of fires in residential, commercial structures, and wildland fire as well as helping people in health care emergencies. Fire Science provides the courses, program, and support to launch a firefighting career.

See the [Fire Science](#) page for more information.

Contact:

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Department: Natural and Industrial Resources
Department Chair: [Paula Simone \(psimone@coocc.edu\)](mailto:psimone@coocc.edu)

Programs

Career and Technical Education

Associate of Applied Science

- [Fire Science - Associate of Applied Science \(AAS\)](#) (p. 225)

Transfer

Associate of Science

- [Fire Service Administration \(EOU Transfer\) - Associate of Science \(AS\)](#) (p. 227)

Courses

FIRE 100 Firefighter Type II Training (3 Credits)

Trains 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, and L-180.

FIRE 101 Introduction to Emergency Services (4 Credits)

Provides an overview to fire protection and EMS. Includes career opportunities, related fields, philosophy and history, organization and function of public and private agencies, nomenclature, functions. In addition, provides a broad overview of college and life success strategies as related to this field. This course is a FESHE core requirement and is equivalent to NFA C0273.

FIRE 102 Fire Service Safety and Survival (3 Credits)

Introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for culture and behavior change through the fire and emergency services. This course is a FESHE core requirement and is equivalent to NFA C0281.

FIRE 110 Building Construction for Fire Personnel (3 Credits)

Prerequisites with concurrency: FIRE 114.

Recommended to be taken with: FIRE 112.

Introduces the relationship of building construction to firefighter and life safety. Explores the elements of construction and design of structures, key factors when inspecting buildings, preplanning fire operations, and operating at emergencies. This course is a FESHE core requirement and is equivalent to NFA C0275.

FIRE 111 Tactical Decision Simulations (2 Credits)

Prerequisites: FIRE 100.

Uses simulations of specific problem situations to learn and apply tactical decision-making skills in the fire environment. Includes anticipating or predicting problem fire behavior during fireline operations, utilizing lookouts, communications, escape routes and safety zones. Upon completion of the course students will receive a Fireline Handbook and Incident Response Pocket Guide (IRPG). P/NP grading.

FIRE 112 Public Education and Fire Prevention (3 Credits)

Recommended to be taken with: FIRE 114.

Provides fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspections; fire and life safety education; and fire investigation. This course is a FESHE core requirement and is equivalent to NFA C0286.

FIRE 114 Fire Codes and Ordinances (3 Credits)

Recommended to be taken with: FIRE 110 and FIRE 112.
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. Provides the students with fundamental knowledge of the role of code enforcement in a comprehensive fire prevention program. This course is a FESHE Fire Prevention model curriculum.

FIRE 120 Fire Protection Systems (3 Credits)

Recommended preparation: FIRE 101 and FIRE 102.
Introduces features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers. Apply concepts in field exercises. This course is a FESHE core requirement and is equivalent to NFA C0288.

FIRE 121 Fire Law (1 Credit)

Recommended preparation: FIRE 101 and FIRE 102.
Introduces the modern legal system with emphasis on cases related to fire service. Reviews case law affecting modern fire service agencies and explores laws relating to medical treatment of patients, fire protection, codes, emergency response and department activities on the fire ground. This course is a FESHE non-core requirement and is equivalent to NFA C0270.

FIRE 122 Fire Department Budget (1 Credit)

Covers the budget process as required by Oregon laws. Includes types of budgets, the process of preparing the budget and classifying expenditures.

FIRE 123 HazMat Awareness & Operations (3 Credits)

Prerequisites with concurrency: FIRE 175 or department approval based on agency affiliation.

Prepares individuals to safely respond to hazardous materials emergencies. Includes 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). Students will be prepared to test for IFSAC certification.

FIRE 130 Rescue Practices (3 Credits)

Recommended preparation: FIRE 101.
Explores techniques and applications of specialized rescue practices in modern fire service. Addresses specialized techniques used in vehicle rescue, steep-angle rescue, swift-water rescue and basic overviews of ice rescue, electrical rescue and trench rescue. Incorporates field exercises to practice techniques and tool use. Combine with Emergency Medical Technician-Basic training to integrate fire and EMS skills for emergency rescue.

FIRE 131 S-131, Firefighter Type I (1 Credit)

Prerequisites: FIRE 100.
Provides Firefighter Type 1 (FFT1) training. Topics include operational leadership, communications, LCES, and tactical decision-making. Includes class discussion and tactical decision games designed to facilitate learning. This course is an NWCG S-131 Certified course and students must be qualified as a Wildland Firefighter Type II (FFT2) per NWCG to take this course.

FIRE 175 NFPA Firefighter 1 Academy (7 Credits)

Provides new firefighters the practical and cognitive training needed to operate safely and effectively on the fireground. Meets the requirements outlined by NFPA 1001 (National Fire Protection Association,) the Oregon Department of Public Safety Standards and Training (DPSST,) and the International Fire Service Accreditation Congress (IFSAC) for firefighter training. Focuses on an intense hands-on approach to firefighter, which promotes both skill competency and an understanding of the fireground. Students will be tasked to complete numerous fireground evolutions that apply their skills to a variety of scenarios. Successful completion of finger printing/background check is required prior to DPSST certification. Requires a high level of physical fitness.

FIRE 188 Special Studies: Fire Science (1-4 Credits)

Explores topics of current interest in the fire science discipline.

FIRE 199 Selected Topics: Fire Science (1-4 Credits)

This course is in development.

FIRE 200 S-200 Initial Attack Incident Command (1 Credit)

Prerequisites: FIRE 230.

Designed to meet the training needs of the Incident Commander Type 4 (ICT4). Presented in a discussion/exercise format. The six instructional units include Foundation Skills; Intelligence Gathering and Documentation; Size Up the Incident; Develop a Plan of Action; Post-fire Activities; Evaluate Incident Objectives and Manage the Incident. This is an NWCG certified course. NWCG requires students be qualified as any single resource boss to take this course.

FIRE 201 NFPA Instructor 1 (3 Credits)

Explores the job performance requirement of the National Fire Protection Agency, 1041 Standard for Fire Service Instructor Professional Qualifications and the National Wildfire Coordinating Group. Prepares students for instruction: planning, using a variety of instructional methods, teaching diverse learners, and evaluating course outcomes. Includes guidelines for addressing the critical issues of safety and the legal issues of training. This course is articulated with DPSST to provide NFPA Instructor 1 Certification. P/NP grading.

FIRE 203 S-203 Introduction to Incident Information (3 Credits)

Prerequisites: Instructor approval based on agency nomination.
Provides students with the knowledge and skills they need to serve as public information officers (PIOF). Includes establishing and maintaining an incident information operation, communicating with internal and external audiences, working with the news media, handling special situations, and long term planning and strategy. This course is an NWCG certified course.

FIRE 205 Fire Behavior & Combustion (3 Credits)

Prerequisites: FIRE 101, FIRE 102, FIRE 110 and FIRE 120.

Prerequisites with concurrency: GS 105 or CH 104 or higher.

Explores theories and fundamentals of how and why fires start, how they spread, and how they are controlled. This course is a FESHE core requirement and is equivalent to NFA C0276.

FIRE 210 FI-210 Wildfire Origin/Cause (2 Credits)

Prerequisites: Department approval.

Provides a knowledge and skill base for the wildland fire origin and cause determination investigator (INVF). Trains an INVF to perform at an acceptable level on a national basis without regard to geographic boundaries. This course is an NWCG certified course and NWCG recommends students have law enforcement or firefighter experience with wildland fire investigation responsibilities.

FIRE 210S Structure Fire Investigation (2 Credits)

Prerequisites: FIRE 101, FIRE 102, FIRE 110, FIRE 112, FIRE 120, FIRE 175, and FIRE 205.

Provides the technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes. This course is a FESHE non-core requirement and is equivalent to NFA C0283.

FIRE 211 S-211 Portable Pumps (1 Credit)

Recommended preparation: FIRE 100 and MTH 015 (or higher).

Covers skills needed to design, setup, operate, troubleshoot, and shut down portable water delivery systems. Focuses on portable pumps, not water delivery for engines. Topics include portable water delivery systems, equipment, roles and responsibilities, and system design and hydraulics. Includes an applied field exercise. This is an NWCG certified course.

FIRE 215 S-215 Fire Operations in the Urban Interface (3 Credits)

Prerequisites: FIRE 131 and FIRE 290.

Focuses on tactical decisions needed to confront wildland fire that threatens life, property, and improvements in the wildland/urban interface. Includes 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. This is an NWCG certified course and NWCG requires students be qualified as a Firefighter Type 1 (FFT1).

FIRE 215S S-215 Fire Operations in Urban Interface for Structure Fire (3 Credits)

Prerequisites: FIRE 100, FIRE 101, FIRE 102, FIRE 123, and FIRE 175.

Focuses on the structure fire duties in relation to the urban interface. 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.

FIRE 219 S-219 Fire Operations (2 Credits)

Prerequisites: FIRE 100.

Introduces the roles and responsibilities of a firing boss (FIRB) and outlines duties of other personnel who may engage firing operations. Discusses and illustrates common firing devices and techniques. Although comprehensive in nature, the course work is not a substitute for the dynamic fire environment. This is an NWCG certified course and students are required to be qualified as a firefighter type 2 (FFT2) for certification.

FIRE 230 S-230 Crew Boss (2 Credits)

Prerequisites: FIRE 131 and FIRE 290.

Trains students 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. This is an NWCG certified course. Students are required to be qualified as firefighter type 1 (FFT1) and have successful completion of S-290.

FIRE 231 S-231 Engine Boss (1 Credit)

Prerequisites: FIRE 131, FIRE 230 and FIRE 290.

Recommended preparation: FIRE 215, FIRE 219, FIRE 270, FEMA 1-200 and a certified driver course.

Trains students to perform all duties associated with the single resource engine boss. Topics include engine and crew capabilities and limitations, information sources, fire size up considerations, tactics, and wildland/urban interface. This is an NWCG certified course and students must be qualified as a firefighter type 1 (FFT1) and have successfully completed S-230.

FIRE 232 Fire Protection Hydraulics and Water Supply (4 Credits)

Prerequisites: FIRE 101, FIRE 102, FIRE 120, FIRE 175, FIRE 205, and MTH 098 (or higher) or minimum placement Math Level 14.

Provides a foundation of theoretical knowledge in the principles of the use of water in fire protection and in the application of hydraulic principles to analyze and solve water supply problems. This course is a FESHE non-core requirement and is equivalent to NFA C0277 and DPSST certification in NFPA Pumper Operator.

FIRE 236 S-236 Heavy Equipment Boss (1 Credit)

Prerequisites: FIRE 230 and FIRE 290.

Trains for the role of 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. This is an NWCG certified course and students are required to be qualified as firefighter type 1 (FFT1) and have successfully completed S-230.

FIRE 248 S-248 Status/Check-In Recorder (2 Credits)

Recommended preparation: FEMA 1-200, L-180 Human Factors, and basic computer skills.

Introduces tools and techniques used to perform the duties of a status check-in recorder (SCKN). Provides an overview of what a student can expect if dispatched to an incident. This is an NWCG certified course.

FIRE 261 S-261 Applied Interagency Incident Business Management (2 Credits)

Recommended preparation: ICS I-100; NWCG certification of S-260, Interagency Incident Business Management, S-110, Basic Willand Fire Suppression Orientation; I-Suite, Time Module component, and L-180 Human Factors on the Fireline.

Provides the prerequisite skills/knowledge necessary to perform the tasks of the entry-level finance positions in the Incident Command System (ICS). Designed to be taken after completion of Interagency Incident Business Management (S-260). This is an NWCG certified course and students are required to have completed S-260, Interagency Incident Business Management.

FIRE 263 Human Behavior in Fire (3 Credits)

Prerequisites: FIRE 101, FIRE 102, FIRE 110, FIRE 112, FIRE 114, FIRE 120, FIRE 205, and MTH 098 (or higher) or minimum placement Math Level 14.

Provides fundamental information on human behavior as it relates to fire and mass casualties, understanding human behavior, building design, evacuation and fire department operations. Discusses issues associated with large populations and disabled or persons with limited mobility. This course is a FESHE fire prevention curriculum requirement and is equivalent to NFA C0276.

FIRE 265 Capstone: Fire and Emergency Service Administration (3 Credits)

Prerequisites: FIRE 101, FIRE 102, FIRE 110, FIRE 112, FIRE 114, FIRE 175, FIRE 120, and WR 065 (or higher) or placement into Wr/Comm Level 9.

Prerequisites with concurrency: FIRE 205.

Recommended preparation: Recommended to be taken your second year. Introduces the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency service ethics and leadership from the perspective of the company officer. This course is a FESHE non-core requirement (equivalent to NFA C0272) and meets DPSST Fire Officer I requirements.

FIRE 270 S-270 Basic Air Operations (2 Credits)

Recommended preparation: FIRE 100.

Covers aircraft types and capabilities, aviation management and safety, tactical and logistical uses of aircraft, and requirements for helicopter take-off and landing areas. NOTE: The regulations, procedures, and policies addressed in this course are primarily those governing federal agency and ICS operations. State, county, and other political subdivisions using this course will need to consult their agency having jurisdiction with respect to regulations, procedures and policies. This is an NWCG certified course.

FIRE 275 Capstone: Tactics & Strategies (3 Credits)

Prerequisites: FIRE 101, FIRE 102, FIRE 110, FIRE 112, FIRE 114, FIRE 120, FIRE 123, FIRE 175 and FIRE 205.

Prerequisites with concurrency: FIRE 232.

Provides a capstone experience to the Fire Science AAS program. Includes an in-depth analysis of the principles of fire control using personnel, equipment, and extinguishing agents on the fire ground. Taken in the final term prior to program completion. This course is a FESHE non-core requirement and is equivalent to NFA C0279.

FIRE 280 Co-op Work Experience Fire Science (1-4 Credits)

Prerequisites: Instructor approval.

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

FIRE 281 L-280 Followership/Leadership (2 Credits)

Prerequisites: FIRE 100.

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, and after action review techniques. This is an NWCG certified course. P/NP grading.

FIRE 286 Pacific Northwest Engine Academy (3 Credits)

Prerequisites: FIRE 100 and FIRE 211.

Training in water handling and engine operation skills, applicable to both fuels management and fire suppression activities. The student will be instructed using ICS terminology. P/NP grading.

FIRE 288 Special Studies: Fire Science (1-4 Credits)

Explores topics of current interest in the fire science discipline.

FIRE 290 S-290 Intermediate Wildfire Behavior (3 Credits)

Prerequisites: FIRE 100.

Prepares the prospective fireline supervisor to undertake safe and effective fire management operations. 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. This is an NWCG certified course.

FIRE 291 S-300 IC Extended Attack (1 Credit)

Prerequisites: FIRE 200 and FIRE 292.

Meets the training needs of the incident commander, type 3 (ICT3). Focuses on the lessons of leadership and command as they relate to the ICT3 position. Includes tactical decision games for students to practice concepts. Units include: Foundational Skills, Situational Awareness, Command and Control, Managing the Incident, Transitional Activities, Post-Fire Activities and a Final Simulation. This is an NWCG course and requires qualification as an Incident Commander Type 4 (ICT4) and Task Force Leader (TFLD) OR qualified as ICT4 and Strike Team Leader and any two single resource boss positions - one must be Crew (CRWB) or Engine (ENGB).

FIRE 292 S-330 Task Force/Strike Team Leader (1 Credit)

Prerequisites: FIRE 230 and FIRE 290.

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. The student is expected to perform in high risk simulations. This is an NWCG certified course and students are required to be qualified as any single resource boss.

FIRE 293 S-339 Division Group Supervisor (1 Credit)

Prerequisites: FIRE 200, FIRE 290 and FIRE 292.

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. This is an NWCG certified course and students are required to be qualified as a Task Force Leader (TFLD); OR qualified as Incident Commander Type 3 (ICT3); OR qualified as Incident commander Type 4 (ICT4) AND any two (2) Strike Team Leader positions (one must be STCR or STEN).

FIRE 294 S-390 Fire Behavior Calculation (3 Credits)

Prerequisites: FIRE 230 and FIRE 290.

Introduces fire behavior calculations by manual methods, using nomograms and the Fire Behavior Handbook Appendix B: Fire Behavior. Gain an understanding of the determinants of fire behavior by studying inputs such as weather, slope, fuels, and fuel moisture. Learn how to interpret fire behavior outputs, documentation processes, and fire behavior briefing components. This is an NWCG (National Wildfire Coordinating Group) Certified course; requires qualification as a single resource boss.

FIRE 298 Independent Study: Fire Science (1-4 Credits)

Prerequisites: Instructor approval.

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

FIRE 299 Selected Topics: Fire Science (1-4 Credits)

Provides a learning experience in Fire Science not currently available; this course is in development to be proposed as a permanent course.

Fire Science - Associate of Applied Science (AAS)

Description

The Fire Science Associate of Applied Science is designed for students seeking a career in the fire service industry and for those who want to upgrade their skills for current fire service employment.

The program is accredited by the International Fire Service Accreditation (IFSAC), the Council for Higher Education Accreditation (CHEA), and the Department of Public Safety Standards and Training (DPSST). Wildland fire courses are certified by the National Wildfire Coordinating Group (NWCG).

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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.
6. Describe the interaction of fuels, weather, and topography on structure and wildland fire behavior, fire line tactics, and safety.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 14
- 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 structural fire courses.
- All 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 see the [program page](#) and/or program handbook for more information.

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

Required:

- CPR for Healthcare Provider card (must remain current throughout EMT class): \$55
- Background check, immunization upload, and 10-panel drug screen: approximately \$110
- Immunizations: \$20 to \$200
- State certification testing and National Registry test: \$170 to \$350
- Materials (boots, ear protection, gloves, etc.): \$200 to \$350

Course Requirements

Course	Title	Credits
Core Courses		
EMT 151	Emergency Medical Technician Part A	5
EMT 152	Emergency Medical Technician Part B	5
FIRE 100	Firefighter Type II Training	3
FIRE 101	Introduction to Emergency Services	4
FIRE 102	Fire Service Safety and Survival	3
FIRE 110	Building Construction for Fire Personnel	3
FIRE 112	Public Education and Fire Prevention	3
FIRE 114	Fire Codes and Ordinances	3
FIRE 120	Fire Protection Systems	3
FIRE 123	HazMat Awareness & Operations	3
FIRE 130	Rescue Practices	3
FIRE 175	NFPA Firefighter 1 Academy	7
FIRE 205	Fire Behavior & Combustion	3
FIRE 210S	Structure Fire Investigation	2
FIRE 215S	S-215 Fire Operations in Urban Interface for Structure Fire	3
FIRE 232	Fire Protection Hydraulics and Water Supply	4
FIRE 265	Capstone: Fire and Emergency Service Administration	3
FIRE 275	Capstone: Tactics & Strategies	3
Fire Science Technical Electives:		
AH 111	Medical Terminology I	
EMT 170	Emergency Response Communication/Documentation	
EMT 171	Emergency Response Patient Transport	
EMT 195	Crisis Intervention for the Emergency Medical Provider	
FOR 130	Chainsaw Use and Maintenance	

FIRE 121	Fire Law	
FIRE 122	Fire Department Budget	
FIRE 263	Human Behavior in Fire	
Any course with a FIRE prefix that is not part of the core curriculum		
Other Required Courses		
Choose one course from the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
HS 208	Multicultural Issues in Human Services	
COMM 111	Fundamentals of Public Speaking	4
GS 105	Physical Science: Chemistry	4-5
or CH 104	Introduction to Chemistry I	
HHP 242	Stress Management	3
or HHP 266	Nutrition for Health	
or HHP 295	Health and Fitness	
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	Psychology of Risk and Adventure	
PSY 201	Mind and Brain	
PSY 202	Mind and Society	
PSY 216	Social Psychology	
SOC 201	Introduction to Sociology	
MTH 105	Math in Society (or choose one course from the foundational requirements math list.)	4
WR 121	Academic Composition	4
1-200 FEMA		
1-700 FEMA		
1-800 FEMA		
EMT Basic Oregon Certification		
Total Credits		97-100

Advising Notes

The 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 by joining a fire agency that requires 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 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. The Fire

Science AAS has an [articulation agreement](#) with Eastern Oregon University.

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 program director at 541-383-7404.

The following are required for graduation in the Fire Science AAS 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, students must pass the National Registry of EMTs written and 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 a Fire Science AAS degree.

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:
 - Many courses require students to undergo drug screening, background check and/or immunization verification with a vendor approved by Central Oregon Community College prior to enrollment; refer to individual classes in the schedule or the program director for more information.

Sample Plan

First Year

Fall		Credits
FIRE 101	Introduction to Emergency Services	4
FIRE 102	Fire Service Safety and Survival	3
FIRE 123	HazMat Awareness & Operations	3
FIRE 175	NFPA Firefighter 1 Academy	7

Credits 17

Winter

EMT 151	Emergency Medical Technician Part A	5
FIRE 100	Firefighter Type II Training	3
FIRE 110	Building Construction for Fire Personnel	3
FIRE 114	Fire Codes and Ordinances	3
FIRE 112	Public Education and Fire Prevention	3

Credits 17

Spring

EMT 152	Emergency Medical Technician Part B	5
Fire Science Technical Electives:		3
FIRE 130	Rescue Practices	3
FIRE 120	Fire Protection Systems	3

WR 121	Academic Composition	4
Credits		18
Second Year		
Fall		
FIRE 205	Fire Behavior & Combustion	3
FIRE 265	Capstone: Fire and Emergency Service Administration	3
GS 105 or CH 104	Physical Science: Chemistry or Introduction to Chemistry I	4-5
MTH 105	Math in Society	4
Credits		14-15
Winter		
COMM 111	Fundamentals of Public Speaking	4
Choose one course from the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
HS 208	Multicultural Issues in Human Services	
Fire Science Technical Electives:		3
Choose one of the following:		3
HHP 242	Stress Management	
HHP 266	Nutrition for Health	
HHP 295	Health and Fitness	
FIRE 215S	S-215 Fire Operations in Urban Interface for Structure Fire	3
Credits		16-17
Spring		
Discipline Studies Courses (choose one from the following):		3-4
ANTH 103	Cultural Anthropology	
BI 234	Microbiology	
CJ 100	Survey of the Criminal Justice System	
OL 244	Psychology of Risk and Adventure	
PSY 201	Mind and Brain	
PSY 202	Mind and Society	
PSY 216	Social Psychology	
SOC 201	Introduction to Sociology	
FIRE 232	Fire Protection Hydraulics and Water Supply	4
FIRE 275	Capstone: Tactics & Strategies	3
FIRE 210S	Structure Fire Investigation	2
Fire Science Technical Electives:		3
Credits		15-16
Total Credits		97-100

Fire Service Administration (EOU Transfer) - Associate of Science (AS)

Description

The Fire Service Administration (EOU Transfer) Associate of Science is intended to prepare students to transfer to Eastern Oregon University's Fire Service Administration 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.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 14

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 fire courses.
- Immunization documentation (hepatitis B or release, current TB, MMR immunizations—at least two of the three shots)

Required:

- All students enrolled in an 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 on the [EMS page](#). 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 or COMM 218	Fundamentals of Public Speaking Interpersonal Communication	3-4
Writing		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
General Education/Discipline Studies		
Aesthetics and Humanities (EOU): ¹		6

ARH 201	Art History: Western: Prehistory to Early Byzantine
ARH 202	Art History: Western: Early Medieval to Late Renaissance
ARH 203	Art History: Western: Baroque to Early Modern
COMM 115	Introduction to Intercultural Communication
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	Beginning Graphic Design
ART 115	Basic Design: 2-D
ART 116	Basic Design: Color
ART 121	Ceramics: Introductory Hand Building
ART 131	Beginning Drawing
ART 132	Intermediate Drawing
ART 161	Photography I
ART 181	Beginning Painting
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	Introduction to 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	Europe: The Classical Era (pre-history to 600 C.E.)
HST 201	Early America - History of the United States (pre-history to 1820)
HST 202	19th and early 20th Century United States History (1820-1920)
PS 201	Introduction to US Government and Politics
PS 205	Introduction to International Relations
PSY 202	Mind and Society
SOC 201	Introduction to Sociology

Program Requirements

Human Relations: (p. 76) 3-4

FIRE 101	Introduction to Emergency Services	4
FIRE 102	Fire Service Safety and Survival	3
FIRE 110	Building Construction for Fire Personnel	3
FIRE 112	Public Education and Fire Prevention	3
FIRE 114	Fire Codes and Ordinances	3
FIRE 120	Fire Protection Systems	3
FIRE 175	NFPA Firefighter 1 Academy	7
FIRE 205	Fire Behavior & Combustion	3
FIRE 232	Fire Protection Hydraulics and Water Supply	4
FIRE 275	Capstone: Tactics & Strategies	3

Electives³ 21

Total Credits 99-101

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

- 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 program. For more information on this bachelor degree program, please contact the program director at 541-383-7404.

Most program 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 FIRE-prefix 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.
 - All courses must be completed with a "C" grade or higher.
- Additional Requirements:
 - Students may not be able to complete the degree if the student has violated a criminal or ethical standard or guideline established by the program in regard to certification requirements.
 - 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 department chair.

Sample Plan

First Year

Fall		Credits
FIRE 101	Introduction to Emergency Services	4
FIRE 102	Fire Service Safety and Survival	3
MTH 105	Math in Society (or higher)	4
WR 121	Academic Composition	4
Elective		3
Credits		18

Winter

FIRE 120	Fire Protection Systems	3
FIRE 110	Building Construction for Fire Personnel	3
FIRE 112	Public Education and Fire Prevention	3
FIRE 114	Fire Codes and Ordinances	3
WR 122	Argument, Research, and Multimodal Composition	4
Credits		16

Spring

Artistic Process & Creation		3
Aesthetics & Humanities		3

Natural, Mathematical and Information Systems (recommend GS 104)		4
Elective		3
Social Science		3
Credits		16

Second Year

Fall

Aesthetics & Humanities		3
FIRE 175	NFPA Firefighter 1 Academy	7
FIRE 205	Fire Behavior & Combustion	3
Natural, Mathematical and Information Systems (recommend GS 105)		4
Credits		17

Winter

Artistic Process & Creation		3
Elective		4
<u>Human Relations:</u> (p. 76)		3-4
Social Science (recommend SOC 201)		4
COMM 111 or COMM 218	Fundamentals of Public Speaking or Interpersonal Communication	3-4
Credits		17-19

Spring

Elective		3
Elective		4
Elective		4
FIRE 275	Capstone: Tactics & Strategies	3
FIRE 232	Fire Protection Hydraulics and Water Supply	4
Credits		18
Total Credits		102-104

Forest Resources Technology/Forestry

Forest Resources Technology/Forestry provides courses and programs to prepare students for immediate employment into forestry-related industries, transfer to a baccalaureate program in forestry or natural resources, or advancement in current forestry or natural resource careers. Students benefit from field-based work with hands-on learning (including outdoor labs and field trips), small class sizes, and knowledgeable and accessible instructors with research, agency, and industry experience.

See the [Forest Resources Technology/Forestry](#) page for more information.

Contact:

[Rebecca Franklin \(rfranklin@cooc.edu\)](mailto:rfranklin@cooc.edu)

541-330-4369

Cascades Hall, Bend Campus

Department: Natural and Industrial Resources

Department Chair: Wayne Yeatman

Career and Technical Education

Associate of Applied Science

- [Forest Resources Technology - Associate of Applied Science \(AAS\)](#) (p. 232)

Career Pathway Certificate of Completion

- [Advanced Forest Concepts - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 234)
- [Conservation of Natural Resources - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 235)
- [Forest Ecology - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 235)
- [Forest Measurements - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 236)
- [Forest Protection - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 236)
- [Mapping/Cartography - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 237)

Transfer

Associate of Science

- [Agricultural Sciences \(OSU Transfer\) Emphasis - Associate of Science \(AS\)](#) (p. 237)
- [Forestry \(OSU Transfer\) Emphasis - Associate of Science \(AS\)](#) (p. 239)
- [Natural Resources \(OSU Transfer\) Emphasis - Associate of Science \(AS\)](#) (p. 240)

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 soil science basics, from physical properties to use and management. Discusses traditional agricultural, wildlands and rangelands, watersheds, and modern environmental perspectives on soil. Reviews new soil applications and soil science to better understand the role soil has in our lives. Includes lab component with indoor and outdoor experience 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 102 or a course from the foundational requirements math list.

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 102 or a course from the foundational requirements math list 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 102 or a course from the foundational requirements math list and 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. 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 use 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. Emphasizes 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 288 Special Studies: Forestry (1-4 Credits)

Explores topics of current interest in the discipline.

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 188 Special Studies: Fish and Wildlife (1-4 Credits)

Explores topics of current interest in the fish and wildlife discipline.

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.

FW 257 Hunting in Modern Society (4 Credits)

Examines the role of recreational hunting in modern society, including its history and development, the use of harvests as a conservation and management tool, and varying ethical perspectives on recreational hunting. Focuses on recreational hunting as a social, biological, and conservation activity, and compares the North American model of wildlife conservation with management and conservation models for wildlife in other countries and cultures.

FW 288 Special Studies: Fish and Wildlife (1-4 Credits)

Explores topics of current interest in the fish and wildlife discipline.

FW 298 Independent Study: Fish and Wildlife (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

FW 299 Selected Topics: Fish/Wildlife (1-4 Credits)

Prerequisites: instructor approval.

Provides a learning experience in fish/wildlife studies not currently available; this course is in development to be proposed as a permanent course.

Forest Resources Technology - Associate of Applied Science (AAS) Description

The Associate of Applied Science 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) and in 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 include forest management activities, such as evaluation of reforestation efforts, timber sale layout, tree measurements, forest damage assessment, and other required forest management activities. 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.

The program has the advantage of being located near several national forests. Most program courses 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 program is accredited by the Society of American Foresters.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Collect, quantify, and present information or data to promote informed decision making in natural resource management.
2. Disseminate information effectively to diverse audiences either verbally or in writing via appropriate media.
3. Enter data into multiple programs and analyze that data into useful outputs.
4. Identify, describe, and apply ecosystem management techniques, including fire, riparian, wildlife protection and implementation, and silvicultural prescriptions.
5. Identify biological, abiotic, and cultural ecosystems to facilitate natural resource management.
6. Demonstrate key attributes and ethical practices of a natural resource professional.
7. Use mapping tools for navigation, planning, and to implement forest management.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- Completion of MTH 060 Beginning Algebra or higher or minimum placement Math Level 10

- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

- Equipment (hardhat, boots, vest, compass, GPS, datum, plant press, hand lens, rain gear, field book, etc.): \$665 to \$915
- Students are expected to provide their own appropriate field clothing and tools.

Enrollment Fees

- Lab fees: 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 or FW 212	Survey of Northwest Mammals Survey of Northwest Birds	2
GEOG 265	Geographic Information Systems	4
Other Required Courses		
HHP 252A	Fitness/First Aid	3
Discipline Studies Courses		8
MTH 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
Choose one course from the following:		3-4

COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
WR 121	Academic Composition ³	4
Total Credits		97-102

- 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 planning to transfer should consider MTH 111 College Algebra and consult with their advisor for other specific transfer requirements.
- 3 Transfer students should also take WR 227 Technical Writing.

Advising Notes

This program can be completed within two years provided the student is adequately prepared to take MTH 102 Applied Technical Mathematics and WR 121 Academic Composition and coursework starts Fall term. Students entering in Winter or Spring term and/or who require developmental writing and/or math courses can complete the program within three years.

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 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		Credits
Fall		
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 102	Applied Technical Mathematics (or choose one course from the foundational requirements math list)	4
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Credits 18

Winter

CIS 120	Computer Concepts (or Computer Competency Test)	0-4
FOR 230B	Forest Surveying	3
FOR 235	Resource Measurements	4
FOR 271	Applied Forest Ecology	3

Credits 10-14

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
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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 115 Introduction to Intercultural Communication

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 or FW 212	Survey of Northwest Mammals or Survey of Northwest Birds	2
Discipline Studies Course		4

Credits 16

Total Credits 97-102

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 use, planning, and management.

Entrance Requirements

There are no formal entrance requirements for the Advanced Forest Concepts Career Pathway Certificate of Completion. However, 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		Credits
FOR 237	Resource Sampling	4
	Credits	4

Third Term		
FOR 215	Forest Resource Capstone	3
Credits		3
Total Credits		12

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		
FOR 240B	Wildlife Ecology	3
Credits		3

Third Term		
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 and 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 workforce and are looking to enhance their skills in basic measurements of trees and 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 workforce and are looking to enhance their skills in identification of forest disease and insects and the basic techniques used to protect forests from catastrophic 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 five 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

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	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	Cartography	4
Credits		7
Second Term		Credits
FOR 230B	Forest Surveying	3
GEOG 265	Geographic Information Systems	4
Credits		7
Total Credits		14

Agricultural Sciences (OSU Transfer) Emphasis - Associate of Science (AS)

Description

The Agricultural Sciences (OSU Transfer) Emphasis Associate of Science fulfills many of the lower-division requirements of the Bachelor of Science in Agricultural Sciences at 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.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

While this program has no formal entrance requirement, individual courses may have prerequisites which must be met before enrollment.

Course Requirements

(See the [baccalaureate core list](#) (p. 76) 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 of Public Speaking	3-4
or COMM 114		Argumentation and Critical 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		
<u>Western Culture</u> : (p. 77) ¹		3-4

<u>Cultural Diversity: (p. 77)</u> ¹	4
<u>Literature and the Arts: (p. 78)</u> ¹	3-4
Social Processes and Institutions: Met by Program Requirements	
<u>Difference, Power and Discrimination: (p. 78)</u> 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
	Recommend: MTH 111	
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 251, SPAN 101, SPAN 102

Total Credits 90-96

¹ Select from the appropriate category in the [OSU Baccalaureate Core course list](#) (p. 76).

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 occasionally offered during during 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
CIS 120	Computer Concepts	4
Elective		4
MTH 111	College Algebra	4
WR 121	Academic Composition	4
Credits		16
Second Term		
COMM 111	Fundamentals of Public Speaking	3-4
or COMM 114	or Argumentation and Critical Discourse	
Elective		4
<u>Western Culture: (p. 77)</u>		3-4
WR 227	Technical Writing	4
Credits		14-16
Third Term		
BA 217	Accounting Fundamentals	4
EC 201	Microeconomics	4
Elective		4
HHP 295	Health and Fitness	3
Credits		15
Fourth Term		
BI 211	Principles of Biology	5
CH 221	General Chemistry I	5
<u>Cultural Diversity: (p. 77)</u>		4
Credits		14
Fifth Term		
BI 213	Principles of Biology	5
CH 222	General Chemistry II	5
Elective		4
<u>Literature and the Arts: (p. 78)</u>		3-4
Credits		17-18
Sixth Term		
BI 212	Principles of Biology	5
<u>Difference, Power and Discrimination: (p. 78)</u>		4
Elective		4
FOR 208	Soils: Sustainable Ecosystems	4
Credits		17
Total Credits		93-96

Forestry (OSU Transfer) Emphasis - Associate of Science (AS)

Description

The Associate of Science Forestry (OSU Transfer) Emphasis is intended to fulfill many lower-division requirements of the Bachelor of Science in Forest Management from Oregon State University. Other universities' requirements for a forest management degree may be similar, and course requirements for other forestry majors will differ. Students planning to transfer to any university forestry program should meet with a forest resources technology advisor to discuss transfer requirements.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met before 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 of 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		
<u>Western Culture:</u> (p. 77) ¹		3-4
<u>Cultural Diversity:</u> (p. 77) ¹		4
<u>Literature and the Arts:</u> (p. 78) 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 Management/Social 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. 76).
- 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 Associate of Science requirement, 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 or 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		
COMM 111	Fundamentals of Public Speaking	4
EC 201	Microeconomics	4
MTH 241	Calculus for Management/Social Science	4
<u>Western Culture:</u> (p. 77)		3-4
WR 227	Technical Writing	4
Credits		19-20
Third Term		
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
<u>Cultural Diversity: (p. 77)</u>		4
Credits		21
Fourth Term		
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		
FOR 230B	Forest Surveying	3
FOR 240B	Wildlife Ecology	3
FOR 241B	Dendrology	3
MTH 244	Introduction to Probability and Statistics 2	4
<u>Literature and the Arts: (p. 78)</u>		3-4
Credits		16-17
Sixth Term		
FOR 235	Resource Measurements	4
FOR 236	Aerial Photo	3
GEOG 265	Geographic Information Systems	4
Credits		11
Total Credits		96-99

Natural Resources (OSU Transfer) Emphasis - Associate of Science (AS)

Description

The Natural Resources (OSU Transfer) Emphasis Associate of Science is designed to fulfill 90-106 credits of the lower-division requirements of a Bachelor of Science in Natural Resources at [Oregon State University-Cascades](#). A fish and wildlife conservation option and an individualized specialty option are available at OSU-Cascades and at Central Oregon Community College. Other universities' requirements for a natural resources degree may be similar. Students planning to transfer to any natural resources program should meet with a forest resources technology advisor to discuss transfer requirements.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
Baccalaureate Core		
Skills		
<u>Writing I: (p. 76)</u> ¹		4
<u>Writing II: (p. 76)</u> ¹		4

<u>Speech: (p. 76)</u> ¹		3-4
Mathematics: Met by Program Requirements		
<u>Fitness: (p. 77)</u> 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		
<u>Western Culture: (p. 77)</u> ¹		3-4
<u>Literature and the Arts: (p. 78)</u> 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 ⁴	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
or FOR 260	Conservation of Natural Resources	
FW 251	Wildlife Conservation	3
G 201	Geology I - The Dynamic Earth	4
or G 202	Geology II - Earth's Surface	
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
MTH 112	Trigonometry	4
or MTH 241	Calculus for Management/Social Science	
or MTH 251	Calculus I	
Natural Resources Options		
Choose one of the following options (see lists below):		4-15
Fish and Wildlife Conservation Option		
Individualized Specialty 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.⁵

Total Credits **90-108**

- ¹ Select from the appropriate category in the [OSU Baccalaureate Core course list](#) (p. 76).
- 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.
- ⁴ CH 221 is recommended if you take BI 211 Principles of Biology, BI 212 Principles of Biology and BI 213 Principles of Biology.
- ⁵ Consider FW 257 Hunting in Modern Society.

Natural Resources Options

Fish and Wildlife Conservation Option

Course	Title	Credits
FOR 111	Forestry Perspectives	4
Total Credits		4

Individualized Specialty Option

Course	Title	Credits
Choose four from the following:		8-15
FOR 111	Forestry Perspectives	
FOR 126	Field Studies Pacific NW Forests	
FOR 127	Plants of the Pacific Northwest	
FOR 230A	Map, Compass and GPS	
FOR 230B	Forest Surveying	
FOR 236	Aerial Photo	
FOR 240B	Wildlife Ecology	
FOR 271	Applied Forest Ecology	
FOR 272	Forest Entomology/Pathology	
FOR 273	Silviculture and Harvesting Systems	
Total Credits		8-15

Advising Notes

The following requirement is not part of the Associate of Science degree, but it is required at Oregon State University:

- Perspectives course, cultural diversity category (see the [Baccalaureate Core list](#) (p. 76))

The difference, power and discrimination requirement 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 240A	Forest Ecology	3
FOR 241A or FOR 241B	Field Dendrology or Dendrology	3
MTH 112 or MTH 241 or MTH 251	Trigonometry or Calculus for Management/Social Science or Calculus I	4
<u>Writing I:</u> (p. 76)		4
Credits		14
Second Term		
CH 104 or CH 221	Introduction to Chemistry I or General Chemistry I	5
FOR 235	Resource Measurements	4
FW 251	Wildlife Conservation	3
<u>Writing II:</u> (p. 76)		4
Credits		16
Third Term		
FOR 208	Soils: Sustainable Ecosystems	4
FW 212 or FW 218	Survey of Northwest Birds or Survey of Northwest Mammals	2
<u>Fitness:</u> (p. 77)		3
<u>Speech:</u> (p. 76)		3-4
<u>Western Culture:</u> (p. 77)		3-4
Credits		15-17
Fourth Term		
BI 211	Principles of Biology	5
G 201 or G 202 or GEOG 278	Geology I - The Dynamic Earth or Geology II - Earth's Surface or Physical Geography-Landforms and Water	4
<u>Literature and the Arts:</u> (p. 78)		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
GEOG 265	Geographic Information Systems	4
GEOG 279	Physical Geography-Weather and Climate	4
Credits		17
Sixth Term		
BI 212	Principles of Biology	5
EC 201	Microeconomics	4
FOR 251 or FOR 260 or FW 257	Recreational Resource Management or Conservation of Natural Resources or Hunting in Modern Society	3-4
Credits		12-13
Total Credits		90-94

General Transfer

The College supports students who plan to transfer to complete a bachelor's degree at another institution. 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 to university requirements. The Associate of Arts Oregon Transfer guarantees 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 provide students with guidance to their intended goal; see individual programs for details.

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Department: Curriculum and Instruction

Programs

Transfer

Associate of Arts Oregon Transfer

- [Exploratory - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 242)
- [Undeclared Transfer Major - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 243)

Associate of General Studies

- [Associate of General Studies - \(AGS\)](#) (p. 246)

Associate of Science

- [General Transfer-OSU - Associate of Science \(AS\)](#) (p. 244)

Exploratory - Associate of Arts Oregon Transfer (AAOT)

Description

Students who plan to earn a degree but have not yet decided on a path are identified as exploratory and assigned the Associate of Arts Oregon Transfer (AAOT) in their audit in GradTracks. The AAOT 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 does not include all bachelor degree requirements for freshmen and sophomores, and it does not include requirements for the College'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 their needs. However, the AGS degree is not designed to waive bachelor's degree general education requirements as the AAOT degree is, nor does it align with workforce training and skills as do CTE programs.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits	¹	3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
<u>Science/Math/Computer Science:</u> (p. 66)		
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 should use several strategies to ensure effective decisions about educational goals. Many resources are available.

- Take HD 110 Career Planning, a three-credit course offered every term.
- Visit with the career services coordinator in CAP Services.
- Discuss options with an academic advisor and faculty in departments of interest.

The College uses the Associate of Arts Oregon Transfer (AAOT) and Associate of General Studies 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 AAOT requirements, but students should be aware that these guidelines are preliminary. Students can explore other programs by using the *What If* option on the GradTracks menu. Many universities require students to declare their major within their first 90 credits, but large majors (i.e., engineering, science, and business) should be declared in the first 45

credits. Career and technical education programs that lead directly to employment typically don't have elective credits, so it is best to make a decision early.

Most 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 (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 institution'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
<u>Mathematics:</u> (p. 60)		4
<u>Oral Communication:</u> (p. 60)		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 or WR 227	Argument, Research, and Multimodal Composition or 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

Discipline Studies Science/Math/Computer Science	3-5	
Elective	4	
Elective	4	
Elective	4	
Credits		15-17
Total Credits		90-106

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 institution but has not yet declared a major, the College 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 institutions. 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.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundation		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses chosen from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses chosen from at least two prefixes		12-16

<u>Science/Math/Computer Science:</u> (p. 66)	
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 institution'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
<u>Mathematics:</u> (p. 60)	4
<u>Oral Communication:</u> (p. 60)	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)	3
WR 122 Argument, Research, and Multimodal or WR 227 Composition or 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 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

General Transfer-OSU - Associate of Science (AS)

Description

The Associate of Science with an Oregon State University emphasis is intended for students who are confident they will finish their bachelor's degree at either OSU in Corvallis or OSU-Cascades. The program provides a framework for students to meet OSU's general education requirements at the lower-division level. At OSU, this is called the baccalaureate core. Students who are uncertain they will complete at OSU, or those who have fewer remaining requirements with the Associate of Arts Oregon Transfer, may be better served by the Associate of Arts, which guarantees progress toward the general education core requirements at all Oregon public universities.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
Baccalaureate Core		
Skills		
<u>Writing I:</u> (p. 76) ¹		4
<u>Writing II:</u> (p. 76) ¹		3-4
<u>Speech:</u> (p. 76) ¹		3-4
<u>Mathematics (OSU):</u> (p. 76) ¹		4
<u>Fitness:</u> (p. 77) ¹		3
Perspectives Courses ^{1,2}		
Choose one course in each of the following categories:		
<u>Physical Science:</u> (p. 77) ¹		4-5

<u>Biological Science:</u> (p. 77) ¹	4-5
<u>Physical or Biological Science:</u> (p. 77) ¹	4-5
<u>Western Culture:</u> (p. 77) ¹	3-4
<u>Cultural Diversity:</u> (p. 77) ¹	4
<u>Literature and the Arts:</u> (p. 78) ¹	3-4
<u>Social Processes and Institutions:</u> (p. 78) ¹	3-4
<u>Difference, Power and Discrimination:</u> (p. 78) 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. 76).

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 Bachelor of Arts/Bachelor of Science requirements in the first 90 credits. Many Oregon State University 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. OSU-Cascades maintains [advising guides for all programs](#). 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 the Associate of Science 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 the Associate of Science; 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 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 or fitness course

Second Year:

- Complete Writing II (required in first 90 OSU credits)
- Continue perspectives courses
- Complete difference, power, and discrimination and fitness course requirements

Notes for majors from the College of Liberal Arts (CLA)

At OSU-Cascades, this includes majors such as American Studies, Liberal Studies, Psychology, and Social Science. Generally, triple dipping is not allowed.

CLA majors have a College of Liberal Arts core requirement (five courses, at least 15 credits).

As of Spring term 2020, triple dipping is not allowed between the baccalaureate core, CLA core, and major requirements. This means that a single course can count towards two of these requirements but not three. This policy applies to major in the CLA but not to minors, certificates, or the Bachelor of Arts/Bachelor of Science requirements (which have separate restrictions with some majors).

Requirements for a Bachelor of Arts (BA) or Bachelor of Science (BS) degree and other requirements

Students are encouraged to include the BA or BS requirements in their lower division courses. Following are considerations for students working on their BA/BS requirement.

- Nearly all degrees at OSU are either BA or BS degrees.
- Some majors offer both BA and BS options, and some offer only 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
<u>Biological Science:</u> (p. 77)	4-5
<u>Fitness:</u> (p. 77)	3
<u>Mathematics (OSU):</u> (p. 76)	4
<u>Writing I:</u> (p. 76)	4
Credits	15-16
Second Term	Credits
Elective	3-4
<u>Writing II:</u> (p. 76)	3-4
<u>Physical Science:</u> (p. 77)	4-5
<u>Western Culture:</u> (p. 77)	3-4
Credits	13-17
Third Term	Credits
<u>Cultural Diversity:</u> (p. 77)	4
Elective	4
<u>Speech:</u> (p. 76)	3-4
<u>Physical or Biological Science:</u> (p. 77)	4-5
Credits	15-17

Fourth Term

<u>Western Culture:</u> (p. 77)	3-4
<u>Literature and the Arts:</u> (p. 78)	3-4
Elective	3
Elective	4
Elective	4
Credits	17-19

Fifth Term

<u>Social Processes and Institutions:</u> (p. 78)	3-4
Elective	4
Elective	4
Elective	4
Credits	15-16

Sixth Term

<u>Difference, Power and Discrimination:</u> (p. 78)	4
Elective	4
Elective	4
Elective	3
Credits	15
Total Credits	90-100

Associate of General Studies - (AGS)

Description

For students who are not pursuing specific transfer or career and technical education programs, the Associate of General Studies (AGS) provides an alternative and allows students to accomplish personal educational goals. The AGS includes a broad general education along with courses selected by the student and their advisor. It is important for a student to work closely with an advisor in designing a course plan for this degree.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

While this program has no formal entrance requirement, individual courses may have prerequisites which must be met before enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Digital Literacy:		
CIS 120	Computer Concepts (or pass competency exam)	0-4
<u>Health:</u> (p. 58)		
Choose 4 credits	¹	4
Math:		
Choose one course from either the general education mathematics list or the related instruction computation list.	²	4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4

Writing:		
WR 121	Academic Composition	4
Choose one of the following: ³		
BA 214	Business Communications	3-4
WR 122	Argument, Research, and Multimodal Composition	
WR 227	Technical Writing	
General Education/ Discipline studies		
<u>Arts and Letters:</u> (p. 61)		
Choose one course from the disciplines studies list		3-4
<u>Science/Math/Computer Science:</u> (p. 66)		
Choose one course from the disciplines studies list		3-5
<u>Social Science:</u> (p. 68)		
Choose one course from the disciplines studies list		3-4
<u>Cultural Literacy:</u> (p. 63)		
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. 58) or the [related instruction computation list](#) (p. 75).
- 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 Associate of General Studies (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 the degree's required number of credits. With careful planning, it can be used to enhance employment, meet sponsoring agency requirements, and/or meet specific baccalaureate requirements.

Considerations

The AGS degree does not transfer with the same guarantees of the Associate of Arts Oregon Transfer degree. For example, it does not guarantee that a student will meet all lower-division general education requirements at a public Oregon institution. However, with careful academic advising and in consideration of transfer institution requirements, the AGS degree may be designed to meet general education and major requirements.

The AGS degree does not meet certification requirements for any career and technical education area.

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
<u>Health:</u> (p. 58)		4
Elective		4
Math course		4
WR 121	Academic Composition	4
Credits		16
Second Term		Credits
<u>Arts and Letters:</u> (p. 61)		3-4
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
<u>Social Science:</u> (p. 68)		3-4
Credits		13-16
Third Term		Credits
<u>Cultural Literacy:</u> (p. 63)		3-4
Elective		4
Elective		4
<u>Science/Math/Computer Science:</u> (p. 66)		3-5
Credits		14-17
Fourth Term		Credits
Elective		4
Elective		4
Elective		4
<u>Oral Communication:</u> (p. 60)		3-4
Credits		15-16
Fifth Term		Credits
Elective		4
Elective		4
Elective		4
Elective		4
Credits		16
Sixth Term		Credits
Elective		4
Elective		4
Elective		4
Elective		4
Credits		16
Total Credits		90-97

Geographic Information Systems

Geographic Information Systems (GIS) provides students with a way to understand the world. By learning computer mapping science and technology, students will be able to apply these concepts and skills to fields such as environmental science, urban and regional planning, utilities management, and natural resources.

GIS programs prepare students for either the growing GIS workforce or for baccalaureate study. The GIS Associate of Applied Science is a two-year program designed to prepare graduates for entry-level positions. The one-year certificate has helped many who have already completed a bachelor's degree to supplement their professional credentials with GIS technology and problem solving. The Geospatial Science Associate of Science offers students a broad background in GIS, geospatial science, and geography with courses designed to transfer to four-year institutions offering baccalaureate programs in these fields. The specific emphasis of the program is the fully online Bachelor of Science in Geography and Geospatial Science offered through Oregon State University.

See the [Geographic Information Systems page](#) for more information.

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Programs

Career and Technical Education Associate of Applied Science

- [Geographic Information Systems - Associate of Applied Science \(AAS\)](#) (p. 248)

One-Year Certificate of Completion

- [Geographic Information Systems - One-Year Certificate of Completion \(CC1\)](#) (p. 250)

Transfer

Associate of Science

- [Geospatial Science \(OSU Transfer\) Emphasis - Associate of Science \(AS\)](#) (p. 251)

Courses

GEOG 101 Introduction to Geospatial Science & GIS (4 Credits)

Introduces science underlying geospatial technologies including geographic information systems, global positioning systems, satellite and unmanned aerial systems imagery, and cartography. Introduces how geospatial technology can be used with the scientific method to investigate questions in a broad range of fields including the sciences, social sciences, and humanities.

GEOG 211 Cartography (4 Credits)

Develops skills needed to produce maps with ArcGIS software. Outlines cartographic principles and map use. Emphasizes mapping techniques within a geographic information system (GIS). Intended for students enrolled in GIS or unmanned aerial systems programs.

GEOG 265 Geographic Information Systems (4 Credits)

Introduces students to principles and practice of geographic information systems (GIS), while providing experience using ArcGIS and Spatial Analyst software. Develops both theoretical understanding of GIS and experience in accessing GIS datasets. Covers raster and vector GIS.

GEOG 266 ArcGIS (4 Credits)

Recommended preparation: or to be taken with GEOG 265.

Provides working knowledge of ArcGIS software. Covers designing and developing a geographic information system database, performing spatial analysis, creating maps, and generating a report with software.

GEOG 267 Geodatabase Design (4 Credits)

Recommended preparation: GEOG 266.

Covers fundamentals of creating, using, editing, and managing spatial and attribute data in ArcGIS. Explores data migration; data loading; topology rules; use of subtypes, attribute domains, and relationship classes. Includes creating, editing, and analyzing geometric networks.

GEOG 273 Spatial Data Collection (4 Credits)

Provides the skills to collect location information for integration with a geographic information system (GIS). Focuses on proper use of the Global Positioning System 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 (4 Credits)

Recommended preparation: GEOG 285.

Provides a capstone experience to the Geographic Information Systems (GIS) program. Presents criteria to complete the project, including project planning, designing and developing a GIS database, collecting and editing data, performing spatial analysis, creating maps, generating reports, and presenting project output. (See instructor for details.)

GEOG 280 Co-op Work Experience GIS (1-3 Credits)

Prerequisites: Instructor approval required.

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

GEOG 284 GIS Customization (4 Credits)

Customize ArcGIS software with a current programming language. Publish content to the internet and servers.

GEOG 285 Data Conversion and Documentation (4 Credits)

Recommended preparation: GEOG 266.

Covers techniques to collect and to convert data between formats, projections, and coordinate systems. Cultivates research and experimentation with data and enhances problem-solving skills. Emphasizes metadata use, which allows the data user to determine whether a particular data set is suitable for its proposed use.

GEOG 286 Remote Sensing (4 Credits)

Introduces theory and methods of remote sensing with satellite imagery. Covers use of SPOT, Landsat, and QuickBird images with ArcGIS and IMAGINE analysis software. Perform digital analysis, 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 Spatial Analysis (4 Credits)

Recommended preparation: GEOG 266.

Explores analytical capabilities of geographic information systems. Covers techniques to locate and to describe features and moves to advanced techniques based on higher-level spatial objects. Use the ArcGIS Spatial Analyst extension to analyze raster datasets in the lab.

GEOG 288 Special Studies: Geography (1-4 Credits)

Explores topics of current interest in the geography discipline.

Geographic Information Systems - Associate of Applied Science (AAS)

Description

The Geographic Information Systems Associate of Applied Science is a career and technical education degree designed for students focused on workforce readiness to secure an entry-level position in the industry.

Geographic information systems (GIS) are designed to work with data referenced by spatial or geographic coordinates. GIS is a database with capabilities for spatially referenced data, a set of operations for working with and analyzing the data, and a cartographic system for designing maps.

Graduates work in natural resources, federal/state/local governments, planning, utilities, real estate, education, retail, businesses, banking, insurance, and web mapping. Careers typically include positions such as GIS technician, analyst, project manager, computer programmer, database administrator, systems administrator, cartographer, applications developer, and related managerial and administrative roles.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Apply foundational theories of geospatial science to real-world industry applications.
2. Use industry-standard GIS software proficiently.
3. Explain geospatial ideas and outcomes to stakeholders, including non-professionals.
4. Create procedures for using GIS and modeling data.
5. Use cartographic design principles to communicate effectively with maps.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of WR 065 Rhetoric and Critical Thinking II or minimum placement Wr/Comm Level 7
- MTH 060 Beginning Algebra or higher or minimum placement Math Level 10
- Completion of computer competency (either IC3 exam or CIS 120 Computer Concepts, which may be taken as part of program)

Other Entrance Requirements

All 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 worksite. See the [program page](#) or program director for more information.

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks) Material Costs

Required:

- Materials (USB drive, maps, office supplies): \$100

Recommended:

- A desktop or laptop computer capable of running GIS software*: approximately \$1,200

*Most courses use GIS software that is compatible only with Microsoft Windows, and there is no MacOS version. Contact program instructor for specifics.

Course Requirements

Course	Title	Credits
Core Courses		
AV 271	Introduction to Unmanned Aerial Systems	4
GEOG 101	Introduction to Geospatial Science & GIS	4
GEOG 211	Cartography	4
GEOG 265	Geographic Information Systems	4
GEOG 266	ArcGIS	4
GEOG 267	Geodatabase Design	4
GEOG 273	Spatial Data Collection	4
GEOG 275	GIS Capstone	4
GEOG 280	Co-op Work Experience GIS	3
GEOG 284	GIS Customization	4
or CIS 122	Introduction to Programming	
GEOG 285	Data Conversion and Documentation	4
GEOG 286	Remote Sensing	4
GEOG 287	Spatial Analysis	4
GIS electives: Choose one of the following sequences:		6-12
AV 272 & AV 273	Unmanned Aerial Systems (UAS) Operations and Unmanned Aerial Sys Ops Maint	
CIS 120 & CIS 131 & CIS 125A1	Computer Concepts and Software Applications and AutoCAD 1	
FOR 230B & FOR 236	Forest Surveying and 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
Choose one course from the following:		3-4
BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
Choose one course from the following:		4
MTH 102	Applied Technical Mathematics	

MTH 105	Math in Society	
Or one course from the foundational requirements math list		
WR 121	Academic Composition	4
WR 227	Technical Writing	4
Total Credits		91-98

Advising Notes

Most GIS courses are offered once per year beginning in Fall term. Students may take an introductory GIS course or non-program support and/or selected GIS courses if they begin Winter, Spring, or Summer term or if they need to build skills related to prerequisites. GIS courses are offered each term and must be taken together and sequentially. Students are recommended to avoid 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.

Sample Plan

First Year		Credits
Fall		
FOR 230A	Map, Compass and GPS	3
GEOG 101	Introduction to Geospatial Science & GIS	4
GEOG 265	Geographic Information Systems	4
GEOG 266	ArcGIS	4
Choose one course from the following:		4
MTH 102	Applied Technical Mathematics	
MTH 105	Math in Society	
Or one course from the foundational requirements math list		
Credits		19
Winter		
FOR 235	Resource Measurements	4
GEOG 211	Cartography	4
GIS elective		3-5
Credits		11-13
Spring		
CIS 135DB	Database Theory/SQL	4
GEOG 267	Geodatabase Design	4
GIS elective		3-5
WR 121	Academic Composition	4
Credits		15-17
Summer		
GEOG 280	Co-op Work Experience GIS	3
Credits		3

Second Year**Fall**

Discipline Studies Course	4
GEOG 273 Spatial Data Collection	4
WR 227 Technical Writing	4
AV 271 Introduction to Unmanned Aerial Systems	4

Credits	16
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Winter

GEOG 284 GIS Customization or CIS 122 or Introduction to Programming	4
GEOG 285 Data Conversion and Documentation	4
GEOG 287 Spatial Analysis	4

Credits	12
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Spring

Discipline Studies Course	4
GEOG 275 GIS Capstone	4
GEOG 286 Remote Sensing	4
Choose one course from the following:	3-4

BA 178 Customer Service	
BA 285 Business Human Relations	
COMM 115 Introduction to Intercultural Communication	
COMM 218 Interpersonal Communication	
COMM 219 Small Group Communication	

Credits	15-16
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Total Credits	91-96
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Geographic Information Systems - One-Year Certificate of Completion (CC1)

Description

The Geographic Information Systems One-Year Certificate of Completion is designed for students who have or who are working on a two- or four-year degree and want to acquire specific geographic information systems (GIS) skills.

Geographic information systems are designed to work with data referenced by spatial or geographic coordinates. GIS is a database with capabilities for spatially referenced data, a set of operations for working with and analyzing the data, and a cartographic system for designing maps.

Graduates work in natural resources, government, planning, utilities, real estate, education, retail, businesses, banking, insurance, and web mapping. Careers typically include positions such as GIS technician, analyst, project manager, computer programmer, database administrator, systems administrator, cartographer, applications developer, and related managerial and administrative roles.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Apply foundational theories of geospatial science to real-world industry applications.

2. Use industry-standard GIS software proficiently.
3. Explain geospatial ideas and outcomes to stakeholders, including non-professionals.
4. Create procedures for using GIS and modeling data.
5. Use cartographic design principles to communicate effectively with maps.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- Two-year, four-year, or graduate degree from accredited institution
- Completion of WR 065 Rhetoric and Critical Thinking II or minimum placement Wr/Comm Level 7
- MTH 060 Beginning Algebra or higher or minimum placement Math Level 10
- 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 drive, maps, assorted office supplies): \$100

Recommended:

- A desktop or laptop computer capable of running the GIS software*: approximately \$1,200

*Most courses use GIS software that is compatible only with Microsoft Windows, and there is no MacOS version. Contact program instructor for specifics.

Course Requirements

Course	Title	Credits
Core Courses		
GEOG 101	Introduction to Geospatial Science & GIS	4
GEOG 211	Cartography	4
GEOG 265	Geographic Information Systems	4
GEOG 266	ArcGIS	4
GEOG 267	Geodatabase Design	4
GEOG 273	Spatial Data Collection	4
GEOG 275	GIS Capstone	4
GEOG 285	Data Conversion and Documentation	4
GEOG 286	Remote Sensing	4
GEOG 287	Spatial Analysis	4
Other Required Courses		
Choose one course from the following:		4
MTH 102	Applied Technical Mathematics	
MTH 105	Math in Society	
Or choose one course from the foundational requirements math list		
Choose one course from the following:		3-4
BA 178	Customer Service	

BA 285	Business Human Relations	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
WR 121	Academic Composition	4
Total Credits		51-52

Advising Notes

Most GIS courses are offered once per year beginning in Fall term. Students may take an introductory GIS course or non-program support and/or selected GIS courses if they begin in Winter, Spring, or Summer term or if they need to build skills related to prerequisites. GIS courses are offered each term and must be taken together and sequentially. It is recommended that students avoid 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 101	Introduction to Geospatial Science & GIS	4
GEOG 265	Geographic Information Systems	4
GEOG 266	ArcGIS	4
GEOG 273	Spatial Data Collection	4
Choose one course from the following:		4
MTH 102	Applied Technical Mathematics	
MTH 105	Math in Society	
Or choose a course from the foundational requirements math list		
	Credits	20

Winter

GEOG 211	Cartography	4
GEOG 285	Data Conversion and Documentation	4
GEOG 287	Spatial Analysis	4
WR 121	Academic Composition	4
	Credits	16

Spring

GEOG 267	Geodatabase Design	4
GEOG 275	GIS Capstone	4
GEOG 286	Remote Sensing	4
Choose one course from the following:		3-4
BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 115	Introduction to Intercultural Communication	

COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
	Credits	15-16
	Total Credits	51-52

Geospatial Science (OSU Transfer) Emphasis - Associate of Science (AS)

Program Description

The Geospatial Science Associate of Science degree is designed for students interested in completing the first two years of coursework before transferring to a baccalaureate program in geography, geographic information systems (GIS), geospatial science, geomatics, or similar program. It is specifically aligned with the fully online Bachelor of Science in Geography and Geospatial Science degree at Oregon State University.

Geographic information systems are designed to work with data referenced by spatial or geographic coordinates. GIS is a database with capabilities for spatially referenced data, a set of operations for working with and analyzing the data, and a cartographic system for designing maps.

Graduates can pursue baccalaureate degrees in geography, geospatial science, GIS, and related areas and move to careers in environmental studies, natural resources, federal/state/local governments, planning, utilities, real estate, education, retail, businesses, banking, insurance, and web mapping. Careers typically include positions such as GIS technician, analyst, project manager, computer programmer, database administrator, systems administrator, cartographer, applications developer, and related managerial and administrative roles.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of WR 065 Rhetoric and Critical Thinking II or minimum placement Wr/Comm Level 7
- MTH 060 Beginning Algebra or higher or minimum placement Math Level 10
- Completion of computer competency (either IC3 exam or CIS 120 Computer Concepts, which may be taken as part of program)

Additional Program Costs (Beyond Standard Tuition/ Fees and Textbooks)

Material costs

Required:

- Materials (USB drive, maps, office supplies): \$100

Recommended:

- A desktop or laptop computer capable of running GIS software*: approximately \$1,200

*Most courses use GIS software that is compatible only with Microsoft Windows, and there is no MacOS version. Contact program instructor for specifics.

Course Requirements

Course	Title	Credits
Baccalaureate Core		
Skills		
<u>Fitness:</u> (p. 77)		3
Mathematics: Met by Program Requirements		
<u>Writing I:</u> (p. 76)		4
<u>Writing II:</u> (p. 76)		4
Perspectives Courses		
<u>Biological Science:</u> (p. 77)		4-5
GEOG 107	Cultural Geography	4
GEOG 201 or GEOG 202	World Regional Geography I or World Regional Geography II	4
GEOG 278 or GEOG 279 or G 202	Physical Geography-Landforms and Water Physical Geography-Weather and Climate Geology II - Earth's Surface	4
Program Requirements		
GEOG 101	Introduction to Geospatial Science & GIS	4
GEOG 211	Cartography	4
GEOG 265	Geographic Information Systems	4
GEOG 286	Remote Sensing	4
MTH 111	College Algebra	4
MTH 112	Trigonometry	4
Electives		39
Choose any course numbered 100 or above that brings the total credits to 90 quarter hours.		
Total Credits		90-91

Advising Notes

Most GIS courses are offered once per year beginning in Fall term. Students interested in this degree are advised to consult the program director about which elective courses would best suit their academic and career objectives.

This degree is designed for students planning to pursue a bachelor of science degree in geography, geospatial science, or GIS. Most classes should be 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 101	Introduction to Geospatial Science & GIS	4
GEOG 201 or GEOG 202	World Regional Geography I or World Regional Geography II	4
MTH 111	College Algebra	4
<u>Writing I:</u> (p. 76)		4
Credits		16

Winter

GEOG 107	Cultural Geography	4
MTH 112	Trigonometry	4
<u>Writing II:</u> (p. 76)		4
Elective		3
Credits		15

Spring

GEOG 265	Geographic Information Systems	4
GEOG 278 or GEOG 279 or G 202	Physical Geography-Landforms and Water or Physical Geography-Weather and Climate or Geology II - Earth's Surface	4
Elective		3
Elective		4
Credits		15

Second Year

Fall

<u>Biological Science:</u> (p. 77)		4-5
Elective		4
Elective		3
Elective		4
Credits		15-16

Winter

GEOG 211	Cartography	4
<u>Fitness:</u> (p. 77)		3
Elective		3
Elective		3
Elective		3
Credits		16

Spring

GEOG 286	Remote Sensing	4
Elective		3
Elective		3
Elective		3
Credits		13

Total Credits

90-91

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. Sample courses include Cultural Geography, Physical Geography, Environmental Geography, and World Regional Geography.

Geography provides excellent preparation for advanced studies in environmental studies, economics, economic development, city and regional planning, tourism and recreation, landscape architecture, and cartography.

See the [Geography page](#) for more information.

Contact:

Murray Godfrey (mgodfrey@cocc.edu)
541-318-3734
Modoc Hall, Bend Campus

Department: World Languages and Cultures
Department Chair: Murray Godfrey

Programs

Transfer

Associate of Arts Oregon Transfer

- [Geography - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 254)

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: WR 060 (or higher) or minimum placement Wr/Comm Level 5.

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: WR 060 (or higher) or minimum placement Wr/Comm Level 5.

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 188 Special Studies: Geography (1-4 Credits)

Explores topics of current interest in the geography discipline.

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 060 (or higher) or minimum placement Wr/Comm Level 5.

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 060 (or higher) or minimum placement Math Level 10.

Looks at the world of maps. Covers 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 human and physical geography. The Associate of Arts Oregon Transfer with a focus in geography includes courses that are commonly required for a bachelor's degree in geography 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, including city planning, recreation, natural resources, and real estate.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 58)		
Choose 3 credits		3
Mathematics: (p. 60)		
Choose one course		4
Oral Communication: (p. 60)		
Choose one course		3-4
Writing: (p. 60)		
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. 63)

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

Arts and Letters: (p. 61)

Choose three courses from at least two prefixes 9-12

Social Science: (p. 68)

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. 66)

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 Bachelor of Arts 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 Bachelor of Science 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. 60)	4
Oral Communication: (p. 60)	3-4
WR 121 Academic Composition	4
Credits	14-16
Second Term	Credits
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 or WR 227	Argument, Research, and Multimodal Composition or Technical Writing	4
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Credits	14-15
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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
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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

Credits	15-17
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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

Credits	17-20
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Sixth Term

Discipline Studies Science/Math/Computer Science		3-5
Elective		4
Elective		4
Elective		4

Credits	15-17
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Total Credits	90-101
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Geology

The study of geology includes natural hazards, the processes responsible for Earth's internal structure and external landforms, Earth resources, a geologic perspective on Earth's dynamic climate, and geologic time. Geology explains why a landscape looks the way it does and shows that Earth is dynamic and changes both gradually and catastrophically. Understanding these changes provides opportunity to prepare for them and to design a resilient society.

Geology is unique among the sciences in that it uses concepts and laws from other fields (i.e., chemistry, physics) to understand the complex world. Textbooks provide foundational information but cannot capture geologic landscapes' intricate puzzles. This means students must explore the outstanding geology in our backyard via field trips.

A bachelor's degree in geology prepares students for entry-level geoscience jobs and graduate school. For most geoscience careers, a master's degree is considered the terminal degree, while a doctorate is necessary for most research and higher education jobs.

Contact:

Hal Wershow (hwershow@cooc.edu)
541-383-7557

Science Center, Bend Campus

Department: Science

Department Chair: [Carol Higginbotham \(chigginbotham@cooc.edu\)](mailto:chigginbotham@cooc.edu)

Programs

Transfer

Associate of Arts Oregon Transfer

- [Geology - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 256)

Geology

G 161 Field Geology: Study of Landscape Evolution (3 Credits)

Introduces students to the processes by which landscapes evolve in a field based setting. Learn how to observe the landscape using methods from field sciences such as geology and ecology, and then apply ideas from these sciences to interpret how landscapes change. The course will take place primarily outdoors, including hiking to field sites and camping for an extended period of time.

G 162CV Field Geology: Cascade Volcanoes (3 Credits)

Explores Central Oregon's spectacular volcanic landscape. Meets for lecture followed by all-day field trip to volcanic sites in Central Oregon. Appropriate for non-majors.

G 163 Field Geology: Rivers, Lakes and Springs of Central Oregon (3 Credits)

Explores Central Oregon's water bodies with emphasis on their interactions with the volcanic landscape. Meets for lecture followed by all-day field trip to sites in Central Oregon. Appropriate for non-majors.

G 188 Special Studies: Geology (1-4 Credits)

Explores topics of current interest in the geology discipline.

G 199 Selected Topics: Geology (1-6 Credits)

This course is in development.

G 201 Geology I - The Dynamic Earth (4 Credits)

Examines the dynamic Earth through the lens of plate tectonics. Uses a geologic perspective to consider how humans and the geologic world impact each other. First course in sequence. Appropriate for non-majors.

G 202 Geology II - Earth's Surface (4 Credits)

Recommended preparation: G 201.

Examines Earth's dynamic landscapes through the lens of surface processes. Uses a geologic perspective to consider how humans and the geologic world impact each other. Second course in sequence.

G 203 Geology III - Earth History (4 Credits)

Recommended preparation: G202.

Examines Earth's history from an Earth's systems perspective including the geosphere, biosphere, hydrosphere, and atmosphere. Considers how humans and the geologic world impact each other. Third course in sequence.

G 207 Geology of the Pacific Northwest (4 Credits)

One-term introductory lab science course in geology. 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. Requires weekend field trip.

G 288 Special Studies: Geology (1-4 Credits)

Explores topics of current interest in the geology discipline.

G 298 Independent Study: Geology (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.

G 299 Selected Topics: Geology (1-6 Credits)

Selected Topics in Geology.

GS 106 Physical Science: Geology (4 Credits)

Recommended preparation: MTH 060 or minimum placement Math Level 10.

Introduces students to the study of the ever-changing Earth, with a focus on hands-on exploration. Designed for students with limited geology background. Field trips will occasionally substitute for labs.

Geology - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer 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 additional coursework in physics, chemistry, and mathematics is needed.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommend: MTH 111 or higher ²		
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		

Choose four courses from at least two prefixes 12-16
Science/Math/Computer Science: (p. 66)

Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science 12-20
Recommend: G 201, G 202, G 203, 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. 39

Recommend: CH 222, CH 223, MTH 112, MTH 251, MTH 252, PH 211, PH 212

Other courses to consider: G 161, G 298

Total Credits 90-106

- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² Students planning to major in Geology should plan to complete a math course at least through MTH 252 Calculus II. Depending on math level placement, the sequence of math courses is MTH 111 College Algebra, MTH 112 Trigonometry, MTH 251 Calculus I, MTH 252 Calculus II.

Advising Notes

Introductory Courses

For students curious about geology but with a limited science background, GS 106 Physical Science: Geology or G 201 Geology I - The Dynamic Earth is recommended. To explore geology outdoors, choose the field-based courses such as G 161 Field Geology: Study of Landscape Evolution, G 162CV Field Geology: Cascade Volcanoes, or G 163 Field Geology: Rivers, Lakes and Springs of Central Oregon.

Geology Majors

Oregon universities with a geology or earth sciences major include [Oregon State University](#), [Portland State University](#), [Western Oregon University](#), and [University of Oregon](#). Requirements vary slightly according to each institution's particular degree program; please follow links above for details.

The sequence of geology courses for majors is: G 201 Geology I - The Dynamic Earth, G 202 Geology II - Earth's Surface, and G 203 Geology III - Earth History.

If students intend to finish their bachelor's degree within two years after transferring, it is strongly recommended to complete math, chemistry, and physics while at COCC. Most universities require:

- At least CH 221 General Chemistry I, CH 222 General Chemistry II and sometimes CH 223 General Chemistry III
- At least PH 201 General Physics I, PH 202 General Physics II or PH 211 General Physics I, PH 212 General Physics II, and sometimes PH 203 General Physics III or PH 213 General Physics III
- At least MTH 112 Trigonometry, MTH 251 Calculus I, MTH 252 Calculus II, and sometimes 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.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Year

Fall		Credits
Discipline Studies Lab Science (recommend G 201)		4
Discipline Studies Social Science ¹		3-4
Mathematics (recommend MTH 111 or higher)		4
WR 121	Academic Composition	4
Credits		15-16

Winter		Credits
Discipline Studies Science Lab (recommend G 202)		4
Elective (recommend MTH 112)		4
Oral Communication		3-4
WR 122	Argument, Research, and Multimodal	4
or WR 227	Composition or Technical Writing	
Credits		15-16

Spring		Credits
Discipline Studies Arts & Letters ¹		3-4
Discipline Studies Science Lab (recommend G 203)		4
Discipline Studies Social Science ¹		4
Health ²		3-4
Credits		14-16

Summer		Credits
Elective (consider: G 161)		3
Credits		3

Second Year

Fall		Credits
Discipline Studies Arts and Letters ¹		3-4
Discipline Studies Social Science ¹		3-4
Discipline Studies Science/Math/Computer Science (recommend CH 221)		5
Elective (recommend MTH 251)		4
Credits		15-17

Winter		Credits
Discipline Studies Arts and Letters ¹		3-4
Elective (recommend CH 222)		5
Elective (recommend MTH 252)		4
Elective (recommend PH 211)		5
Credits		17-18

Spring		Credits
Discipline Studies Social Science ¹		3-4
Elective (recommend CH 223)		5
Elective (recommend PH 212)		5

Elective (only if needed, consider G 298)

Credits	13-14
Total Credits	92-100

¹ One discipline studies course should be on both the cultural literacy and either the arts and letters or social science lists.

² To meet the health requirement, students have the choice of taking one 3- or 4-credit course from the health list, or taking 3 1-credit HHP or HHPA courses which can be spread over several terms.

Health Information Management

Health Information Management 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.

See the [Health Information Management page](#) for more information.

Contact:

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Health Careers Center, Bend Campus

Department: Allied Health

Department Chair: [Shannon Waller \(swaller@cocc.edu\)](mailto:swaller@cocc.edu)

Programs

Career and Technical Education

Associate of Applied Science

- Health Information Management - Associate of Applied Science (AAS) (p. 259)

One-Year Certificate of Completion

- Medical Office Specialist - One-Year Certificate of Completion (CC1) (p. 261)

Courses

AH 111 Medical Terminology I (3 Credits)

Covers terminology pertaining to medical term construction, body structure, integumentary, hematopoietic/lymph, cardiovascular, pharmacology, 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. Studies medical terms related to endocrine & neurologic systems and disorders; the digestive system; special senses (eye/ear); urinary system; male and female reproductive systems, obstetric terminology; child health; oncology; mental health; and gerontology. 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 298 Independent Study: Allied Health (1-4 Credits)

Prerequisites: Instructor approval required.

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.

HIM 103 Introduction to Health Information Management (4 Credits)

Prerequisites: AH 111, BA 214 or WR 121, and CIS 120.

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 (4 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 (4 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 and tools.

HIM 182 Introduction to Reimbursement and Classification Systems (4 Credits)

Prerequisites: Instructor approval.

Introduces healthcare reimbursement methodologies and healthcare classification (coding) systems. Provides foundational skills for understanding healthcare financing and reimbursement. Introduces the use of classification systems with a focus on the Current Procedural Terminology and the International Classification of Diseases Clinical Modification.

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 188 Special Studies: Health Information Management (1-4 Credits)

Explores topics of current interest in the health information management discipline.

HIM 190 HIPAA for Practical Experience (2 Credits)

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 199 Selected Topics: Health Information Management (1-4 Credits)

This course is in development.

HIM 201 Legal and Ethical Aspects of Health Care (4 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 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 (2 Credits)

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 265 Health Information Management Community Service Learning Project (2 Credits)

Prerequisites: Instructor approval.

Service learning combines meaningful service, academic instruction, and critical reflective thinking to enhance student learning and civic responsibility. Design, create, and implement a cooperative project related to accumulated HIM knowledge. Includes work with members of the community throughout the project.

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. Course emphasizes 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. Focuses on specific statistical analysis of common health care data, percentile use, research, and descriptive data presentations.

HIM 282 Reimbursement Systems (4 Credits)

Prerequisites: Instructor approval required based on completion of first-year HIM curriculum.

Provides an overview of third party payers in a variety of healthcare settings. Includes commercial health insurance, government payers, workman's comp, and liability. This course also addresses coding compliance, coding for medical necessity and completion and submission of claims, including their electronic versions.

HIM 283 Coding Classifications I (4 Credits)

Prerequisites: Instructor approval required based on completion of first-year HIM curriculum.

Provides intermediate skill development in correct code assignment based on the health record documentation and application of coding standards, guidelines and conventions for the Current Procedural Terminology, and the International Classification of Diseases Clinical Modification.

HIM 284 Coding Classifications II (5 Credits)

Prerequisites: Instructor approval based on completion of first-year HIM curriculum.

Develops advanced skills in applying the Current Procedural Terminology and the International Classification of Diseases Clinical Modification. Introduces skills required for correct code assignment based on the health record documentation and application of coding standards, guidelines and conventions for HCPCS Level II, and International Classification of Diseases Procedure Classification.

HIM 285 Revenue Cycle Management (5 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 prospective. Application of knowledge, skills, and abilities accumulated in prior terms related to classification and reimbursement systems.

HIM 288 Special Studies: Health Information Management (1-4 Credits)

Explores topics of current interest in the health information management discipline.

HIM 293 Professional Practice Experience (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.

HIM 298 Independent Study: Health Information Management (1-4 Credits)

Prerequisites: Instructor approval required.

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

HIM 299 Selected Topics: Health Information Management (1-4 Credits)

Provides a learning experience in health information management not currently available; this course is in development to be proposed as a permanent course.

Health Information Management - Associate of Applied Science (AAS)

Description

The Health Information Management Associate of Applied Science prepares students in technical coursework, human relations, communications, mathematics, and computer technology. The program employs a career ladder approach that includes the Medical Office Specialist certificate.

At the end of six academic quarters (approximately two years), students earn the Associate of Applied Science in Health Information Management. Students are eligible to take the Registered Health Information Technician national credential examination upon completion.

Health information technicians collect, analyze, code, manage, and maintain patient information. Health information technicians must be highly organized and detail oriented. They maintain patient medical information in a complete, accurate, and secure manner while modeling high ethical standards. Health information technicians work in a wide range of health care facilities, including hospitals, clinics, doctors' offices, and nursing homes.

The Commission on Accreditation for Health Informatics and Information Management Education accredits the program.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Demonstrate leadership skills and the impact of organizational change management in healthcare organizations.
2. Classify and apply concepts and principles to the practice of health information management, including analysis of data and health record privacy, confidentiality, and security.
3. Apply privacy, security, and legal processes impacting health information.
4. Apply the use of coding guidelines to the assignment of diagnostic and procedural coding.

Entrance Requirements

Academic Entrance Requirements

Before enrolling in HIM 103 Introduction to Health Information Management, students must pass CIS 120 Computer Concepts, AH 111 Medical Terminology I, and BA 214 Business Communications.

Other Entrance Requirements

- Students entering the HIM program are required to have a criminal history check before 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 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 computer and high-speed internet.

Course Requirements

Course	Title	Credits
Support Courses		
AH 111	Medical Terminology I	3
BA 214	Business Communications	3-4
or WR 121	Academic Composition	
CIS 120	Computer Concepts	4
Core Courses		
HIM 103	Introduction to Health Information Management	4
HIM 104	Health Information Standards and Governance	4
HIM 105	Health Information Compliance and Analytics	4
HIM 171	Project Management	2
HIM 182	Introduction to Reimbursement and Classification Systems	4
HIM 184	Pathophysiology and Pharmacology	5
HIM 190	HIPAA for Practical Experience	2
HIM 201	Legal and Ethical Aspects of Health Care	4
HIM 202	Health Information Management Applications	2
HIM 203	Health Information Technologies	4
HIM 265	Health Information Management Community Service Learning Project	2
HIM 271	Quality Improvement in Health Care	4
HIM 272	Management Principles and Leadership in HIM	4
HIM 273	HIM Capstone	2
HIM 281	Healthcare Statistics	4
HIM 282	Reimbursement Systems	4
HIM 283	Coding Classifications I	4
HIM 284	Coding Classifications II	5
HIM 285	Revenue Cycle Management	5
HIM 293	Professional Practice Experience	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
CIS 131	Software Applications	4

COMM 218	Interpersonal Communication	3
Total Credits		103-104

Advising Notes

HIM is a cohort program, which begins each Fall. Students can complete non-HIM courses before 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](#) with the University of Cincinnati for students choosing to pursue the [online Bachelor of Science 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
BA 214	Business Communications	3-4
or WR 121	or Academic Composition	
CIS 120	Computer Concepts	4
COMM 218	Interpersonal Communication	3
Credits		13-14

Second Year

Fall

AH 112	Medical Terminology II	3
BI 231	Human Anatomy and Physiology I	4
CIS 131	Software Applications	4
HIM 103	Introduction to Health Information Management	4
Credits		15

Winter

BI 232	Human Anatomy and Physiology II	4
HIM 104	Health Information Standards and Governance	4
HIM 171	Project Management	2
HIM 190	HIPAA for Practical Experience	2
Credits		12

Spring

BI 233	Human Anatomy and Physiology III	4
HIM 105	Health Information Compliance and Analytics	4
HIM 182	Introduction to Reimbursement and Classification Systems	4
HIM 184	Pathophysiology and Pharmacology	5
Credits		17

Third Year**Fall**

HIM 201	Legal and Ethical Aspects of Health Care	4
HIM 202	Health Information Management Applications	2
HIM 282	Reimbursement Systems	4
HIM 283	Coding Classifications I	4
Credits		14

Winter

HIM 265	Health Information Management Community Service Learning Project	2
HIM 272	Management Principles and Leadership in HIM	4
HIM 281	Healthcare Statistics	4
HIM 284	Coding Classifications II	5
HIM 271	Quality Improvement in Health Care	4
Credits		19

Spring

HIM 203	Health Information Technologies	4
HIM 273	HIM Capstone	2
HIM 285	Revenue Cycle Management	5
HIM 293	Professional Practice Experience	2
Credits		13
Total Credits		103-104

Medical Office Specialist - One-Year Certificate of Completion (CC1)

Description

The Medical Office Specialist One-Year Certificate of Completion prepares students for entry-level medical office specialist employment. 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 settings range from a physician's office to a large hospital. Job duties may include maintaining medical records and accounts, word processing, basic accounting, scheduling, professional communication, and general health care facility operations.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Apply principles of data structure, content, and information governance in health information management.
2. Correlate privacy and security regulations and strategies to protected health information.
3. Apply the concepts of health informatics and data analytics.
4. Use components of reimbursement and classification systems.

Entrance Requirements

Academic Entrance Requirements

Required:

- Before enrolling in HIM 103 Introduction to Health Information Management, students must successfully complete CIS 120 Computer Concepts, AH 111 Medical Terminology I, and BA 214 Business Communications.

Other Entrance Requirements

Recommended:

- Keyboarding: 40 words per minute 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 before enrolling in HIM 103 Introduction to Health Information Management. Students 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. Additional costs are approximately \$2,500, including textbooks, technology fees, directed practice travel expense, OrHIMA Convention, criminal history check, etc.

Recommended:

- Students are strongly encouraged to have access to a desktop or laptop computer with high-speed internet access.

Course Requirements

Course	Title	Credits
Support Courses		
AH 111	Medical Terminology I	3
BA 214	Business Communications	3-4
or WR 121	Academic Composition	
CIS 120	Computer Concepts	4
Core Courses		
HIM 171	Project Management	2
HIM 103	Introduction to Health Information Management	4
HIM 104	Health Information Standards and Governance	4
HIM 105	Health Information Compliance and Analytics	4
HIM 182	Introduction to Reimbursement and Classification Systems	4
HIM 184	Pathophysiology and Pharmacology	5
HIM 190	HIPAA for Practical Experience	2
HIM 281	Healthcare Statistics	4
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 218	Interpersonal Communication	3
Total Credits		57-58

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
BA 214 or WR 121	Business Communications or Academic Composition	3-4
CIS 120	Computer Concepts	4
COMM 218	Interpersonal Communication	3
Credits		13-14

Second Year

Fall

AH 112	Medical Terminology II	3
BI 231	Human Anatomy and Physiology I	4
HIM 103	Introduction to Health Information Management	4
Credits		11

Winter

BI 232	Human Anatomy and Physiology II	4
HIM 104	Health Information Standards and Governance	4
HIM 171	Project Management	2
HIM 190	HIPAA for Practical Experience	2
HIM 281	Healthcare Statistics	4
Credits		16

Spring

BI 233	Human Anatomy and Physiology III	4
HIM 105	Health Information Compliance and Analytics	4
HIM 182	Introduction to Reimbursement and Classification Systems	4
HIM 184	Pathophysiology and Pharmacology	5
Credits		17
Total Credits		57-58

History

Studying history exposes students to the legacy of the past through exploration of historical events and social changes.

Historical investigation of human and cultural accomplishments enhances understanding of the human experience. Courses cover world, European, United States, women's, and Pacific Northwest history.

History provides an excellent background for a broad range of careers, including teaching, business, journalism, international affairs, foreign service, government, library and archival work, and the ministry. Additionally, a history degree is good preparation for a variety of graduate programs, including law school.

See the [History page](#) for more information.

Contact:

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Modoc Hall, Bend Campus

Department: World Languages and Cultures
Department Chair: Murray Godfrey

Programs

Transfer

Associate of Arts Oregon Transfer

- [History - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 264)

Courses

HST 101 Europe: The Classical Era (pre-history to 600 C.E.) (4 Credits)

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 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 history 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)

Covers political, social, and religious developments in the Islamic world from 600 C.E. to the 1960s. 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 288 Special Studies: History (1-4 Credits)

Explores topics of current interest in the history discipline.

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 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 skills that lead to careers in education, government, international work, marketing, public relations, non-profit, business, journalism, museum work, and law.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
Recommend: HST 101, HST 102, HST 103, HST 104, HST 105, HST 106, HST 201, HST 202, or HST 203		
<u>Science/Math/Computer Science:</u> (p. 66)		
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 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 History, 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 bachelor of arts 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 four-year degrees 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 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
<u>Mathematics:</u> (p. 60)	4
<u>Oral Communication:</u> (p. 60)	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	4
Health (3 credits with HHP or HHPA prefix)	3
WR 122 Argument, Research, and Multimodal or WR 227 Composition or Technical Writing	4
Credits	17-19
Third Term	
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	
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	3
Elective	4
Elective	4
Elective	4
Credits	18-20
Total Credits	90-106

Human Services

Human Services prepares 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, and probation officer. These positions provide services to schools, prisons, government agencies, and nonprofit groups.

See the [Human Service page](#) for more information.

Contact:

Monica Vines (mvines@coocc.edu)
541-383-7251
Modoc Hall, Bend Campus

Department: Social Science
Department Chair: Ken Ruettgers

Programs

Career and Technical Education

Associate of Applied Science

- [Addiction Studies and Human Services - Associate of Applied Science \(AAS\)](#) (p. 267)

Two-Year Certificate of Completion

- [Addiction Studies and Human Services - Two-Year Certificate of Completion \(CC2\)](#) (p. 269)

Transfer

Associate of Arts Oregon Transfer

- [Human Services - Associate of Arts Oregon Transfer \(AAOT\)](#)
(p. 270)

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 and WR 121.

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 and WR 121.

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 human services 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 and WR 121.

Presents the foundations for developing the skills and sensitivities needed to practice as culturally alert counselors. Explores 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 288 Special Studies: Human Services (1-4 Credits)

Explores topics of current interest in the human services discipline.

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 Addiction Studies and Human Services Associate of Applied Science 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 for the CADC II certification.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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
- Completion of WR 065 Rhetoric and Critical Thinking II (or higher) or minimum placement WR/Comm Level 7
- Basic computer competency skills

Other Entrance Requirements

Must pass a criminal background check as a condition of acceptance into a practicum for training. Students who do not pass the criminal background check 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
- Mental Health and Addiction Certification Board of Oregon exams: \$75 application fee, \$210 exam fee
- Video recording fees for two terms: approximately \$50
- Background check for practicum placement: approximately \$75

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 Infectious Diseases	2
HS 200	Introduction to Addictions	3
HS 201	Families and Addictions	3
HS 205	Youth and Addictions	3
HS 206	Group Counseling Skills for Human Services	4
HS 208	Multicultural Issues in Human Services	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	Counseling the Chemically Dependent Client	3
HS 266	Case Management for the Chemically Dependent Client	4
HS 290	Introduction to Practicum in Human Services	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 105	Math in Society (or choose one course from the foundational requirements math list)	4
Choose one course from the following:		3-4
COMM 111	Fundamentals of Public Speaking	
COMM 114	Argumentation and Critical Discourse	
COMM 115	Introduction to Intercultural Communication	
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		95-98

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 105	Math in Society (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Credits		14
Second Term		
HS 180	Addictions, HIV and other Infectious Diseases	2
HS 205	Youth and Addictions	3
Choose one from the following:		3-4
COMM 111	Fundamentals of Public Speaking	
COMM 114	Argumentation and Critical Discourse	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	

COMM 219	Small Group Communication	
WR 122 or WR 227	Argument, Research, and Multimodal Composition or Technical Writing	4
Credits		12-13
Third Term		
HS 161	Ethics for Human Services	4
HS 206	Group Counseling Skills for Human Services	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 in Human Services	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	Counseling the Chemically Dependent Client	3
HS 266	Case Management for the Chemically Dependent Client	4
HS 208	Multicultural Issues in Human Services	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		95-98

Addiction Studies and Human Services - Two-Year Certificate of Completion (CC2)

Description

The Addiction Studies and Human Services Two-Year Certificate of Completion provides the coursework and 300 of the 1,000 hours of supervised experience required to qualify to sit for the Oregon Certified Alcohol and Drug Counselor 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 that include work with addicted persons and their families.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement WR/Comm Level 7
- Basic computer competency skills

Other Entrance Requirements

Must pass a criminal background check as a condition of acceptance into a practicum for training. Students who do not pass the criminal background check 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
- Mental Health and Addiction Certification Board of Oregon exams: \$75 application fee; \$210 exam fee
- Video recording fees for two terms: approximately \$50
- Background check for practicum placement: approximately \$75

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 Infectious Diseases	2
HS 200	Introduction to Addictions	3

HS 201	Families and Addictions	3
HS 205	Youth and Addictions	3
HS 206	Group Counseling Skills for Human Services	4
HS 208	Multicultural Issues in Human Services	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	Counseling the Chemically Dependent Client	3
HS 266	Case Management for the Chemically Dependent Client	4
HS 290	Introduction to Practicum in Human Services	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 105	Math in Society (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
Total Credits		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 105	Math in Society (or choose one course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Credits		14
Second Term		
HS 205	Youth and Addictions	3
HS 180	Addictions, HIV and other Infectious Diseases	2
HS 260	Counseling Theories	4

WR 122 or WR 227	Argument, Research, and Multimodal Composition or Technical Writing	4
Credits		13
Third Term		
HS 161	Ethics for Human Services	4
HS 206	Group Counseling Skills for Human Services	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 Management for the Chemically Dependent Client	4
HS 290	Introduction to Practicum in Human Services	1
Credits		12
Fifth Term		
HS 208	Multicultural Issues in Human Services	4
HS 224	Psychopharmacology	4
HS 262	Effective Helping Skills II	4
Credits		12
Sixth Term		
HS 263	Counseling the Chemically 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		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.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

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		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes ²		12-16
Recommend: HS 206, HS 208, HS 209		
<u>Science/Math/Computer Science:</u> (p. 66)		
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		39
Total Credits		90-106

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

² HS 208 Multicultural Issues in Human Services 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, Oregon State University - Cascades offers a [Bachelor's Degree in Human Development and Family Science, Human Services option](#). This degree requires careful and accurate planning of the first 90 credits. Working closely with a COCC academic advisor is highly recommended.

Another option is [Portland State University's Bachelor Degree in Social Work \(BSW\) online program](#). This program has flexibility in transfer course work and prepares students for the local master's in social work program for students interested in continuing their education.

Students pursuing a bachelor of arts (as opposed to a bachelor of science) 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
<u>Mathematics:</u> (p. 60)	4
<u>Oral Communication:</u> (p. 60)	3-4
WR 121 Academic Composition	4
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 or Technical Writing	4
Credits	14-15
Third Term	Credits
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	Credits
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	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	90-101

Humanities

Humanities is the study of the expression of the human experience. Courses in literature, film, culture, and writing are offered. Students develop the ability to apply creative skills to problem solving, analyzing and evaluating information, thinking critically, and communicating effectively.

See the [Humanities page](#) for more information.

Contact:

Stacey Donohue (sdonohue@cocc.edu)
541-383-7533
Ochoco Hall, Bend Campus

Department: Humanities
Department Chair: Stacey Donohue

Programs

Transfer

Associate of Arts Oregon Transfer

- [English/Literature - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 276)
- [Humanities - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 278)
- [Liberal Arts/Liberal Studies - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 279)

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.

Examines 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. Explores 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.

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.

Study representative plays from Shakespeare's early and middle periods and sonnets relevant to play elements.

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.

Surveys children's literature for all ages in genres that may include picture books, myths and folklore, poetry, nonfiction, historical fiction, and fantasy, making connections to the historical, cultural, institutional, and psychological contexts related to production and reception. Examines how texts represent childhood and reflect assumptions about the social and educational function of children's and young adult 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 250 Introduction to Folklore and Mythology (4 Credits)**Recommended preparation:** WR 121.

Surveys and compares representative texts from world mythology and folklore. Explores common mythological and folkloric themes and genres. Examines mythology as an interdisciplinary field that incorporates anthropology, sociology, history, literary studies, psychology, and religion.

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 298 Independent Study: English and Literature (1-4 Credits)**Prerequisites:** Instructor approval required.**Recommended preparation:** Prior coursework in the discipline.

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

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 188 Special Studies: Film Arts (1-4 Credits)

Explores topics of current interest in the discipline.

FA 199 Selected Topics: Film Arts (1-4 Credits)

Provides a learning experience in film arts not currently available; this course is in development to be proposed as a permanent course.

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 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 humanities 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. Considers Native American works in their national, historical, cultural, geographical, political, and legal contexts.

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 288 Special Studies: Humanities (1-4 Credits)

Explores topics of current interest in the humanities discipline.

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.

J 188 Special Studies: Journalism (1-4 Credits)

Explores topics of current interest in the journalism discipline.

J 199 Selected Topics: Journalism (1-4 Credits)

This course is in development.

J 215 Publications Lab (1 Credit)**Recommended preparation:** J 216.

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.

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 288 Special Studies: Journalism (1-4 Credits)

Explores topics of current interest in the journalism discipline.

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.

RD 099 Selected Topics: Reading (1-4 Credits)

This course is in development.

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 Wr/Comm Level 3.

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 Wr/Comm Level 5.

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 098 Writing Seminar (2 Credits)**Prerequisites:** WR 065 or minimum placement Wr/Comm Level 7.**Corequisites:** WR 121.

A companion course to WR 121 for students who place into WR 098. 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 minimum placement Wr/Comm Level 9.

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 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.

Introduces forms and genres of prose fiction. Uses individual and collaborative workshop activities to develop skills in drafting and revision, these may include critical reading of published authors, prose craft exercises and constructive response to other student work. Presents effective strategies for writing fiction and craft fundamentals including conflict and plot, story, character, dialogue, theme, setting, narration, and point of view. Includes creation of a portfolio of works reflecting various stages of the writing process.

WR 242 Introduction to Creative Writing: Poetry (4 Credits)

Recommended preparation: WR 121.

Introduces 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 original poems 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 298 Independent Study: Writing (1-4 Credits)

Prerequisites: Instructor approval required.

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

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.

Offers an introduction to Women's and Gender Studies, an interdisciplinary field that asks critical questions about the meanings of sex and gender in society. Examines the issues raised for all genders by feminism and the women's movement; integrates analysis of contemporary and historical experiences of women; and considers the multiple ways that sex and gender interact with race, class, nationality, and other social identities. Students will become familiar with key issues, questions, and debates in the field.

English/Literature - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer 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. Degree requirements and course plan are based the statewide English Literature major transfer map (MTM).

Major transfer maps identify the optimal and specific courses students need to take to transfer efficiently into the major. Completing the MTM allows students to receive status at the public university based on the number of credits referenced in the transfer agreement. This includes at least 30 general education credits. This is comparable to the status of students with the same number of academic credits in the major who began their postsecondary studies at the public university. Students will not be required to retake a course if they have earned minimum required grades.

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, law and criminal justice, and teaching/education.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Recommend: COMM 111		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
	or WR 227 Technical Writing	
Recommend: WR 122		
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
Recommend: ENG 204 and ENG 205 or ENG 253 and ENG 254		
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
Recommend: HST 201 or HST 202 or HST 203 or HST 204		
<u>Science/Math/Computer Science:</u> (p. 66)		
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, one PHL course and three terms of a 200-level language course.		

Other courses to consider: Discipline Studies courses with ARH, ART, FA, MUS, or TA prefix

Total Credits **90-106**

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

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 institution to which they wish to transfer, and determine whether one or more of the following courses should be elected to fulfill 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 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
Discipline Studies Social Science (recommend HST 201 or HST 202 or HST 203 or HST 204)		4
Elective (recommend world language 100-level)		4
Mathematics: (p. 60)		4
WR 121	Academic Composition	4
Credits		16
Second Term		Credits
Discipline Studies Arts & Letters (recommend ENG 204 and ENG 205 or ENG 253 and ENG 254)		4
Discipline Studies Social Science		4
Elective (recommend world language 100-level)		4
Credits		12
Third Term		Credits
Discipline Studies Science/Math/Computer Science (laboratory science)		4-5
Health (3 credits with HHP or HHPA prefix)		3
Elective (recommend world language 100-level)		4
WR 122	Argument, Research, and Multimodal Composition	4
Credits		15-16
Fourth Term		Credits
Communication (recommend COMM 111)		4
Discipline Studies Arts & Letters (recommend 2nd in sequence of either ENG 204 and ENG 205 or ENG 253 and ENG 254)		4
Elective (recommend world language 200-level)		4
Elective (recommend ENG 201, ENG 202, or a course with a PHL prefix)		4
Credits		16
Fifth Term		Credits
Discipline Studies Arts & Letters (recommend world language 200-level)		4
Discipline Studies Science/Math/Computer Science		4
Discipline Studies Science/Math/Computer Science (laboratory sciences)		4-5
Discipline Studies Social Science		4
Credits		16-17
Sixth Term		Credits
Discipline Studies Social Science		4
Discipline Studies Science/Math/Computer Science (laboratory sciences)		4-5
Elective (consider Discipline Studies course with ARH, ART, FA, MUS, or TA prefix)		4
Elective (recommend World Language 200-level)		4
Credits		16-17
Total Credits		91-94

Humanities - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer 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.

The humanities encompass diverse subjects in Western and non-Western cultures and is concerned with the study of:

- Human experience and communication
- Philosophy, values, and beliefs
- Language arts
- Cultural traditions

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

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		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
<u>Science/Math/Computer Science:</u> (p. 66)		
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.

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
<u>Mathematics:</u> (p. 60)	4
<u>Oral Communication:</u> (p. 60)	3-4
WR 121 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 Argument, Research, and Multimodal Composition or WR 227 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

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
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Liberal Arts/Liberal Studies - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer degree with a focus in liberal arts/liberal studies 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. 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 an effective choice for students who have specific career or personal goals, who enjoy a wide range of disciplines, and who appreciate the flexibility provided.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4

Oral Communication: (p. 60)

Choose one course	3-4
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Writing: (p. 60)

WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	

General Education/Discipline studiesCultural Literacy: (p. 63)

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

Arts and Letters: (p. 61)

Choose three courses from at least two prefixes	9-12
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Social Science: (p. 68)

Choose four courses from at least two prefixes	12-16
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Science/Math/Computer Science: (p. 66)

Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science	12-20
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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
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Total Credits	90-106
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¹ HHPA activity courses (1 credit each) are not to be duplicated

Advising Notes

Students are encouraged to consider meeting Bachelor of Arts (BA) or Bachelor of Science (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/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
<u>Mathematics:</u> (p. 60)	
	4
<u>Oral Communication:</u> (p. 60)	
	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	4
Argument, Research, and Multimodal Composition or 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 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

Manufacturing Technology

Industrial manufacturing is a diverse sector closely connected with engineering and industrial design. The College's manufacturing programs train students for immediate employment in Central Oregon, provide continuing skills training for local industry employees in a format designed for working adults, and provide customized skills training at local employers' request.

See the [Manufacturing Technology](#) page for more information.

Contact:

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Building 3, Redmond Campus

Department: Natural and Industrial Resources
Department Chair: Wayne Yeatman

Programs

Career and Technical Education

Associate of Applied Science

- [Manufacturing Machining Technician - Associate of Applied Science \(AAS\)](#) (p. 283)
- [Welding - Associate of Applied Science \(AAS\)](#) (p. 287)

One-Year Certificate of Completion

- [Manufacturing CNC Machine Operator - One-Year Certificate \(CC1\)](#) (p. 285)
- [Welding - One-Year Certificate of Completion \(CC1\)](#) (p. 289)

Career Pathway Certificate of Completion

- [Manufacturing Technician - Career Pathway Certificate of Completion \(CPCC\)](#) (p. 286)
- [Welding Technician- Career Pathway Certificate of Completion \(CPCC\)](#) (p. 290)

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)

Covers reading and interpreting 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 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)

Introduces solid modeling software (computer aided drafting) used in design and manufacturing. Includes using the software to capture design intent through part development and creating assemblies with 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 161 CNC Project I (4 Credits)

Provides opportunity to complete a culminating project representing the skills developed in the CNC Machining one-year certificate.

MFG 188 Special Studies: Manufacturing Technology (1-4 Credits)

Explores topics of current interest in the discipline.

MFG 199 Selected Topics: Manufacturing (1-4 Credits)

Prerequisites: instructor approval.

Provides a learning experience in manufacturing not currently available; this course is in development to be proposed as a permanent course.

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 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 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 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: MFG 100.

Introduces additive manufacturing concepts including various processes used in rapid prototyping. Design and create sample parts with a three-dimensional 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 256 CNC Mill Programming (4 Credits)

Prerequisites: MFG 100 and MFG 110.

Recommended to be taken with: MFG 257.

Introduces basic programming skills used on the CNC Mill.

MFG 257 CNC Mill Setup & Operation (4 Credits)

Prerequisites: MFG 100 and MFG 110.

Prerequisites with concurrency: MFG 256.

Introduces basic operation and setup used with Fanuc compatible CNC Mill machining centers.

MFG 258 Mastercam Mill (4 Credits)

Prerequisites: MFG 100, MFG 110 and MFG 119.

Introduces Mastercam Mill operational basics. Includes terminology relevant to computer aided drafting/computer aided modeling work. Covers the use of the Mastercam Mill menu structure and system management.

MFG 259 CNC Lathe Programming (4 Credits)

Prerequisites: MFG 100 and MFG 110.

Recommended to be taken with: MFG 260.

Introduces basic programming skills used on the CNC lathe.

MFG 260 CNC Lathe Setup & Operation (4 Credits)

Prerequisites: MFG 100 and MFG 110.

Prerequisites with concurrency: MFG 259.

Introduces basic operation and setup used with Fanuc compatible CNC Lathe machining centers.

MFG 261 Mastercam Lathe (4 Credits)

Prerequisites: MFG 100, MFG 110 and MFG 119.

Recommended to be taken with: MFG 259 and MFG 260.

Introduces Mastercam Lathe operational basics. Includes terminology relevant to PC-based CAD/CAM work. Covers the use of the Mastercam Lathe menu structure and system management, 2 1/2 axis wireframe geometry creation, and toolpath creation for output of CNC "G" code for CNC lathe.

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 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.

Covers gas torch, air carbon arc, and plasma gas cutting. Includes torch setup and maintenance, flame setting, diagnostics, track torch operations, circle cutting, and carbon arc scarfing practice.

MFG 268 Production CNC Operations Mill (3 Credits)

Prerequisites: MFG 256 and MFG 257.

Prerequisites with concurrency: MFG 258 and MFG 270.

Provides opportunity to evaluate efficiency of a parts manufacturing process using a mill. Covers methods to improve efficiency.

MFG 270 CNC Fixture Design Mill (3 Credits)

Prerequisites: MFG 119 and MFG 257.

Provides methods beyond the basic use of a vice in order to hold and machine irregularly shaped parts using a mill.

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 277 Production CNC Operations Lathe (3 Credits)**Prerequisites:** MFG 259 and MFG 260.**Prerequisites with concurrency:** MFG 261 and MFG 278.

Provides opportunities to evaluate the efficiency of a parts manufacturing process using a lathe. Covers methods to improve efficiency.

MFG 278 CNC Fixture Design Lathe (3 Credits)**Prerequisites:** MFG 119, MFG 250, MFG 257.

Covers methods beyond the basic use of a chuck in order to hold and machine irregularly shaped parts using a lathe.

MFG 279 CNC Project II (4 Credits)**Prerequisites:** MFG 259, MFG 260, MFG 261.

Provides opportunity to complete a culminating project representing the skills developed during second year of the Manufacturing Machining Technician AAS.

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 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.

MFG 299 Selected Topics: Manufacturing (1-4 Credits)**Prerequisites:** instructor approval.

Provides a learning experience in manufacturing not currently available; this course is in development to be proposed as a permanent course.

Manufacturing Machining Technician - Associate of Applied Science (AAS)

Program Description

The Manufacturing Machining Technician Associate of Applied Science prepares students to apply basic utilization skills for the identification and resolution of production problems in the manufacture of products. The program includes instruction in machine operations, production line operations, utilization improvements, physical controls, automation, computer-aided manufacturing (CAM), manufacturing planning, quality control, and informational infrastructure.

The degree benefits students who are new to design and machining technology and those who are currently in the field but looking to expand skills and increase career opportunities. Students who have a non-technology career in another field may find this degree optimum for cross training into the CAD/CAM and manufacturing technology discipline.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Use fixture design in production environment.
2. Analyze machine operation for optimization opportunities.
3. Develop part-holding options for computer numerical control lathe and mill.
4. Model effective and appropriate communication with manufacturing professionals and clients.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of MTH 060 Beginning Algebra or minimum placement Math Level 10
- Successful completion of or current enrollment in MFG 100 MFG Orientation
- College-level computer skills

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

Required:

- Machining personal protective equipment and tools: approximately \$250:
- Hardcopy of textbook and packet (electronic versions do not have a cost): approximately \$220

Recommended:

- A desktop or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office: approximately \$600

Enrollment Fees

- Fees on specific MFG courses (estimated \$1,100 total)

Course Requirements

Course	Title	Credits
Core Courses		
MFG 100	MFG Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 119 or MFG 119M	Manufacturing Design and Drafting Techniques Mechanical Drawing Techniques	4
MFG 133	Quality Assurance	3
MFG 161	CNC Project I	4
MFG 250	Additive Manufacturing	2
MFG 256	CNC Mill Programming	4
MFG 257	CNC Mill Setup & Operation	4
MFG 258	Mastercam Mill	4

MFG 259	CNC Lathe Programming	4
MFG 260	CNC Lathe Setup & Operation	4
MFG 261	Mastercam Lathe	4
MFG 268	Production CNC Operations Mill	3
MFG 270	CNC Fixture Design Mill	3
MFG 277	Production CNC Operations Lathe	3
MFG 278	CNC Fixture Design Lathe	3
MFG 279	CNC Project II	4
MFG 280	Co-op Work Experience Manufacturing	1-4
MFG Electives		13

Support Courses

Choose one course from the following:		3-4
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
MTH 102	Applied Technical Mathematics (Or one math course from the foundational requirements math list)	4
WR 121	Academic Composition	4

Total Credits **90-94**

Advising Notes

Nearly all MFG courses are self-directed and outcome based. This provides students with a greater degree of flexibility than many other 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 AAS 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. Before 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	MFG Orientation	1
MFG 101	Blueprint Reading	3
MTH 102	Applied Technical Mathematics (Or one math course from the foundational requirements math list)	4
MFG 110	Manufacturing Processes I	4

MFG 119 or MFG 119M	Manufacturing Design and Drafting Techniques or Mechanical Drawing Techniques	4
Credits		16
Second Term		
MFG 133	Quality Assurance	3
MFG 256	CNC Mill Programming	4
MFG 250	Additive Manufacturing	2
MFG 257	CNC Mill Setup & Operation	4
Choose one course from the following:		3-4
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
Credits		16-17
Third Term		
MFG 161	CNC Project I	4
MFG 259	CNC Lathe Programming	4
MFG 260	CNC Lathe Setup & Operation	4
WR 121	Academic Composition	4
Credits		16
Fourth Term		
MFG 103	Welding Technology I	4
MFG 258	Mastercam Mill	4
MFG 268	Production CNC Operations Mill	3
MFG 270	CNC Fixture Design Mill	3
Credits		14
Fifth Term		
MFG 261	Mastercam Lathe	4
MFG 277	Production CNC Operations Lathe	3
MFG 278	CNC Fixture Design Lathe	3
MFG elective		4
Credits		14
Sixth Term		
MFG 280	Co-op Work Experience Manufacturing	1-4
MFG 279	CNC Project II	4
MFG elective		4
MFG elective		5
Credits		14-17
Total Credits		90-94

Manufacturing CNC Machine Operator - One-Year Certificate (CC1)

Program Description

The Manufacturing CNC Machine Operator One-Year Certificate of Completion incorporates introductory manufacturing processes to provide hands-on experiences emphasizing computer numerical control (CNC) setup, operation, and code modification. The certificate skill sets align with industry-recognized proficiencies that qualify a graduate to apply for entry-level positions as a computer-controlled machine tools operator or CNC setup technician.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Interpret part drawings and their tolerances.
2. Fabricate items with computer aided drafting/computer aided manufacturing.
3. Use measurement tools.
4. Use computer numerical control mill and lathe safely.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of MTH 060 Beginning Algebra or minimum placement Math Level 10
- Successful completion of or current enrollment in MFG 100 MFG Orientation
- College-level computer skills

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

Required:

- Machining personal protective equipment and tools: approximately \$250

Enrollment Fees

- Fees on specific MFG courses: \$600

Course Requirements

Course	Title	Credits
MFG 100	MFG Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 119 or MFG 119M	Manufacturing Design and Drafting Techniques Mechanical Drawing Techniques	4
MFG 133	Quality Assurance	3
MFG 161	CNC Project I	4
MFG 250	Additive Manufacturing	2
MFG 256	CNC Mill Programming	4
MFG 257	CNC Mill Setup & Operation	4
MFG 259	CNC Lathe Programming	4
MFG 260	CNC Lathe Setup & Operation	4
MTH 102	Applied Technical Mathematics (Or one math course from the foundational requirements math list)	4
WR 121	Academic Composition	4
Choose one course from the following:		3-4
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	

COMM 219	Small Group Communication	
Total Credits		52-53

Advising Notes

Nearly all MFG courses are self-directed and outcome based. This provides students with a greater degree of flexibility than many other 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 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. Before 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 Year		
First Term		Credits
MFG 100	MFG Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 119 or MFG 119M	Manufacturing Design and Drafting Techniques or Mechanical Drawing Techniques	4
Credits		16
Second Term		
MFG 133	Quality Assurance	3
MFG 250	Additive Manufacturing	2
MFG 256	CNC Mill Programming	4
MFG 257	CNC Mill Setup & Operation	4
MTH 102	Applied Technical Mathematics (Or one math course from the foundational requirements math list)	4
Credits		17
Third Term		
MFG 259	CNC Lathe Programming	4
MFG 260	CNC Lathe Setup & Operation	4
WR 121	Academic Composition	4
MFG 161	CNC Project I	4
Credits		16
Fourth Term		
Choose one course from the following:		3-4

COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
Credits		3-4
Total Credits		52-53

Manufacturing Technician - Career Pathway Certificate of Completion (CPCC)

Description

The Manufacturing Technician Career Pathway Certificate of Completion is designed to bridge high schools students and newcomers to the trade by means of basic blueprint reading, basic use of lathe, mill, drill press, bandsaw, and an orientation course on SolidWorks, a solid modeling computer-aided design and computer-aided engineering computer program. It also introduces stick welding to help students decide on a path to welding or machining.

This certificate's credits can be applied to the Manufacturing CNC Machine Operator One-Year Certificate of Completion.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Demonstrate the ability to safely perform routine workplace tasks in a manufacturing/fabrication environment.
2. 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
- Completion of MTH 060 Beginning Algebra or minimum placement Math Level 10
- Successful completion of or current enrollment in MFG 100 MFG Orientation
- College-level computer skills

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

- Machining personal protective equipment and tools: not required for MFG 103 Welding Technology I or MFG 110 Manufacturing Processes I

Enrollment Fees

- Fees on specific MFG courses: approximately \$130

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	Manufacturing Design and Drafting Techniques	4
or MFG 119M	Mechanical Drawing Techniques	
Total Credits		15

Advising Notes

Nearly all MFG courses are self-directed and outcome based. This provides students with a greater degree of flexibility than many other 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 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. Before 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 usually means students will need to schedule 24 hrs or more each week in the lab. The welding lab is staffed Monday through Thursday 9 am to 8 pm (40 hours a 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	Manufacturing Design and Drafting Techniques	4
or MFG 119M	Mechanical Drawing Techniques	
Credits		15
Total Credits		15

Welding - Associate of Applied Science (AAS)

Description

The Associate of Applied Science in Welding is a culmination of the career pathway and one-year certificates of completion. Emphasis is on structural welds that include multiple positions and pipe. Students will weld overhead, vertical, and cylindrical pipe. All welding methods are used. Students also use destructive testing methods of welds.

In order to complete the program, students must satisfactorily complete welding, welding laboratory, and general education courses.

Along with welding, the degree allows electives that can be taken in the machine shop. Students can take manual or computer numerical control (CNC) classes in machining.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- Model industry safety standards in a welding/fabrication environment.
- Summarize test standards and information in order to pass the American Welding Society Expert Welder practical knowledge qualification written test.
- Perform the specific skills needed to pass American Welding Society Expert Welder performance qualification tests.
- Apply inspection, testing, and acceptance criteria at the American Welding Society Expert Welder level.
- Model effective and appropriate communication with welding professionals and clients.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of MTH 060 Beginning Algebra or minimum placement Math Level 10
- Successful completion of or current enrollment in MFG 100 MFG Orientation
- College-level computer skills

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

Required:

- Welding personal protective equipment and tools: approximately \$250

Recommended:

- A desktop or laptop computer capable of running the latest version of Windows and Microsoft Office: approximately \$600

Enrollment Fees

- Fees on specific MFG courses: approximately \$1,100 total

Course Requirements

Course	Title	Credits
Core Courses		
MFG 100	MFG 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	Manufacturing Design and Drafting Techniques	4
or MFG 119M	Mechanical Drawing Techniques	
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	Co-op Work Experience Manufacturing	1-4
Welding Program Electives		20
MFG 102	Blueprint Reading Sheet Metal	
MFG 112	Manufacturing Processes II	
MFG 114	Manufacturing Processes III	
MFG 133	Quality Assurance	
MFG 201	Bench Work	
MFG 202	Metals Preparation	
MFG 210	Vertical Milling	
MFG 214	Lathe Operator I	
MFG 216	Lathe Operator II	
MFG 250	Additive Manufacturing	
MFG 254	Manufacturing Jigs and Fixtures	
MFG 256	CNC Mill Programming	
MFG 257	CNC Mill Setup & Operation	
MFG 258	Mastercam Mill	
MFG 259	CNC Lathe Programming	
MFG 260	CNC Lathe Setup & Operation	
MFG 261	Mastercam Lathe	
MFG 266	Manufacturing Cost Estimation	
MFG 275	SMAW III	
MFG 276	GMAW III	
MFG 285	GTAW III	
MFG 286	FCAW III	

Other Required Courses

Choose one from the following:		3-4
BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
MTH 102	Applied Technical Mathematics (or choose from the foundational requirements math list)	4
WR 121	Academic Composition	4
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 other programs.

Upon starting their program, students review their desired degree outcome with their advisor, and a coursework sequence is identified. This is particularly important if developmental work is needed.

The 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. Before starting any manufacturing technology 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 usually means students will need to schedule 24 hours or more each week in the lab. The welding lab is staffed Monday through Thursday from 9 am to 8 pm (40 hours a 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	MFG Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 119	Manufacturing Design and Drafting Techniques	4
or MFG 119M	or Mechanical Drawing Techniques	
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
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Second Year**First Term**

MFG 273	SMAW II	3
MFG 274	GMAW II	3
MTH 102	Applied Technical Mathematics (or choose from the foundational requirements math list)	4

Welding program elective (recommend MFG 254)	2
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Welding program elective	3
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Credits	15
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Second Term

MFG 283	GTAW II	3
MFG 284	FCAW II	3
WR 121	Academic Composition	4
Welding program elective (recommend MFG 275)		3
Welding program elective		2

Credits	15
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Third Term

Choose one course from the following:	3-4
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BA 178	Customer Service
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BA 285	Business Human Relations
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COMM 115	Introduction to Intercultural Communication
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COMM 218	Interpersonal Communication
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COMM 219	Small Group Communication
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MFG 280	Co-op Work Experience Manufacturing	1-4
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MFG 288	Industrial Fabrication	3
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MFG 289	Material Handling-Fork Lift Safety	1
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Welding program elective (recommend MFG 276)	3
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Welding program elective (recommend MFG 285)	3
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Credits	14-18
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Total Credits	90-94
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Welding - One-Year Certificate of Completion (CC1)

Description

The Welding One-Year Certificate of Completion emphasizes shielded metal arc welding, gas tungsten arc welding, gas metal arc welding, flux-cored arc welding, oxyacetylene welding and cutting, and basic fabrication.

In order to complete program, students must satisfactorily complete welding, welding laboratory, and general education courses.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Model industry safety standards in a welding/fabrication environment.
2. Summarize test standards and information in order to pass the American Welding Society Advanced Welder practical knowledge qualification written test.
3. Perform the specific skills needed to pass American Welding Society Advanced Welder performance qualification tests.
4. Apply inspection, testing, and acceptance criteria at the American Welding Society Advanced Welder level.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of MTH 060 Beginning Algebra or minimum placement Math Level 10
- Successful completion of or current enrollment in MFG 100 MFG Orientation
- College-level computer skills

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

Required:

- Welding personal protective equipment and tools: approximately \$250

Enrollment Fees

- Fees on specific MFG courses: \$600

Course Requirements

Course	Title	Credits
Core Courses		
MFG 100	MFG 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	Manufacturing Design and Drafting Techniques	4
or MFG 119M	Mechanical Drawing Techniques	
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		
Choose one course from the following:		3-4

BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
MTH 102	Applied Technical Mathematics (or choose from the foundational skills requirements list)	4
WR 121	Academic Composition	4
Total Credits		53-54

Advising Notes

Nearly all MFG courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than other programs.

Upon starting their program, students review their desired degree outcome with their advisor, and a coursework sequence is identified. This is particularly important if developmental work is needed.

The 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. Before starting any manufacturing technology 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 usually means students will need to schedule 24 hours or more each week in the lab. The welding lab is staffed Monday through Thursday from 9 am to 8 pm (40 hours a 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	MFG Orientation	1
MFG 101	Blueprint Reading	3
MFG 103	Welding Technology I	4
MFG 110	Manufacturing Processes I	4
MFG 119 or MFG 119M	Manufacturing Design and Drafting Techniques or 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 102	Applied Technical Mathematics (or choose from the foundational skills math list)	4
Credits		16

Fourth Term		
Choose one course from the following:		3-4
BA 178	Customer Service	
BA 285	Business Human Relations	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
WR 121	Academic Composition	4
Credits		7-8
Total Credits		53-54

Welding Technician- Career Pathway Certificate of Completion (CPCC)

Description

The Welding Career Pathway Certificate of completion is designed to recognize students' accomplishments in welding and prepare them for entry-level work in the welding industry. Students will have the skills necessary to be valuable employees in the industrial welding trades.

Certificate credits are transferable to the Welding One-Year Certificate of Completion.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Model industry safety standards in a welding/fabrication environment.
2. Summarize test standards and information in order to pass the American Welding Society Entry Welder practical knowledge qualification written test.
3. Perform the specific skills needed to pass American Welding Society Entry Welder performance qualification tests.
4. Apply inspection, testing, and acceptance criteria at the American Welding Society Entry Welder level.

Entrance Requirements

Academic Entrance Requirements

Recommended:

- High school diploma or GED
- Completion of MTH 060 Beginning Algebra or minimum placement Math Level 10
- Successful completion of or current enrollment in MFG 100 MFG Orientation
- College-level computer skills

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

Required:

- Welding personal protective equipment and tools: approximately \$250

Enrollment Fees

- Fees on specific MFG courses: approximately \$600

Course Requirements

Course	Title	Credits
Core Courses		
MFG 100	MFG 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 other programs.

Upon starting their program, students review their desired degree outcome with their advisor, and a coursework sequence is identified. This is particularly important if developmental work is needed.

The 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. Before starting any manufacturing technology 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 usually means students will need to schedule 24 hours or more each week in the lab. The welding lab is staffed Monday through Thursday from 9 am to 8 pm (40 hours a 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		Credits
First Term		
MFG 100	MFG 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 historic origins. Massage therapists can work in conjunction with doctors, nurses, physical therapists, chiropractors, naturopaths, acupuncturists, sport teams, and in many other settings. In addition to private practice, massage therapists can work in hospitals, athletic clubs, family health centers, cruise ships, vacation resorts, spas, and salons.

A student can graduate from the program in as few as four terms. Students are qualified to sit for licensing exams required by the Oregon Board of Massage Therapists and are prepared for a variety of massage techniques and business methods.

See the [Massage Therapy page](#) for more information.

Contact:

[Alan Nunes \(anunes@cocc.edu\)](mailto:anunes@cocc.edu)

541-318-3757

Health Careers Center, Bend Campus

Department: Allied Health

Department Chair: [Shannon Waller \(swaller@cocc.edu\)](mailto:swaller@cocc.edu)

Programs

Career and Technical Education

Associate of Applied Science

- [Massage Therapy - Associate of Applied Science \(AAS\)](#) (p. 293)

Two-Year Certificate of Completion

- [Massage Therapy - Two-Year Certificate of Completion \(CC2\)](#) (p. 295)

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 placement in Wr/Comm Level 7; MTH 015 (or higher) or minimum placement in Math Level 7.

Recommended preparation: BI 105 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. 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 bony 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 bony 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 placement in Wr/Comm Level 7; MTH 015 (or higher) or minimum placement in Math Level 7.

Corequisites: LMT 155, LMT 170.

Recommended preparation: BI 105 or BI 231.

Introduces 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)

Explores managing a massage practice, including business structures, legal, and tax documentation requirements. Formulate a marketing plan including advertising, market analysis, and professional goals.

LMT 140 Pathology for Massage Therapy (4 Credits)

Recommended preparation: BI 105 or BI 231.

Covers effects of massage therapy on body systems, including indications and contraindications to massage. Reviews medical terminology and basic mechanisms of disease process.

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 113 and LMT 145.

Introduces theory and practice of various modalities including deep tissue, trigger point therapy, muscle energy technique, and stretching. Incorporates client assessment and treatment planning for a massage session.

LMT 155 Eastern Theory & Practice (2 Credits)

Prerequisites: WR 065 or higher or placement in Wr/Comm Level 7; MTH 015 or higher or minimum placement in Math Level 7.

Corequisites: LMT 130, LMT 170.

Recommended preparation: BI 105 or BI 231.

Focuses on Chinese medicine as the primary model. Introduces Eastern philosophy and its complimentary healing techniques in a philosophically neutral way.

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 placement in Wr/Comm Level 7; MTH 015 or higher or minimum placement in Math Level 7.

Corequisites: LMT 130, LMT 155.

Recommended preparation: BI 105 or BI 231.

Explores professional and ethical boundaries governing massage therapy practice. Examines and discusses Oregon Administrative Rules and Revised Statutes applicable to licensed massage therapists.

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 206 The Spirit of Massage (1 Credit)

Explores 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 Fundamentals (2 Credits)

Introduces essential oils' properties, benefits, and effects on the body when used in clinical and holistic settings.

LMT 217 Aromatherapy Applications (2 Credits)

Advanced exploration and utilization of essential oils.

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.

Explores insurance billing, retail selling, target marketing, bookkeeping, credentialing and other issues a massage practice may encounter.

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 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 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 Associate of Applied Science in Massage Therapy integrates sciences related to the human body with additional massage therapy theories and applications. Students develop skills in business and advanced massage techniques while serving the community.

The Associate of Applied Science includes the Massage Therapy Two-Year Certificate of Completion, which qualifies students to sit for licensing exams the Oregon Board of Massage Therapists requires. The degree builds skills for graduates who typically have completed the certificate and are working as licensed massage therapists.

Students have two opportunities to enter the program each year: a Fall term day program and a Spring term evening program. Students may take certain program and/or non-massage therapy courses any time before enrollment into the program or during enrollment in the program.

The program is accredited by the [Commission on Massage Therapy Accreditation](#).

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Implement a wide variety of specialty skills related to massage therapy.
2. Exhibit characteristics of guidelines for a professional business practice.
3. Conduct client assessment, reassessment, and treatment planning.
4. Describe the benefits and physiological effects of techniques that manipulate soft tissue.
5. Use professional communication skills with clients and peers.

Entrance Requirements

Required:

- Completion of MTH 015 Basic Mathematics or higher or minimum placement Math Level 7
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7

Recommended:

- BI 105 Essentials of Human Biology or BI 231 Human Anatomy and Physiology I

Other Entrance Requirements

Required:

- Must be a minimum of 18 years of age
- High school diploma or GED

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

- Massage table: \$400 to \$700

Enrollment Fees

- \$17 per credit for most first-year LMT courses
- \$25 per credit for all other LMT courses

Course Requirements

Course	Title	Credits
Core Courses		
Choose one of the following options:		3-12
Option 1:		

BI 105	Essentials of Human Biology	
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 for Massage Therapy 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 and 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		
Choose one course from the following:		3-4
AH 105	Calculations for Allied Health	
BA 104	Business Math	
MTH 102	Applied Technical Mathematics	
MTH 105	Math in Society	
Or one course from the foundational requirements math list		
AH 115 or BA 178 or COMM 218	Cultural Responsiveness in Allied Health Customer Service Interpersonal Communication	3
BA 214 or WR 121	Business Communications Academic Composition	3-4
CIS 120	Computer Concepts	4
HHP 252	First Aid & AHA Basic Life Support Provider CPR	3
Choose one health course from the list below:		3-4
HHP 231	Human Sexuality	
HHP 242	Stress Management	
HHP 258	Holistic Wellness	
HHP 266	Nutrition for Health	
HHP 295	Health and Fitness	
Two Courses from the Discipline Studies List		6-10
Total Credits		90-106

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
Choose one course from the following:	3-4
AH 105	Calculations for Allied Health
BA 104	Business Math
MTH 102	Applied Technical Mathematics
MTH 105	Math in Society
Or one course from the foundational requirements math list	
BI 105	Essentials of Human Biology
BA 214 or WR 121	Business Communications or Academic Composition
CIS 120	Computer Concepts
Credits	13-15

Second Term

LMT 113	Kinesiology for Massage Therapy I	4
LMT 130	Massage Fundamentals	2
LMT 155	Eastern Theory & Practice	2
LMT 170	Professional Ethics and Rules	2
LMT 200 level electives		2
Credits		12

Third Term

LMT 118	Kinesiology for Massage Therapy II	4
LMT 145	Massage I	5
LMT 200 level electives		2
Credits		11

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

AH 115 or BA 178 or COMM 218	Cultural Responsiveness in Allied Health or Customer Service or Interpersonal Communication	3
HHP 252	First Aid & AHA Basic Life Support Provider CPR	3
LMT 135	Managing a Massage Practice	3
LMT 160	Hydrotherapy	1
LMT 180	Therapeutic Clinic	3
Credits		13

Second Term

Course from Discipline Studies List		3-5
LMT 200 level electives		10

LMT 245	Effective Office Decisions	2
Credits		15-17
Third Term		
Course from the Discipline Studies List		3-5
Choose one of the following:		3-4
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
LMT 210	Community Outreach	2
Credits		11-14
Total Credits		90-97

Massage Therapy - Two-Year Certificate of Completion (CC2)

Description

The Massage Therapy Two-Year Certificate of Completion develops skills that include a variety of massage techniques and modalities, maintaining client and business records, adhering to client/practitioner boundaries and ethics, client communication, and universal sanitation practices. The program integrates sciences related to the human body with massage therapy theory and practice.

The certificate can be completed in four terms. Students have two opportunities to enter the program each year: a Fall term day program and a Spring term evening program. Most students complete the certificate at the end of the same term the following year (i.e., a student starting Fall term 2021 would complete in Fall term 2022). Successful completion of all program courses in a term is required before moving to the next term. Students may take non-program courses before or after program enrollment.

The certificate qualifies students to sit for licensing exams the Oregon Board of Massage Therapists requires.

The program is accredited by the [Commission on Massage Therapy Accreditation](#).

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Identify the benefits and physiological effects of techniques that manipulate soft tissue
2. Pathology: Recognize and describe 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 business practice standards.

Entrance Requirements

Academic Entrance Requirements

Required:

- Completion of MTH 015 Basic Mathematics or higher or minimum placement Math Level 7
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7

Recommended:

- BI 105 Essentials of Human Biology or BI 231 Human Anatomy and Physiology I

Other Entrance Requirements

- Must be a minimum of 18 years of age
- High school diploma or GED

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

- Massage table: \$400 to \$700

Enrollment Fees

- \$17 per credit for most first-year LMT courses
- \$25 per credit for all other LMT courses

Course Requirements

Course	Title	Credits
Core Courses		
Choose one option from the following:		3-12
Option 1:		
BI 105	Essentials of Human Biology	
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 for Massage Therapy 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 and Rules	2
LMT 175	Swedish Relaxation Clinic	2
LMT 180	Therapeutic Clinic	3
Other Required Courses		
Choose one course from the following:		3-4
AH 105	Calculations for Allied Health	
BA 104	Business Math	

MTH 102	Applied Technical Mathematics	
MTH 105	Math in Society	
Or one course from the foundational requirements math list		
AH 115	Cultural Responsiveness in Allied Health	3
or BA 178	Customer Service	
or COMM 218	Interpersonal Communication	
BA 214	Business Communications	3-4
or WR 121	Academic Composition	
Total Credits		53-64

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.

Sample Plan

First Year

First Term		Credits
Choose one course from the following:		
AH 105	Calculations for Allied Health	3-4
BA 104	Business Math	
MTH 102	Applied Technical Mathematics	
MTH 105	Math in Society	
Or one course from the foundational requirements math list		
BI 105	Essentials of Human Biology	3
BA 214	Business Communications	3-4
or WR 121	or Academic Composition	
Credits		9-11

Second Term

LMT 113	Kinesiology for Massage Therapy I	4
LMT 130	Massage Fundamentals	2
LMT 155	Eastern Theory & Practice	2
LMT 170	Professional Ethics and Rules	2
Credits		10

Third Term

LMT 118	Kinesiology for Massage Therapy II	4
LMT 145	Massage I	5
Credits		9

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
AH 115	Cultural Responsiveness in Allied Health	3
or BA 178	or Customer Service	
or COMM 218	or Interpersonal Communication	
LMT 160	Hydrotherapy	1
LMT 180	Therapeutic Clinic	3
Credits		10
Total Credits		53-55

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 industry, government, research, and business. In addition, math courses serve as the foundation for many related science, technology, engineering, and mathematics (STEM) programs.

See the [Mathematics page](#) for more information.

Contact:

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Department: Mathematics

Department Chair: [Jessica Giglio](mailto:jgiglio@coocc.edu) (jgiglio@coocc.edu)

Programs

Transfer

Associate of Arts Oregon Transfer

- [Mathematics - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 298)

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 015 Basic Mathematics (4 Credits)

Recommended preparation: Minimum placement Math Level 4.

Introduces mathematics and its application, explains language and symbols used in math, develops concepts in whole numbers, fractions, decimals, percents, ratio, proportion, and integers, while emphasizing study and learning skills necessary for success in math courses and overcoming anxiety toward math.

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 015. May be taken concurrently with another math class. P/NP grading.

MTH 060 Beginning Algebra (4 Credits)

Recommended preparation: MTH 015 or higher or minimum placement Math Level 7.

Introduces 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 095 Intermediate Algebra (4 Credits)

Recommended preparation: MTH 060 or minimum placement Math Level 10.

Continues the algebra foundation necessary to study college level algebra. Includes polynomial, exponential, radical, and rational expressions. Linear and quadratic functions will be used to model situations and interpret data. An understanding of the connection between narrative, numeric, algebraic, and graphical representations of functions is emphasized. Graphing by hand and using technology are implemented as appropriate. Graphing calculator required (TI-83 or TI-84 recommended).

MTH 098 Math Literacy (4 Credits)

Recommended preparation: MTH 015 or minimum placement in Math Level 7.

Builds on MTH 015 to present mathematics in the context of "math you encounter in your daily life". Introduces and applies pattern recognition, estimation and number sense, working with units, negative numbers, order of operations, and using basic equations and formulas. Explores how to clearly communicate arguments supported by quantitative evidence using words, tables, graphs, and when appropriate, equations and mathematical models.

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 102 Applied Technical Mathematics (4 Credits)

Prerequisites: MTH 060 or higher or minimum placement Math Level 10. Presents algebraic, geometric, and trigonometric concepts in a practical and applied workplace problem-solving context. Includes mathematical operations with real numbers, measurement, ratios, proportions, percentages, dimensional analysis, order of operations, solving equations numerically and symbolically, right triangle trigonometry, area, perimeter, surface area, volume, and weights.

MTH 105 Math in Society (4 Credits)

Recommended preparation: MTH 095 or MTH 098 or higher or minimum placement Math level 14.

Math in Society is a rigorous mathematics course designed for students across multiple disciplines in both transfer degrees and career and technical degrees and certificates. 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 or minimum placement Math Level 18.

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 or minimum placement Math Level 20.

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 188 Special Studies: Mathematics (1-4 Credits)

Explores topics of current interest in the mathematics 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 or minimum placement Math Level 18.

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 or minimum placement Math Level 22.

Examines 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. Expands and explores symbolic, numerical, and graphical representations of mathematical concepts. Emphasizes 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 or minimum placement Math Level 20.

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 MTH 241 or MTH 251) or MTH 105 or minimum placement Math Level 20.

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 251 Calculus I (4 Credits)

Recommended preparation: MTH 112 (or higher) or minimum placement Math Level 22.

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 or minimum placement Math Level 24.

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 288 Special Studies: Mathematics (1-4 Credits)

Explores topics of current interest in the mathematics discipline.

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.

MTH 299 Selected Topics: Mathematics (1-4 Credits)

Provides a learning experience in math not currently available; this course is in development to be proposed as a permanent course.

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 with a focus in mathematics includes courses 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) and direct employment in industry, government, research, and business.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose three credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommend: MTH 251		
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
	or WR 227	Technical Writing
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
<u>Science/Math/Computer Science:</u> (p. 66)		
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: 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 term.
- 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
<u>Oral Communication:</u> (p. 60)	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
	or 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	Credits
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	Credits
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	Credits
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, or administering select tests or medications as directed by clinicians. Administrative duties may require maintenance of medical records, patient scheduling, knowledge of insurance regulations, and basic secretarial and receptionist skills.

See the [Medical Assistant page](#) for more information.

Contact:

Shannon Waller (swaller@cocc.edu)
541-318-3722
Health Careers Center, Bend Campus

Department: Allied Health
Department Chair: Shannon Waller

Programs

Career and Technical Education

One-Year Certificate of Completion

- [Medical Assistant - One-Year Certificate of Completion \(CC1\)](#)
(p. 301)

Career Pathway Certificate of Completion

- [Medical Assistant - Career Pathway Certificate of Completion \(CPCC\)](#)
(p. 303)

Courses

AH 105 Calculations for Allied Health (3 Credits)

Prerequisites: MTH 015 (or higher) or minimum placement Math Level 7. 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).

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.

MA 110 Introduction to Clinical Medical Assisting (7 Credits)

Prerequisites: Instructor approval.

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 (4 Credits)

Corequisites: MA 110.

Introduces medical assistant key competencies related to office practices and administrative responsibilities defined by the Commission on Accreditation of Allied Health Education Programs and the Medical Assisting Educational Review Board. Includes concepts related to professionalism, diversity, confidentiality, communication, telephone techniques, legal concepts, scheduling, triage skills, and office safety.

MA 120 Clinical Medical Assisting II (7 Credits)

Prerequisites: MA 110 and MA 111.

Corequisites: MA 121.

Covers key medical assistant clinical cognitive, psychomotor, and affective competencies defined by the Commission on Accreditation of Allied Health Education Programs and the Medical Assisting Educational Review Board. Expands skills required to assist with diagnostic testing, outpatient procedures, and office-based lab testing. Increases mastery of standard precautions, infection control, medical and surgical asepsis, patient preparation, delivery of oral and parenteral medications, and patient nutritional needs.

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, 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 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 Assistant (1-4 Credits)

Explores topics of current interest in the medical assistant 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 288 Special Studies: Medical Assistant (1-4 Credits)

Explores topics of current interest in the medical assistant discipline.

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.

MA 299 Selected Topics: Medical Assistant (1-4 Credits)

Provides a learning experience in medical assisting not currently available; this course is in development to be proposed as a permanent course.

Medical Assistant - One-Year Certificate of Completion (CC1)

Description

The Medical Assistant One-Year Certificate of Completion 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. Program courses begin once per year in Fall term. 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 and are eligible to submit

an application to sit for the American Association of Medical Assistants (AAMA) Certified Medical Assistant (CMA) certification examination. Upon passing the AAMA exam, medical assistants earn the CMA.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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

Recommended:

- Students expected to be computer literate and utilize different computer programs in their courses; CIS 120 Computer Concepts is recommended to enhance computer skills and usage if needed.

Other Entrance Requirements

Required:

- Must be 18 years of age or older
- Criminal history check and 10-panel drug screen with vendor chosen by the College; see the [program page](#) for more information
- Documentation of current immunizations: TB blood titer, MMR, hepatitis B, varicella, Tdap, flu
- American Heart Association Basic Life Support for Healthcare Providers CPR and first aid training will need to be completed prior to entrance into practicum.
- Additional immunizations, tracking fees, or background checks may be required by practicum sites at the student's expense
- Refer to [program technical standards](#) (physical, medical, safety, and other requirements that an individual must meet in order to be eligible for admission) for more information

Reentry

Students who leave or are dropped from the program may reenter the next Fall term with program director permission. In rare cases, a student may reenter at a different point in the program on a space available basis and with program director permission. 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 (Beyond Standard Tuition/Fees and Textbooks)

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 and titers: \$0 to \$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: \$20
- Cengage Learning Management System and online textbooks: \$179

Enrollment Fees

- Lab fees: \$665 to \$765

Course Requirements

Course	Title	Credits
Prerequisite Courses		
Choose one course from the following:		3-4
AH 105	Calculations for Allied Health	
MTH 105	Math in Society	
Or choose one course from the foundational requirements math list		
AH 114	Introduction to Pathophysiology ¹	5
BI 105	Essentials of Human Biology ²	3
BA 214	Business Communications	3-4
or WR 121	Academic Composition	
Core Courses		
MA 110	Introduction to Clinical Medical Assisting	7
MA 111	Introduction to Professional Medical Assisting	4
MA 120	Clinical Medical Assisting II	7
MA 121	Administrative Medical Assisting	5
MA 137	Application of Professional Medical Assisting	4
MA 147	Medical Assistant Practicum I	5
MA 150	Pharmacology for Medical Assistants	3
Other Required Courses		
Choose one course from the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
Total Credits		52-55

¹ Will accept (AH 111 Medical Terminology I and AH 112 Medical Terminology II and AH 113 Introduction Study of Disease).

² 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 courses begin once per year in Fall term. Students wishing to register in the Fall term 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 that 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 career and technical education 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
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
 - 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
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, 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 COMM 115 Introduction to Intercultural Communication or COMM 218 Interpersonal Communication or COMM 219 Small Group Communication) before entering core program classes are encouraged to do so. The human relations requirement can technically be completed any time before 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.

COMM 219	Small Group Communication	
Credits		12-13
Total Credits		52-55

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

Summer		Credits
Choose one course from the following:		
AH 105	Calculations for Allied Health	3-4
MTH 105	Math in Society	
Or choose one course from the foundational requirements math list		
AH 114	Introduction to Pathophysiology	5
BA 214 or WR 121	Business Communications or Academic Composition	3-4
BI 105	Essentials of Human Biology	3
Credits		14-16

Second Year

Fall		
MA 110	Introduction to Clinical Medical Assisting	7
MA 150	Pharmacology for Medical Assistants	3
MA 111	Introduction to Professional Medical Assisting	4
Credits		14
Winter		
MA 120	Clinical Medical Assisting II	7
MA 121	Administrative Medical Assisting	5
Credits		12
Spring		
MA 137	Application of Professional Medical Assisting	4
MA 147	Medical Assistant Practicum I	5
Choose one course from the following:		
AH 115	Cultural Responsiveness in Allied Health	3-4
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	

Medical Assistant - Career Pathway Certificate of Completion (CPCC)

Description

The Medical Assistant Career Pathway Certificate of Completion is a 35 credit, nine-month program designed to get highly trained, qualified, certified medical assistants into the local workforce quickly due to an extreme shortage of medical assistants in Central Oregon.

This program is in partnership with a local clinic, and the courses begin once per year in Spring term. Students may re-enter and complete the one-year certificate of completion.

Upon successful completion of the program, students receive a certificate of completion and are eligible to submit an application to sit for the American Association of Medical Assistants (AAMA) Certified Medical Assistant (CMA) certification examination. Upon passing the AAMA exam, medical assistants earn the CMA.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- Apply foundations of clinical practice to provide evidence-based, quality care for patients.
- Implement concepts of applied communication to optimize patient care and promote positive interactions in the professional environment.
- Utilize knowledge of medical business practices in the provision of patient care and services.
- Demonstrate medical law and ethics in the application of medical assisting practice.
- Implement safety and emergency practices in the course of patient care delivery and outpatient practice.
- 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

Other Entrance Requirements

Required:

- Must be 18 years of age or older
- Criminal history check and 10-panel drug screen with vendor chosen by the College; see the [program page](#) for more information
- Documentation of current immunizations: TB blood titer, MMR, hepatitis B, varicella, Tdap, flu
- American Heart Association Basic Life Support for Healthcare Providers CPR and first aid training will need to be completed prior to entrance into practicum

- Additional immunizations, tracking fees, or background checks may be required by practicum sites at the student's expense
- Refer to [program technical standards](#) (physical, medical, safety, and other requirements that an individual must meet in order to be eligible for admission) for more information

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.

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

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 and titers: \$0 to \$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: \$20
- Cengage Learning Management System and online textbooks: \$179

Enrollment Fees

- Lab fees: \$665 to \$765

Course Requirements

Course	Title	Credits
Core Courses		
MA 110	Introduction to Clinical Medical Assisting	7
MA 111	Introduction to Professional Medical Assisting	4
MA 120	Clinical Medical Assisting II	7
MA 121	Administrative Medical Assisting	5
MA 137	Application of Professional Medical Assisting	4
MA 147	Medical Assistant Practicum I	5
MA 150	Pharmacology for Medical Assistants	3
Total Credits		35

Advising Notes

Program entry will be by instructor approval. Please contact the Program Director, Shannon Waller by email swaller@cocc.edu or by phone 541-318-3722.

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

Sample Plan

First Term		Credits
MA 110	Introduction to Clinical Medical Assisting	7
MA 111	Introduction to Professional Medical Assisting	4
MA 150	Pharmacology for Medical Assistants	3
Credits		14
Second Term		Credits
MA 120	Clinical Medical Assisting II	7
MA 121	Administrative Medical Assisting	5
Credits		12
Third Term		Credits
MA 137	Application of Professional Medical Assisting	4
MA 147	Medical Assistant Practicum I	5
Credits		9
Total Credits		35

Music

The Music program offers classes that increase understanding and skill in the musical arts. The program serves as a stepping stone for students interested in a transfer degree and provides opportunities for those who wish to develop their talents as instrumental and vocal musicians. It also plays a vital role in our local community by providing performance opportunities for hundreds of musicians with the [Central Oregon Symphony](#), [Cascade Chorale](#), College Choir, Vocal Jazz Ensemble, [Cascade Winds Symphonic Band](#), and [Big Band Jazz](#) who perform 30 concerts each season for thousands of Central Oregonians. Whether students enjoy performing, listening, or scholarship, music at COCC has something for everyone.

See the [Music](#) page for more information.

Contact:

[Colette Hansen \(chansen@cocc.edu\)](mailto:chansen@cocc.edu)
541-383-7510
Pence Hall, Bend Campus

Department: Fine Arts and Communication
Department Chair: [Lilli Ann Linford-Foreman \(lforeman@cocc.edu\)](mailto:lforeman@cocc.edu)

Programs

Transfer

Associate of Arts Oregon Transfer

- [Music - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 308)

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)

Recommended to be taken with: MUS 197A.

A select group of singers that focuses on various jazz idioms: blues, funk, Latin and straight-ahead. Enrollment is by audition. 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 199 Selected Topics: Music Lessons (1-4 Credits)

Provides a learning experience in music lessons not currently available; this course is in development to be proposed as a permanent course.

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 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.

MUP 298 Independent Study: Music - Small Ensembles/Lessons (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

MUP 299 Selected Topics: Music Lessons (1-4 Credits)

Provides a learning experience in music lessons not currently available; this course is in development to be proposed as a permanent course.

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: Basic understanding of the fundamentals of music theory. Recommended to be taken with: MUS 114.

Focuses on harmony of the common-practice period with attention to part writing, and analysis techniques.

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)

Recommended to be taken with: MUS 111.

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 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)

Explores topics of current interest in the music discipline.

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 (1-4 Credits)

This course is in development.

MUS 201 Introduction to Music: Antiquity-1800 (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 from the Medieval, Renaissance, Baroque and Classical eras.

MUS 202 Introduction to Music: 1800-Present (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 from the Romantic, Twentieth Century and Contemporary eras.

MUS 203 Introduction to Music: World Music (3 Credits)

Focuses on the place of music in human society. Examines instruments, people, and activities surrounding musical events in diverse parts of the world. Introduces the field of ethnomusicology, the discipline that studies music and music cultures of the world, how they make music, and how they interpret and engage with the music that they make.

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 288 Special Studies: Music (1-4 Credits)

Explores topics of current interest in the music discipline.

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.

MUS 299 Selected Topics: Music (1-4 Credits)

Provides a learning experience in music not currently available; this course is in development to be proposed as a permanent course.

Music - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer with a focus in music meets Oregon transfer degree requirements and allows students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. The degree includes many of the core courses typically required during the first two years of a program leading to a bachelor's degree in music.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

While the program has no formal entrance requirements, individual ensembles have audition requirements that must be met before enrollment. Consult with individual ensemble directors for audition information; contact information can be found on the [Music page](#).

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommend: MTH 105		
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
Recommend: COMM 218 or COMM 219		
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses chosen from at least two prefixes		9-12
Recommend: MUS 111 and MUS 201 ²		
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
<u>Science/Math/Computer Science:</u> (p. 66)		
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

Recommend: MUS 112, MUS 113, MUS 114, MUS 115, MUS 116, MUS 202, MUS 203, MUS 205, MUS 211, MUS 212, MUS 213, MUS 214, MUS 215, MUS 216

Total Credits **90-106**

- ¹ HHPA activity courses (1 credit each) are not to be duplicated.
- ² Additional MUS courses beyond the required 2 for Arts and Letters will be applied to the AAOT as elective credits.
- ³ As indicated in the Sample Plan, music majors should plan to take the two-year sequence of Musicianship IA, IB, IC, IIA, IIB and IIC, and Music Theory IA, IB, IC, IIA, IIB and IIC. If possible, music majors should also participate in a performing ensemble each term (one credit) and work to obtain proficient keyboard skills, which can be gained by taking Piano Class I, II and III. Private lessons are also available. Ensembles, piano class and private lessons will add additional credits to those given in the Sample Plan. It is possible to exchange some of the recommended electives with these options.

Advising Notes

- While not required, MUS 201 Introduction to Music: Antiquity-1800, MUS 202 Introduction to Music: 1800-Present, and MUS 203 Introduction to Music: World Music are excellent survey courses of music history and provide a solid background for future, in-depth studies of music history.
- While not required for the AAOT, private lessons (applied voice, violin, trombone, etc.) are an integral part of the music major. Studying with a private teacher fosters individual growth and technique development; it provides a solid background in solo repertoire, proper language enunciation, and in-depth studies of music genres.
- Two years of a world language is strongly 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, such as Music Theory, intended specifically for music majors. Instead, institutions test students upon arrival to assess what they have learned in previous courses to place students at the appropriate level for their program. Students who perform well in the College's music theory and musicianship courses regularly meet or exceed the requirements to continue on with the next level of study at the transfer institution; for example, 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 (recommend MUS 111)		3
Elective (recommend MUS 114)		2
Mathematics (recommend MTH 105)		4
Oral Communication (recommend COMM 218 or COMM 219)		3-4
WR 121	Academic Composition	4
Credits		16-17
Second Term		Credits
Discipline Studies Arts & Letters (recommend MUS 201)		3
Discipline Studies Social Science		3-4
Elective (recommend MUS 112)		3
Elective (recommend MUS 115)		2
Health (3 credits with HHP or HHPA prefix) ¹		3
WR 122 or WR 227	Argument, Research, and Multimodal Composition or Technical Writing	4
Credits		18-19
Third Term		Credits
Discipline Studies Arts & Letters (non-MUS prefix with Cultural Literacy designation)		3-4
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective (recommend MUS 113)		3
Elective (recommend MUS 116)		2
Elective (recommend MUS 202)		3
Credits		17-21
Fourth Term		Credits
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective (recommend MUS 211)		3
Elective (recommend MUS 214)		2
Elective (recommend MUS 203)		3
Credits		14-17
Fifth Term		Credits
Discipline Studies Science/Math/Computer Science		3-5
Discipline Studies Social Science		3-4
Elective (recommend MUS 212)		3
Elective (recommend MUS 215)		2
Elective (recommend MUS 205)		3
Credits		14-17
Sixth Term		Credits
Discipline Studies Science/Math/Computer Science		3-5
Elective (recommend MUS 213)		3
Elective (recommend MUS 216)		2
Elective		3
Credits		11-13
Total Credits		90-104

Nursing

Nursing is a diverse health care profession focused on the care of individuals, families, and communities. The College offers both the

curriculum to prepare students to transfer into a baccalaureate program and the training required to sit for exams to be a licensed practical nurse or a registered nurse and to enter a nursing career upon licensure.

The program is approved by the Oregon State Board of Nursing and nationally accredited by the Accreditation Commission for Education in Nursing.

See the [Nursing page](#) for more information.

Contact:

[Kristin Lambert \(klambert2@cocc.edu\)](mailto:klambert2@cocc.edu)
541-383-7248
Health Careers Center, Bend Campus

Department: Nursing
Department Chair: [Jane Morrow \(jmorrow1@cocc.edu\)](mailto:jmorrow1@cocc.edu)

Programs

Career and Technical Education

Associate of Applied Science

- [Nursing \(RN\) - Associate of Applied Science \(AAS\)](#) (p. 311)

Two-Year Certificate of Completion

- [Practical Nursing - Two-Year Certificate of Completion \(CC2\)](#) (p. 313)

Transfer

Associate of Arts Oregon Transfer

- [Nursing - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 315)

Courses

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 112 Introduction to Community Nursing (2 Credits)**Prerequisites:** NUR 106.

Introduces foundational content for the community-based nurse, to better prepare a student for a career in community nursing. Includes community health topics such as epidemiology, environment, culture, ethics, health policy, global health topics and emerging infectious disease. Explore strategies to promote healthy partnerships in schools, faith communities, marginalized groups, and with the elderly as well as gain an understanding of the role of health policy in relationship to healthy communities.

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 Associate of Applied Science in Nursing provides students with the academic and clinical preparation to sit for the national licensure exam (NCLEX) upon program completion and provides a career ladder with exit points at the nursing assistant or practical nurse after the first year and registered nurse after the second year.

Students who choose to exit the program at the end of the first three terms will be awarded the Practical Nursing One Year Certificate of Completion, which qualifies students to take the NCLEX-PN national licensure examination and to apply for licensure as a practical nurse from a state board of nursing. Students may also apply for the CNA I or CNA II certificate after completing three terms. Students who successfully complete the first year of nursing courses may continue on to the registered nurse sequence of courses without additional application requirements.

After completing required support and prerequisite courses and all six terms of nursing courses, students are awarded the Associate of Applied Science in Nursing and are eligible to take the NCLEX-RN national licensure examination and apply for licensure as a registered nurse from a state board of nursing.

Licensed practical nurses who graduated from another nursing program and have a current license may seek advanced placement into the program's registered nurse level and should see the [nursing advanced placement page](#) for requirements and application information.

A student may choose to complete the Associate of Arts Oregon Transfer with a focus in Nursing but should note that requirements are different.

The program is approved by the Oregon State Board of Nursing and nationally accredited by the Accreditation Commission for Education in Nursing.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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:

- The 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
 - Choose one course from the following human relations courses:
 - AH 115 Cultural Responsiveness in Allied Health
 - COMM 115 Introduction to Intercultural Communication
 - COMM 218 Interpersonal Communication
 - COMM 219 Small Group Communication
 - MTH 105 Math in Society or course from the foundational requirements math list
 - WR 121 Academic Composition
- Chemistry, anatomy and physiology, and microbiology courses must have been successfully completed no more than five years before the time of application.

Recommended:

- Students are recommended to complete the following courses before 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
- Students admitted to the Nursing program are expected to be computer literate and utilize different computer programs in their courses; CIS 120 Computer Concepts is recommended to enhance computer skills and usage if needed.

Other Entrance Requirements

- In-district residency status
- Documentation of completion of immunizations and screenings listed on the [program page](#)
- Current healthcare provider American Heart Association Basic Life Support certification (must be maintained throughout program duration)
- Complete criminal history checks as a condition of acceptance into the nursing program (see the [program page](#) for details)
- Must complete a 10 panel urine drug screen with Verified Credentials, Inc.

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

- Nursing textbooks and software: \$2,000
- Specialized clothing or uniform: \$175
- Tools and equipment: \$175
- My Clinical Exchange (mCE): \$37.00 first year, \$37.00 second year
- Verified Credentials, Inc. background check, drug screen, immunization tracking: \$120
- American Heart Association Basic Life Support certification: approximately \$90

Enrollment Fees

- Nursing program fee: \$450 per term

Licensing Costs to Oregon State Board of Nursing

- State exam/licensure fee: \$360 (\$160 RN-OR, \$200 NCLEX)
- State fingerprinting fee: \$64.50 (RN)

* Does not include cost of immunizations and/or titers if needed.

* Additional costs for optional LPN licensure.

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
MTH 105	Math in Society (or choose one course from the foundational requirements math list.)	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
Choose one course from the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
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		106-108

Advising Notes

Students seeking transfer admission into the AAS in Nursing must meet with the pre-admission nursing advisor and advanced placement program coordinator to determine eligibility before entry. Students transferring to another institution should be advised that often only selected credits from a community college program 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.
 - 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](#).

Sample Plan

First Year		Credits
Fall		
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 or General Chemistry I	5
WR 122 or WR 227	Argument, Research, and Multimodal Composition or Technical Writing	4
Credits		13
Spring		
BI 233	Human Anatomy and Physiology III	4
BI 234	Microbiology	4
FN 225 or HHP 240	Human Nutrition or Science of Nutrition	3-4
Choose one course from the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	

COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
Credits		14-16
Second Year		
Fall		
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		
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		106-108

Practical Nursing - Two-Year Certificate of Completion (CC2)

Description

The Practical Nursing Two-Year Certificate of Completion qualifies students to take the national licensure examination (NCLEX-PN) and to apply for licensure as a practical nurse from a state board of nursing.

Students can exit after successfully completing the first year prepared to be a practical nurse. Students can exit after successfully completing the second year prepared to be a registered nurse. Students who successfully complete the first year of nursing courses may continue into the registered nurse course sequence without additional application requirements.

The program is approved by the Oregon State Board of Nursing.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Nurse as Health Promoter and Care Provider: Apply all steps of the nursing process in the delivery of patient-centered care for two patients based on established standards of practice.
2. Nurse as Care Manager: Set priorities, organize, and work cooperatively in delivering nursing care to a group of patients.
3. Nurse as Professional Colleague: Model professional behaviors within the scope of practice of the licensed practical nurse.

4. Nurse as Quality Care Advocate: Implement changes in practice that are based on current nursing science.
5. Nurse as User of Technology and Informatics: Maintain the competency necessary to properly use the informatics and technologies of the practice setting.

Entrance Requirements

Academic Entrance Requirements

Required:

- The program has selective admission based on a 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 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
- Choose one course from the following human relations courses:
 - AH 115 Cultural Responsiveness in Allied Health
 - COMM 115 Introduction to Intercultural Communication
 - COMM 218 Interpersonal Communication
 - COMM 219 Small Group Communication
- MTH 105 Math in Society or course from the foundational requirements math list
- WR 121 Academic Composition
- Chemistry, anatomy and physiology, and microbiology courses must have been successfully completed no more than five years before the time of application.

Recommended:

- Students are recommended to complete the following courses before 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
- Students admitted to the nursing program are expected to be computer literate and to use different computer programs in their courses. CIS 120 Computer Concepts is recommended to enhance computer skills and use if needed.

Other Entrance Requirements

Required:

- In-district residency status
- Documentation of completion of immunizations and screenings listed on the [program page](#)

- Current healthcare provider American Heart Association Basic Life Support certification (must be maintained throughout program duration)
- Completed criminal history checks as a condition of acceptance into the nursing program (see the [program page](#) for details)
- Completed 10-panel urine drug screen with Verified Credentials, Inc.

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

- Nursing textbooks and software: \$2,000
- Specialized clothing or uniform: \$175
- Tools and equipment: \$175
- My Clinical Exchange (mCE): \$37.00
- Verified Credentials, Inc. background check, drug screen, immunization tracking (does not include cost of immunizations and/or titers if needed): \$120
- American Heart Association Basic Life Support certification: approximately \$90

Enrollment Fees

- Nursing program fee: \$450 per term

Licensing Costs to Oregon State Board of Nursing

- State exam/licensure fee: \$360 (\$160 LPN-OR, \$200 NCLEX exam cost)
- State fingerprinting fee: \$64.50

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
MTH 105	Math in Society (or choose one course from the foundational requirements math list.)	4
WR 121	Academic Composition	4
Support Courses		
PSY 215	Developmental Psychology	4
Choose one of the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
Core Courses		
NUR 106	Nursing I	12
NUR 107	Nursing II	10
NUR 108	Nursing III	11
Total Credits		64-65

Advising Notes

Students seeking transfer admission into the program must meet with the pre-admission nursing advisor and advanced placement program coordinator to determine eligibility prior to entry. Students transferring

to another institution should be advised 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 the 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](#).

Sample Plan

First Term		Credits
BI 231	Human Anatomy and Physiology I	4
MTH 105	Math in Society (or higher)	4
WR 121	Academic Composition	4
Credits		12
Second Term		
BI 232	Human Anatomy and Physiology II	4
PSY 215	Developmental Psychology	4
Choose one of the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
Credits		11-12
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		64-65

Nursing - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer (AAOT) with a focus in nursing is a 90-credit degree that allows students to transfer with junior standing to all Oregon public universities and some private universities. For students planning to apply to Bachelor of Science in Nursing (BSN) program, an additional benefit of the AAOT is the potential admission points awarded to those with a degree, thus making an application more competitive. However, the majority of BSN programs have prerequisite coursework that exceeds the AAOT's requirements. It is important for students to identify their potential transfer institutions as early as possible so that their course plan can most accurately reflect the transfer institution's requirements.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
Recommend: HHP 295		
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommend: MTH 111		
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		

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

<u>Arts and Letters:</u> (p. 61)	
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	
<u>Social Science:</u> (p. 68)	
Choose four courses from at least two prefixes	12-16
Recommend: ANTH 103, PSY 201, PSY 215, SOC 201	
<u>Science/Math/Computer Science:</u> (p. 66)	
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	39
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 eleven baccalaureate degree programs, with five of those being campuses affiliated with Oregon Health & Science University. The [Oregon State Board of Nursing \(OSBN\)](#) maintains an approved educational program list with four broad categories: practical nursing programs, registered nurse associate degree programs, registered nurse baccalaureate degree programs, and graduate programs. Students should use the OSBN approved program list when researching Oregon Bachelor of Science in Nursing options.

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
<u>Oral Communication:</u> (p. 60)	3-4
WR 121 Academic Composition	4
Credits	15-16
Second Term	Credits
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	4
Argument, Research, and Multimodal Composition or 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

Nursing Assistant

The Nursing Assistant program prepares students to be a certified nursing assistant (CNA).

A certified nursing assistant is a member of a healthcare team under the direct supervision of a registered nurse or licensed practical nurse. A CNA helps patients with daily living activities and other healthcare needs.

See the [Nursing Assistant page](#) for more information.

Contact:

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541-383-7586
Health Careers Center, Bend Campus

Department: Nursing
Department Chair: [Jane Morrow \(jmorrow1@cooc.edu\)](mailto:jmorrow1@cooc.edu)

Programs

Career and Technical Education

One-Year Certificate of Completion

- [Nursing Assistant - One-Year Certificate of Completion \(CC1\)](#) (p. 316)

Courses

NUR 103 Nursing Assistant (9 Credits)

Prerequisites: Department approval based on proof of holding a current American Heart Association, BLS Provider CPR card, passing a criminal history check, passing a urine drug screen, and meeting immunization and TB test requirements.

Covers basic nursing assistant level one care and effective communication skills for clients in acute and long-term care facilities. Discusses issues of confidentiality, client rights, and role of the nursing assistant. Students are eligible to sit for the Oregon State Board of Nursing sanctioned certified nursing assistant level one examination upon completion of the course. Clinic takes place in acute and long-term care facilities.

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. Focuses on technical skills, interpersonal skills and communication, safety, and infection control with the outcome of demonstrated proficiency in knowledge, skills and abilities in these areas. Includes clinical component to be scheduled at a clinical partner. Requires: a current unencumbered Oregon CNA 1 certificate (verified prior to registration); current American Heart Association BLS Provider CPR card; a criminal history check; immunization and tuberculosis test (required after registration but prior to class participation).

Nursing Assistant - One-Year Certificate of Completion (CC1)

Description

The Nursing Assistant One-Year Certificate of Completion is a three-term program that trains individuals to perform authorized nursing assistant duties in acute care, sub-acute care, skilled-nursing facilities, and 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 level 1 and level 2.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

1. 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 this program.

Other Entrance Requirements

- Documentation of current immunizations (Centers for Disease Control adult schedule) by the assigned due date
- Completed criminal history checks as a condition of enrollment in NUR 103 Nursing Assistant and NUR 104 Certified Nursing Assistant: Level 2
- Completed 10-panel urine drug screen with Verified Credentials, Inc. before entering the program. With the exception of certain prescribed medications, students with a positive drug screen that prevents them from attending clinical will be disqualified from entering the program. See the [Nursing Assistant page](#) for more information.
- A current American Heart Association (International Liaison Committee on Resuscitation compliant) Basic Life Support Provider CPR card by the assigned due date
- Students must be 18 years of age by the start of clinical rotations. Please contact the department for detailed information.

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

- Stethoscope: \$30
- Uniform: \$30 to \$80
- Books: \$500 per term
- Course and lab packets: \$100 per term
- Immunizations and titers: \$600
- Immunization tracking: \$10
- Criminal background check: \$55
- Urine drug screen: \$45
- Nursing assistant competency examination: \$106
- Electronic fingerprinting: \$70.50
- American Heart Association Basic Life Support Provider CPR card: \$60

Course Requirements

Course	Title	Credits
Core Courses		
HD 100CS	College Success	3
HD 109	Effective Job Search Strategies	2-3
or HD 103	Strategies for Life Management	
or HD 110	Career Planning	
Choose one course from the following:		3-4
HHP 100	Introduction to Public Health	
HHP 210	Introduction to the Health Care System	
HHP 248	Health Psychology	
HHP 258	Holistic Wellness	
HHP 283	Introduction to Alternative Medicine	
NUR 103	Nursing Assistant	9
NUR 104	Certified Nursing Assistant: Level 2	6
PSY 215	Developmental Psychology	4
Other Required Courses		
Choose one math course from the following:		3-4
AH 105	Calculations for Allied Health	
MTH 102	Applied Technical Mathematics	

MTH 105	Math in Society	
Or one math course from the foundational requirements math list		
BA 214	Business Communications	3-4
or WR 121	Academic Composition	
CIS 120	Computer Concepts (or Computer Competency Test)	0-4
Choose one course from the following:		3-5
AH 115	Cultural Responsiveness in Allied Health	
BA 178	Customer Service	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	

Total Credits **36-46**

Advising Notes

The Nursing Assistant One-Year Certificate of Completion 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.

Program courses 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.

NUR 104 Certified Nursing Assistant: Level 2 will likely only be offered once a year. If a student cannot take NUR 104 Certified Nursing Assistant: Level 2 in the term it is offered, substitutes will be allowed for those credits, such as additional Health and Human Performance courses.

NUR 103 Nursing Assistant and NUR 104 Certified Nursing Assistant: Level 2 are approved by OSBN (971-673-0685 or oregon.gov/OSBN).

For patient and personnel safety reasons, students are recommended to avoid 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 program director and/or CAP Services for more 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.

Sample Plan

First Year		Credits
Fall		
AH 105	Calculations for Allied Health	3-4
or MTH 102	or Applied Technical Mathematics	
or MTH 105	or Math in Society	
BA 214	Business Communications	3-4
or WR 121	or Academic Composition	

HD 100CS	College Success	3
Choose one course from the following:		3-4
HHP 100	Introduction to Public Health	
HHP 210	Introduction to the Health Care System	
HHP 248	Health Psychology	
HHP 258	Holistic Wellness	
HHP 283	Introduction to Alternative Medicine	
Credits		12-15
Winter		
CIS 120	Computer Concepts	0-4
NUR 103	Nursing Assistant	9
PSY 215	Developmental Psychology	4
Credits		13-17
Spring		
HD 103	Strategies for Life Management	2-3
or HD 109	or Effective Job Search Strategies	
or HD 110	or Career Planning	
NUR 104	Certified Nursing Assistant: Level 2	6
Choose one course from the following:		3-5
AH 115	Cultural Responsiveness in Allied Health	
BA 178	Customer Service	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
Credits		11-14
Total Credits		36-46

Outdoor Leadership

Outdoor leadership prepares professionals to understand the importance of maintaining natural areas because these areas provide adventurous, challenging, and educational opportunities. Students may work in positions related to outdoor recreation, outdoor education, adventure education, wilderness therapy, and tourism and leisure.

See the [Outdoor Leadership page](#) for more information.

Contact:

Tim Peterson
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Mazama Hall, Bend Campus

Department: Health and Human Performance
Department Chair: [Jessica Russell \(jlussell@cooc.edu\)](mailto:jlussell@cooc.edu)

Programs

Transfer

Associate of Science

- [Outdoor Leadership \(OSU Transfer\) Emphasis AS - Associate of Science \(AS\)](#) (p. 321)

Associate of Arts Oregon Transfer

- [Outdoor Leadership - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 320)

Courses

OL 111 Introduction to Outdoor Leadership (3 Credits)

Prerequisites: WR 065 (or higher) or minimum placement Wr/Comm Level 7.

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 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 188 Special Studies: Outdoor Leadership (1-4 Credits)

Explores topics of current interest in the outdoor leadership discipline.

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 194AC Avalanche Level II (2 Credits)

Recommended preparation: OL 194AA.

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 288 Special Studies: Outdoor Leadership (1-4 Credits)

Explores topics of current interest in the outdoor leadership discipline.

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.

OL 299 Selected Topics: Outdoor Leadership (1-4 Credits)

Provides a learning experience in outdoor leadership not currently available; this course is in development to be proposed as a permanent course.

Outdoor Leadership - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer with a focus in outdoor leadership prepares students to transfer to a baccalaureate institution. Outdoor leadership includes careers in outdoor recreation, outdoor education, wilderness therapy, and tourism and leisure enterprises.

The 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 and will understand comprehensive

knowledge and standards. Highly skilled and knowledgeable faculty exemplify the highest level of standards, integrity, and ethics.

The College also offers an Outdoor Leadership Emphasis Associate of Science designed for transfer to OSU-Cascades.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
<u>Science/Math/Computer Science:</u> (p. 66)		
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	Technical Skills for Outdoor Leadership	
OL 207	Seminar in Outdoor Leadership	
OL 244	Psychology of Risk and 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 Program Instruction and Guiding
OL 294MB	Mountain Bike Guiding and Trail Stewardship
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 (OL) program is a cohort program where students complete courses each term with a single peer group. Before taking OL courses, students should complete as much of their general education requirements as possible.

Students begin introductory/fundamental OL courses in Fall term, which is a particularly special time because students attend an outdoor classroom daily for the entire term and complete an eight-day expedition in November. After Fall term, students complete prescribed courses in Winter and Spring terms. During Winter term, students work on advanced theory and application courses and gain more extensive understanding about the practices of professional outdoor leaders. In Spring term students complete advanced skills courses aimed at developing students' practice of professional standards within specific activities.

First-year completion requirements for enrollment into second-year 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 higher; completion of a minimum of 36 college credits made up, in part, by the above courses and 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
<u>Mathematics:</u> (p. 60)		4
<u>Oral Communication:</u> (p. 60)		3-4
WR 121	Academic Composition	4
Credits		14-15

Second Term

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 or Technical Writing	4
Credits		16-22

Third Term

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

Elective (recommend OL 111)	3	
Elective (recommend OL 171)	2	
Elective (recommend OL 255)	5	
Elective (recommend OL 263)	5	
Credits		15

Fifth Term

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

Discipline Studies Science/Math/Computer Science	3-5	
Electives (recommend two of the following):	6	
OL 294AC	Alpine Climbing	
OL 294CA	Canoe Program Instruction and Guiding	
OL 294MB	Mountain Bike Guiding and Trail Stewardship	
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

Outdoor Leadership (OSU Transfer) Emphasis AS - Associate of Science (AS)

Description

The Outdoor Leadership (OSU Transfer) Emphasis Associate of Science 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 develop current and industry-accepted skills. Highly skilled and knowledgeable faculty exemplify the highest level of standards, integrity, and ethics. The degree is designed for transfer to OSU-Cascades and aligns with lower-division requirements.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met before 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 of Public Speaking	4
<u>Mathematics (OSU):</u> (p. 76) ¹		
Fitness		
HHP 295	Health and Fitness	3
Perspectives Courses ^{1,2}		
Choose one course from each of the following categories:		
<u>Physical Science:</u> (p. 77) ¹		
<u>Biological Science:</u> (p. 77) ¹		
<u>Physical or Biological Science:</u> (p. 77) ¹		
<u>Western Culture:</u> (p. 77) ¹		
<u>Cultural Diversity:</u> (p. 77) ¹		
<u>Literature and the Arts:</u> (p. 78) ¹		
<u>Social Processes and Institutions:</u> (p. 78) ¹		
<u>Difference, Power and Discrimination:</u> (p. 78) ¹		
Program Requirements		
BA 101	Introduction to Business	4
FOR 255	Resource Interpretation	3
OL 111	Introduction to Outdoor Leadership	3
OL 171	Technical Skills for Outdoor Leadership	2
OL 207	Seminar in Outdoor Leadership	2
OL 244	Psychology of Risk and 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:		
OL 294AC	Alpine Climbing	3
OL 294CA	Canoe Program Instruction and Guiding	
OL 294MB	Mountain Bike Guiding and Trail Stewardship	
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

Total Credits **94-100**

- ¹ Select from the appropriate category in the [OSU Baccalaureate Core course list](#) (p. 76).
- 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 Outdoor Leadership (OL) program is a cohort program where students complete courses each term with a single peer group. Before taking OL courses, students should complete as much of their general education requirements as possible.

Students begin introductory/fundamental OL courses in Fall term, which is a particularly special time because students attend an outdoor classroom daily for the entire term and complete an eight-day expedition in November. After Fall term, students complete prescribed courses in Winter and Spring terms. During Winter term, students work on advanced theory and application courses and gain more extensive understanding about the practices of professional outdoor leaders. In Spring term students complete advanced skills courses aimed at developing students' practice of professional standards within specific activities.

First-year completion requirements for enrollment into second-year 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 higher; completion of a minimum of 36 college credits made up, in part, by the above courses and 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	Introduction to Business	4
<u>Mathematics (OSU):</u> (p. 76)		4
<u>Physical Science:</u> (p. 77)		4-5
WR 121	Academic Composition	4
Credits		16-17

Winter

<u>Biological Science:</u> (p. 77)		4-5
COMM 111	Fundamentals of Public Speaking	4

<u>Physical or Biological Science:</u> (p. 77)		4-5
WR 122	Argument, Research, and Multimodal Composition	4
Credits		16-18
Spring		
<u>Difference, Power and Discrimination:</u> (p. 78)		4
HHP 295	Health and Fitness	3
<u>Literature and the Arts:</u> (p. 78)		3-4
<u>Social Processes and Institutions:</u> (p. 78)		3-4
Credits		13-15
Second Year		
Fall		
OL 111	Introduction to Outdoor Leadership	3
OL 171	Technical Skills for Outdoor Leadership	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
<u>Western Culture:</u> (p. 77)		3-4
Credits		15-16
Spring		
<u>Cultural Diversity:</u> (p. 77)		4
Elective		4
OL 244	Psychology of Risk and Adventure	3
FOR 255	Resource Interpretation	3
Choose one of the following:		3
OL 294AC	Alpine Climbing	
OL 294CA	Canoe Program Instruction and Guiding	
OL 294MB	Mountain Bike Guiding and Trail Stewardship	
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

Pharmacy Technician

A pharmacy technician is a health care provider who performs pharmacy-related functions under the supervision of a licensed pharmacist. Pharmacy technicians work in a variety of settings, including hospitals, clinics, community pharmacies, and other health care agencies.

The Pharmacy Technician program 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. The program is accredited through [ASHP/](#)

[ACPE](#) and is the only accredited pharmacy technician program in Oregon east of the Cascades.

See the [Pharmacy Technician](#) page for more information.

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Health Careers Center, Bend Campus

Department: Allied Health

Department Chair: [Shannon Waller \(swaller@cocc.edu\)](mailto:swaller@cocc.edu)

Programs

Career and Technical Education

One-Year Certificate of Completion

- [Pharmacy Technician - One-Year Certificate of Completion \(CC1\)](#) (p. 325)

Courses

PHM 100 Pharmacy Technician Practice I (5 Credits)

Corequisites: PHM 101, PHM 115, PHM 120.

Recommended preparation: MTH 015 (or higher) or minimum placement Math Level 7; WR 065 (or higher or BA 214) or minimum placement Wr/Comm Level 7; and BI 105.

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:** PHM 100, PHM 101 and PHM 120.**Corequisites:** PHM 130, PHM 140.**Recommended preparation:** MTH 015 (or higher) or minimum placement Math Level 7.

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 Pharmacy Technician 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 288 Special Studies: Pharmacy Technician (1-4 Credits)

Explores topics of current interest in the discipline.

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.

PHM 299 Selected Topics: Pharmacy Technician (1-4 Credits)

Provides a learning experience not currently available in the pharmacy technician program; this course is in development to be proposed as a permanent course.

Pharmacy Technician - One-Year Certificate of Completion (CC1)

Description

The Pharmacy Technician One-Year Certificate of Completion prepares students for employment in the pharmacy industry. Pharmacy technicians are skilled workers trained to work in a pharmacy and assist in all areas of the pharmacy not requiring a registered pharmacist's professional judgment. Practice areas for pharmacy technicians include retail, hospital, manufacturing, disease state management, mail order, and insurance claim specialists. Pharmacy technicians process prescriptions and medication orders and play an integral role in maintaining the pharmacy department.

The curriculum focuses on the abilities needed to assist the pharmacist and provides the skills necessary to process prescriptions accurately, to participate in administration and management of a pharmacy, and to maintain inventory. Topics 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. To gain workplace experience, students will participate in a hospital and retail pharmacy practicum.

The 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 Oregon.

The program is accredited through [ASHP/ACPE](#).

Program courses are offered in an online and hybrid format.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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 Oregon Administrative Rules, various standards of Joint Commission, and apply principles of USP 797 and USP 800.
6. Process insurance claims and explain benefit structures.

Entrance Requirements

Academic Entrance Requirements

- Completion of MTH 015 Basic Mathematics or higher or minimum placement Math Level 7
- Completion of WR 065 Rhetoric and Critical Thinking II or higher or minimum placement Wr/Comm Level 7
- BI 105 Essentials of Human Biology
- Completion of COCC's [online orientation](#)

Other Entrance Requirements

- A high school diploma, a high school transcript noting successful graduation, or a GED
- 18 years of age
- All students enrolled in the 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 the College prior to entry into the 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 see the [Pharmacy Technician advising page](#) for detailed information.
- Documentation of current immunizations (MMR, Tdap, varicella, hepatitis B, flu, TB, blood titer)
- American Heart Association Health Care Provider or American Red Cross CPR card

Additional Program Costs (Beyond Standard Tuition/Fees and Textbooks)

Material Costs

- In some cases, fees associated with required immunizations and tuberculosis screening: \$150 to \$300
- Drug screening: \$65
- Background check: \$55
- American Heart Association CPR for Health Care Providers certificate: \$65
- Distance students will be responsible for the cost of travel and expenses to campus for one lecture lab weekend (Fri-Sun) in the Fall and Winter terms.

Enrollment Fees

- Program fee: \$150 per term (a total of \$450 for the three-term cohort)

Course Requirements

Course	Title	Credits
Prerequisite Courses		
BI 105	Essentials of Human Biology	3
Support Courses		
Choose one course from the following:		3-4
AH 105	Calculations for Allied Health	
MTH 105	Math in Society	
Or choose one course from the foundational requirements math list		
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	Pharmacy Technician Practicum I: Hospital/ Institutional	4
PHM 191	Pharmacy Technician Practicum II: Retail/ Community	4

Other Required Courses:

Choose one course from the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	

Total Credits 52-55

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, fingerprinting and a birth certificate OR passport. 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](#) 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 prerequisite 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
Choose one course from the following: 3-4

AH 105	Calculations for Allied Health	
MTH 105	Math in Society	
Or choose one course from the foundational requirements math list		
BI 105	Essentials of Human Biology	3
BA 214 or WR 121	Business Communications or 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

Choose one course from the following:		3-4
AH 115	Cultural Responsiveness in Allied Health	
COMM 115	Introduction to Intercultural Communication	
COMM 218	Interpersonal Communication	
COMM 219	Small Group Communication	
PHM 181	Pharmacy Technician Seminar	2
PHM 190	Pharmacy Technician Practicum I: Hospital/Institutional	4

PHM 191	Pharmacy Technician Practicum II: Retail/Community	4
Credits		13-14
Total Credits		52-55

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. Studying political science introduces 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, or national government, law, journalism, special interest groups, teaching, and research. Political science knowledge can enhance citizens' roles in community service and/or public office, and for those interested in a law degree, political science may be an excellent undergraduate major.

See the [Political Science page](#) for more information.

Contact:

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Modoc Hall, Bend Campus

Department: World Languages and Cultures

Department Chair: Murray Godfrey

Programs

Transfer

Associate of Arts Oregon Transfer

- [Political Science - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 327)

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: WR 121.

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 288 Special Studies: Political Science (1-4 Credits)

Explores topics of current interest in the discipline.

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 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.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline Studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes ²		12-16
Recommend: PS 201, PS 204		
<u>Science/Math/Computer Science:</u> (p. 66)		
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 Bachelor of Arts 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 Bachelor of Science should consider taking more math and science courses. Language is not necessary. It is recommended that students pursuing a political science degree take additional social sciences courses to fulfill some elective credits. Economics, geography, and history courses are particularly helpful. For details, speak with an advisor.

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
<u>Mathematics:</u> (p. 60)	4
<u>Oral Communication:</u> (p. 60)	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 or 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 students understand themselves, other people, and the organisms that inhabit the earth. The program explores how behavioral choices are made 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 students for graduate work in experimental and clinical psychology and related areas, such as special education, social work, business, communications, law school, and health care.

See the [Psychology page](#) for more information.

Contact:

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Modoc Hall, Bend Campus

Department: Social Sciences

Department Chair: Ken Ruetters

Programs

Transfer

Associate of Arts Oregon Transfer

- [Psychology - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 330)

Courses

PSY 101 Applied Psychology (3 Credits)

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 higher) or minimum placement Wr/Comm Level 5.

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 higher) or minimum placement Wr/Comm Level 5.

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 higher) or minimum placement Wr/Comm Level 5.

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 210 Introduction to Cognitive Psychology (4 Credits)

Recommended preparation: WR 060 or minimum placement Wr/Comm Level 5.

Introduces cognitive psychology, a sub-discipline within psychology that focuses on the mental structures and processes that make sensation, perception, attention, memory, learning, language, problem solving and decision making possible. Gain fundamental knowledge that is applicable to every area of modern psychology.

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 215 Developmental Psychology (4 Credits)

Recommended preparation: WR 060 (or higher) or minimum placement Wr/Comm Level 5.

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: PSY 202 or SOC 201 and WR 060 (or higher) or minimum placement Wr/Comm Level 5.

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 higher) or minimum placement Wr/Comm Level 5.

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 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 higher) or minimum placement Wr/Comm Level 5.

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 higher) or minimum placement Wr/Comm Level 5.

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 Indonesian Field Study I: Preparation to Study Abroad (3 Credits)

Prerequisites: Instructor approval based on completion of Field Study Readiness Checklist.

This course is the first of a three-class sequence. Prepares students for international field research training about conservation, sustainability and biodiversity. Topics include Indonesian people, culture and history, Indonesian language. Students will development and design a conservation-related field research project that will be conducted in Indonesia.

PSY 262 Indonesian Field Study II: Global Health: Field Training and Research (6 Credits)

Prerequisites: PSY 261 and instructor approval based on completion of requirements outlined in PSY 261.

This course is conducted in Indonesia. Provides hands-on field research training and outreach experiences related to international conservation, sustainability and biodiversity. Student projects developed in PSY 261 are conducted in this course. P/NP grading.

PSY 263 Indonesian Field Study III: Communicating Indonesian Field Experience (3 Credits)

Prerequisites: PSY 262 and instructor approval based on completion of requirements outlined in PSY 261 and PSY 262.

Provides the opportunity to summarize, reflect, and discuss experiences with international field study and field research techniques completed in PSY 262 in Indonesia. Includes formal and informal presentation styles; discusses oral, written and visual formats for scientific communication. P/NP grading.

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 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.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (p. 58)		
Choose 3 credits ¹		3

Mathematics: (p. 60)	
Choose one course	4
Recommend: MTH 111	
Oral Communication: (p. 60)	
Choose one course	3-4
Writing: (p. 60)	
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. 63)	
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).	
Arts and Letters: (p. 61)	
Choose three courses from at least two prefixes	9-12
Social Science: (p. 68)	
Choose four courses from at least two prefixes	12-16
Recommend: PSY 201, PSY 202	
Science/Math/Computer Science: (p. 66)	
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

For specific advice about how coursework and extracurricular activities relate to transfer to four-year colleges and universities, please meet with a psychology advisor who will help navigate schools' frequently changing requirements and expectations. It can often feel complex and confusing, and schools have different specialties. Psychology advisors are here to help. As part of meeting with a psychology advisor, please consult websites and degree requirements for prospective schools*. Here are Oregon schools' psychology pages:

- [Eastern Oregon University](#)
- [Oregon State University](#)
- [Oregon State University - Cascades](#)
- [Oregon Health Sciences University](#)
- [Oregon Institute of Technology](#)
- [Portland State University](#)
- [Southern Oregon University](#)
- [University of Oregon](#)
- [Western Oregon University](#)

In general, the College does not have a language requirement, but most Oregon public colleges and universities do. 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.

Bachelor of Science (BS) versus Bachelor of Arts (BA) in Psychology: 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 for the AAOT. 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 BS. These will also partially fulfill the science/math/computer science discipline studies requirement. Language beyond entrance requirements is often not required for a BS degree.

Psychology is also a gateway to many other fields of study and careers. Your advisor can work with you to discuss these connections.

Laboratory science class recommendations: 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 through BI 233 Human Anatomy and Physiology III due to these courses relevance 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.

Additional classes and electives: 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. In addition to being electives, some courses satisfy specific degree requirements:

Science/math/computer science AAOT lab course requirements: PSY 204 Research Methods: Design and Analysis, PSY 213 Introduction to Physiological Psychology, and PSY 227 Animal Behavior

Social science AAOT requirements: PSY 210 Introduction to Cognitive Psychology, PSY 215 Developmental Psychology, PSY 216 Social Psychology, PSY 219 Abnormal Psychology, PSY 228 Positive Psychology, PSY 233 Psychology of Violence & Aggression

More electives: PSY 250 Readings in Psychology, PSY 261 Indonesian Field Study I: Preparation to Study Abroad, PSY 262 Indonesian Field Study II: Global Health: Field Training and Research, PSY 263 Indonesian Field Study III: Communicating Indonesian Field Experience, and any other potential special topics PSY courses that are offered.

Math and statistics: Psychology students will be required to take statistics when they transfer. Although MTH 111 College Algebra is sufficient for the math requirement, advisors recommend MTH 105 Math in Society and then 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 some colleges and universities, these classes do not fulfill the BS math requirements. Please make sure to reference four-year college and university requirements to see current expectations. PSY 204 Research Methods: Design and Analysis is also a good preparation for upper-division statistics required for a psychology BA or BS.

Clinical or counseling psychology: Students considering clinical or counseling psychology might consider the following electives: EMT 195 Crisis Intervention for the Emergency Medical Provider, 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.

* Please 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
<u>Oral Communication:</u> (p. 60)		3-4
WR 121	Academic Composition	4
Credits		14-16

Second Term		Credits
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	Argument, Research, and Multimodal	4
or WR 227	Composition or Technical Writing	
Credits		15-16

Third Term		Credits
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		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		
Discipline Studies Science/Math/Computer Science	3-5	
Elective	4	
Elective	4	
Elective	4	
Credits		15-17
Total Credits		90-104

Public Health

The public health field is dedicated to protecting and improving the health of individuals, families, communities, and populations where they live, learn, work, and play. Public health professionals aim to prevent problems from happening before people get sick or injured by promoting healthcare equity, quality, and accessibility.

Public health careers include program planners, program evaluators, researchers, educators, epidemiologists, health and safety engineers, advocacy and policy advisors, health communication specialists, community developers and organizers, global health development officers, minority health and health disparities experts, and environmental health specialists. Work activities may include developing educational programs, creating health promoting policies, providing social services, conducting mixed-methods research, and leading community development and health systems reform.

See the [Public Health page](#) for more information.

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Department: Health and Human Performance
Chair: [Jessica Russell \(jlrussell@cocc.edu\)](mailto:jlrussell@cocc.edu)

Programs

Transfer

Associate of Arts Oregon Transfer

- [Public Health - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 334)

Courses

HHP 100 Introduction to Public Health (4 Credits)

Recommended preparation: WR 065 or WR 121 or minimum placement Wr/Comm Level 9.

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: WR 065 or WR 121 or minimum placement Wr/Comm Level 9.

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 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 228 Health and Social Justice (4 Credits)

Recommended preparation: HHP 100.

Introduction to the intersection of health and social justice, to better understand socially unjust health differences (inequities) present in communities across the United States and abroad. Particular attention will be paid to the social ecological framework for health promotion and the social determinants of health. The course takes a deeper dive into public health challenges by exploring current health issues in the United States and globally. Examination of relevant historical issues, theories of justice, human rights, and empirical evidence of health inequities, with an emphasis in critical analysis and applied knowledge. Community-engaged strategies and service learning activities will be used to explore social injustices and health inequities.

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 WR 121 or minimum placement Wr/Comm Level 9.

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 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 WR 121 or minimum placement Wr/Comm Level 9.

First aid and 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; 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 a first aid card and an American Heart Association Basic Life Support for Provider Adult & Pediatric CPR card.

HHP 252A Fitness/First Aid (3 Credits)

Recommended preparation: WR 065 and MTH 015.

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 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 065 or higher or minimum placement Wr/Comm Level 7.

Farmer and author Wendell Berry once wrote that eating is an "agricultural act". It is also an ethical, social, political, and environmental act. In order to more fully understand the impact of our food choices, this course explores American food production from start to finish, past to present, and field to fork. Along the way we answer questions like: How does a plant grow? What is the difference between conventional vs. organic agriculture? How and why did our current food system develop? How much does a 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 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.

SUS 101 Introduction to Sustainability (4 Credits)

Explores the environmental, social, and economic dimensions of sustainability. Defines and applies basic principles of sustainability to address today's most pressing environmental and social challenges. Develops an understanding of how individual behaviors affect community and global health. Approaches sustainability from a multidisciplinary perspective by integrating faculty from across the curriculum, including public health, biology, natural resources, sociology, and economics. Includes 4 hours of service learning at an off-campus location.

SUS 180 Co-op Work Experience Sustainability (1-4 Credits)

Recommended preparation: 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.

SUS 188 Special Studies: Sustainability (1-4 Credits)

Prerequisites: instructor approval.

Explores topics of current interest in Sustainability.

SUS 199 Selected Topics: Sustainability (1-4 Credits)

Prerequisites: instructor approval.

Provides a learning experience in Sustainability not currently available; this course is in development to be proposed as a permanent course.

SUS 280 Co-op Work Experience Sustainability (1-4 Credits)

Recommended preparation: 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.

SUS 288 Special Studies: Sustainability (1-4 Credits)

Prerequisites: instructor approval.

Explores topics of current interest in Sustainability.

SUS 298 Independent Study: Sustainability (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.

SUS 299 Selected Topics: Sustainability (1-4 Credits)

Prerequisites: instructor approval.

Provides a learning experience in Sustainability not currently available; this course is in development to be proposed as a permanent course.

Public Health - Associate of Arts Oregon Transfer (AAOT)

Description

The Associate of Arts Oregon Transfer degree with a focus in public health is designed for students who wish to transfer to a four-year university to pursue a bachelor's degree in public health or a related field. Lower-division coursework provides students with a strong foundation in public health topics, including disease prevention, health promotion, health psychology, healthcare policy, health equity, and environmental sustainability as well as prerequisite coursework in biology, chemistry, and mathematics. To learn more about career and degree options in the field of public health, visit the [Association of Schools and Programs of Public Health](#) website.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
Recommend: HHP 110 and HHPA activity courses		
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
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. 63)

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

Arts and Letters: (p. 61)

Choose three courses from at least two prefixes 9-12

Social Science: (p. 68)

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. 66)

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: 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.

Advising Notes

The following is a list of public health programs available at public universities in Oregon. Note that public health programs have varying titles/program names, and it is important for students to research and connect with the institution to which they are interested in transferring. There are a variety of program delivery options from online to in-person to hybrid. There are [seven public higher education institutions in Oregon](#). Of these seven institutions, the following have programs related to public health or population health:

1. Oregon Health & Sciences University-Portland State University School of Public Health
 - a. [Bachelor of Arts or Science in Public Health Studies](#)
 - i. Option: Healthy Aging
 - ii. Option: Community Health Promotion
 - iii. Option: Health Services Administration
 - iv. Option: Clinical Health Science
 - v. Option: School Health
2. Oregon Institute of Technology
 - a. [Bachelor of Science in Population Health Management](#)
 - i. Option: Health Counseling and Outreach
 - ii. Option: Care Management and Coordination
 - iii. Option: Applied Health Data Analytics
3. Oregon State University
 - a. [Bachelor of Science in Public Health](#)
 - i. Option: Health Management and Policy
 - ii. Option: Health Promotion and Health Behavior
 - iii. Video: [Public Health at OSU](#)
 - iv. [Transfer guide](#)
4. Oregon State University - Cascades

- a. [Bachelor of Science in Human Development and Family Sciences](#) (related public health program)
 - b. [Bachelor of Arts or Science in Social Science](#) (related public health program)
5. Southern Oregon University
- a. [Bachelor of Arts or Science in Healthcare Administration](#)
 - Option: Community Public Health
 - Option: Data Analytics
 - Option: Personnel Management

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
Discipline Studies Arts & Letters		3-4
<u>Mathematics:</u> (p. 60)		4
<u>Oral Communication:</u> (p. 60)		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)		3
WR 122 or WR 227	Argument, Research, and Multimodal Composition or Technical Writing	4
Credits		14-15

Third Term		Credits
Discipline Studies Arts & Letters		3-4
Discipline Studies Science/Math/Computer Science (recommend BI 101)		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)		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)		4
Elective (recommend HHP 240)		3
Elective (recommend HHP 267)		3
Elective		3
Credits		13

Sixth Term

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

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 analyze causes of and potential solutions for social problems, such as poverty, war, prejudice, and addiction. Courses include topics such as race, class, ethnicity, gender, and social deviance. Sociology prepares students for employment in social service, recreation, teaching, and preparation for pre-professional studies.

See the [Sociology page](#) for more information.

Contact:

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Modoc Hall, Bend Campus

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Modoc Hall, Bend Campus

Department: Social Sciences
Department Chair: Ken Ruettgers

Programs

Transfer

Associate of Arts Oregon Transfer

- [Pre-Law - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 337)
- [Sociology - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 338)

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. Cross-listed with: ANTH 141; courses are identical and credit counts once.

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 288 Special Studies: Sociology (1-4 Credits)

Explores topics of current interest in the discipline.

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

The Associate of Arts Oregon Transfer with a focus in pre-law includes courses useful to pre-law students and meets lower-division general education requirements at all Oregon public universities. Law school is graduate-level and builds on a bachelor's degree but does not require a specific major. Students are encouraged to combine this focus with preparation for a major they find interesting and challenging and that provides exposure to legal concepts and issues and develops skill in research, communication, problem solving, and organization.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122 or WR 227	Argument, Research, and Multimodal Composition Technical Writing	4
General Education/Discipline Studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
<u>Science/Math/Computer Science:</u> (p. 66)		
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.

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. 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 Bachelor of Arts 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 Bachelor of Science after transfer should consider taking more math and science courses. Language is not necessary. For 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
<u>Oral Communication:</u> (p. 60)	3-4
<u>Mathematics:</u> (p. 60)	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	4
Argument, Research, and Multimodal Composition or 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 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

The Associate of Arts Oregon Transfer with a focus in sociology includes courses commonly required for this major and meets lower-division general education requirements at all Oregon public universities. Sociology is the study of human social relationships and institutions and includes subject matter such as race, religion, families, government, and social change. A bachelor's degree in sociology prepares students for graduate school, such as schools of law or education. It also prepares students for employment in government, research, and human services.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

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

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
Recommend: MTH 105		
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
<u>Cultural Literacy:</u> (p. 63)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
<u>Arts and Letters:</u> (p. 61)		
Choose three courses from at least two prefixes		9-12
Recommend: 200-level language courses for students seeking Bachelor's of Arts ²		
<u>Social Science:</u> (p. 68)		
Choose four courses from at least two prefixes		12-16
Recommend: SOC 201, SOC 211, SOC 212		
Related courses to consider: ANTH 103 or PSY 216		
<u>Science/Math/Computer Science:</u> (p. 66)		
Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science		12-20
Recommend: MTH 243 for the non-lab course		
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
Total Credits		90-106

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

² Students seeking to obtain a Bachelor's of Art must complete all foreign language through the 200 level (i.e., 203). 200 level foreign language courses count as an Arts and Letters requirement. 100-level foreign language courses count as electives and, depending on language placement, may be required.

Advising Notes

Students pursuing a Bachelor of Arts 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 Bachelor of Science 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 occasionally offered.

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 before transfer.

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 specific program 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 Arts & Letters ²		3-4
Elective (recommend starting foreign language sequence) ²		4
<u>Oral Communication</u> : (p. 60)		3-4
WR 121	Academic Composition	4
Credits		14-16
Second Term		Credits
Discipline Studies Social Science (recommend SOC 201)		4
Elective (recommend continuing foreign language sequence) ²		4
Mathematics (recommend MTH 105)		4
WR 122 or WR 227	Argument, Research, and Multimodal Composition or Technical Writing	4
Credits		16
Third Term		Credits
Discipline Studies Social Science (recommend SOC 211)		4
Health (3 credits with HHP or HHPA prefix)		3
Elective (recommend continuing foreign language sequence)		4
Discipline Studies Science/Math/Computer Science (recommend MTH 243)		4
Credits		15

Fourth Term

Discipline Studies Lab Science	4-5	
Discipline Studies Social Science (recommend SOC 212)	4	
Elective ²	4	
Discipline Studies Arts & Letters ²	3-4	
Credits		15-17

Fifth Term

Discipline Studies Lab Science	4-5	
Discipline Studies Social Science (recommend ANTH 103 or PSY 216)	4	
Elective ²	4	
Discipline Studies Arts & Letters ²	3-4	
Credits		15-17

Sixth Term

Discipline Studies Lab Science	4-5	
Elective ²	4	
Elective ²	4	
Discipline Studies Arts & Letters ²	3-4	
Credits		15-17
Total Credits		90-98

Veterinary Technician

Students who care about animals, are good at math, science, and decision making, enjoy working with their hands, and who like working with people and handling a variety of responsibilities may find the challenging career of veterinary technology to be just right. 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 of the 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.

See the [Veterinary Technician page](#) for more information.

Contact:

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Department: Allied Health
Department Chair: [Shannon Waller](#) (swaller@cocc.edu)

Programs

Career and Technical Education

Associate of Applied Science

- [Veterinary Technician - Associate of Applied Science \(AAS\)](#) (p. 341)

Courses

VT 101 Intro to Veterinary Technician (3 Credits)

Prerequisites: BI 101 or BI 211; CH 104 or CH 221; MTH 095, or MTH 111 (or higher) or minimum placement Math Level 18; WR 121; and COMM 218; instructor approval based on admission into the veterinary technician program.

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 (3 Credits)

Corequisites: VT 101, VT 102, VT 117.

Introduces veterinary medical records, admitting procedures, record maintenance, resume writing and job interview techniques. Covers basic bookkeeping skills, inventory control measures, marketing, client communication, the use of veterinary computer software, and professional development.

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 (4 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, VT 117 and MTH 095 or MTH 111 (or higher) or minimum placement Math Level 18.

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 (5 Credits)

Prerequisites: Acceptance into the Veterinary Technician Program.

Corequisites: VT 101, VT 102, VT 103.

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 (4 Credits)

Prerequisites: VT 101, VT 102, VT 103 and VT 117.

Corequisites: VT 108, VT 110, VT 114.

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 199 Special Topics: Veterinary Technician (1-4 Credits)

Provides a learning experience not currently available in the veterinary technician program; this course is in development to be proposed as a permanent course.

VT 200 Radiation Safety (2 Credits)

Prerequisites: VT 111, VT 112, VT 113 and VT 116.

Corequisites: VT 201, VT 203, VT 209, VT 212.

Introduces x-radiation and safety principles involved in using x-ray machines.

VT 201 Anesthesiology and Surgery Techniques (4 Credits)

Prerequisites: VT 111, VT 112, VT 113, and VT 116.

Corequisites: VT 200, VT 203, VT 209, 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 209, and VT 212.

Corequisites: VT 204, VT 206, VT 208.

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 209, 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 209 and VT 212.**Corequisites:** VT 202, VT 206, VT 208.

Covers the operation and use of fixed, portable, and dental x-ray machines; creating diagnostic images; 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 209 and VT 212.**Corequisites:** VT 202, VT 204, VT 208.

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 209.

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 (9 Credits)**Prerequisites:** VT 202, VT 204, VT 206 and VT 208.**Corequisites:** VT 281.

This is the first of two practicum courses that provides two three-week practicums where students link prior coursework with off-campus learning experiences. Students gain hands-on experience working with live animal cases in a veterinary hospital. Each student is expected to attend 120 total hours for each three-week period at the practicum sites for a total of 240 hours. The course also reviews the Veterinary Technician program curriculum for preparation for sitting for the Veterinary Technician National Exam (VTNE).

VT 281 Clinical Practicum II (5 Credits)**Prerequisites:** VT 202, VT 204, VT 206 and VT 208.

Second of two practicum courses; students will spend three weeks in a veterinary hospital continuing to link prior coursework with off-campus learning experiences using advanced skills. Students can request to attend a specialized clinic. Each student is expected to attend 120 total hours in the three-week time period. The course also continues to review the Veterinary Technician program curriculum for preparation for sitting for the Veterinary Technician National Exam (VTNE). Students will return the last week to reflect on their practicum experience and take a program exit exam.

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: Veterinary Technician (1-4 Credits)

Provides a learning experience not currently available in the veterinary technician program; this course is in development to be proposed as a permanent course.

Veterinary Technician - Associate of Applied Science (AAS)

Description

The Veterinary Technician Associate of Applied Science is a two-year program designed to prepare students to take the Veterinary Technician National Examination to become a certified veterinary technician. The program is accredited by the American Veterinary Medical Association Committee on Veterinary Technician Education and Activities as a program for educating veterinary technicians.

The 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 skills learned in the classroom.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

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:

- High school diploma or GED
- The following prerequisite courses must be completed with a C grade or higher before applying to the program:
 - BI 101 General Biology: Cells & Genes or BI 211 Principles of Biology
 - CH 104 Introduction to Chemistry I or CH 221 General Chemistry I
 - WR 121 Academic Composition
 - COMM 218 Interpersonal Communication
 - Minimum placement Math Level 18 or complete 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 [program admissions handbook](#) for a detailed description of admission requirements. Students must complete 40 hours of observation in a veterinary clinic, the program application, and must submit any required documentation as part of their application packet. Admission packets are available on the [Veterinary Technician page](#). Applications are accepted biennially during Spring term for admission to the program the following Fall term.
- Students must be 18 years of age or older before starting the program.
- Once admitted into the program, students need to complete the following before 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 to \$900
- Supplies, such as scrubs, lab jacket, coveralls, farm boots, stethoscope, thermometer, bandage scissors, wrist watch, name badge, calculator, laptop or tablet computer: \$500 to \$800
- Transportation costs: 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	4-5
CH 104 or CH 221	Introduction to Chemistry I General Chemistry I	5
COMM 218	Interpersonal Communication	3
WR 121	Academic Composition	4
Math skill level: Minimum placement Math Level 18 or complete MTH 095 Intermediate Algebra or MTH 111 (or higher).		
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	3
VT 108	Small Animal Nursing	4
VT 110	Parasitology and Pathology	4
VT 111	Hematology and Urinalysis	4
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	5
VT 118	Veterinary Anatomy & Physiology II	4
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	9
VT 281	Clinical Practicum II	5
360 hours on-site at veterinary practices		
Total Credits		104-105

Advising Notes

Students are admitted to the Veterinary Technician program through a selective admission process. Admission to the program is competitive and enrollment is limited. Program courses must be taken in sequence.

Students are strongly recommended to attend a [program information session](#) to learn about the College's [Veterinary Technician program](#) 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. 133)). 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 C or higher in each prerequisite course.
 - 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 within the program, 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

		Credits
BI 101 or BI 211	General Biology: Cells & Genes or Principles of Biology	4-5
CH 104 or CH 221	Introduction to Chemistry I or General Chemistry I	5
COMM 218	Interpersonal Communication	3
WR 121	Academic Composition	4
Math courses as needed to meet prerequisite skill level		
40 hours of observation in a veterinary clinic		
Credits		16-17

Second Year

		Credits
VT 101	Intro to Veterinary Technician	3
VT 102	Veterinary Terminology	3
VT 103	Animal Hospital and Office Procedures	3
VT 117	Veterinary Anatomy & Physiology I	5
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	4
Credits		15

Spring

VT 111	Hematology and Urinalysis	4
VT 112	Advanced Small Animal Nursing	4
VT 113	Exotic and Lab Animal Medicine	3
VT 116	Pharmacology	4
Credits		15

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
Credits		13

Spring

VT 280	Clinical Practicum I	9
VT 281	Clinical Practicum II	5
360 hours on-site at veterinary practices		
Credits		14
Total Credits		104-105

World Languages

In today's interconnected world and competitive job markets, the multilingual and culturally competent have an advantage in any career. The College offers first-year and second-year French, Spanish, German, Italian, and Chinese courses, which satisfy baccalaureate lower-division requirements and prepare transfer students for academic and professional success. Additionally, first-year courses in Kiksht (the language of the Wasco people) and Ichishkin (the language of the Sahaptin people) are offered on the Madras campus.

See the [World Languages page](#) for more information.

Contact:

[Murray Godfrey](#)
541-318-3734
Modoc Hall, Bend Campus

Department: World Languages and Cultures
Department Chair: Murray Godfrey

Programs

Transfer

Associate of Arts Oregon Transfer

- [World Languages - Associate of Arts Oregon Transfer \(AAOT\)](#) (p. 348)

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 188 Special Studies: Chinese (1-4 Credits)

Explores topics of current interest in the Chinese discipline.

CHN 199 Selected Topics: Chinese (1-4 Credits)

Provides a learning experience in Chinese not currently available; this course is in development to be proposed as a permanent course.

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 288 Special Studies: Chinese (1-4 Credits)

Explores topics of current interest in the Chinese discipline.

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.

CHN 299 Selected Topics: Chinese (1-4 Credits)

Provides a learning experience in Chinese not currently available; this course is in development to be proposed as a permanent course.

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 141 Paris: City of Lights: History, Culture and Politics (3 Credits)

Examines the history of Paris chronologically from the founding of Paris to the present. Explores the political, cultural, and societal changes in 2,000 years of Parisian history. Examines the city from political, social, geographical, and cultural viewpoints. Taught in English.

FR 188 Special Studies: French (1-4 Credits)

Explores topics of current interest in the French discipline.

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 FR 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 288 Special Studies: French (1-4 Credits)

Explores topics of current interest in the French discipline.

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.

FR 299 Selected Topics: French (1-4 Credits)

Provides a learning experience in French not currently available; this course is in development to be proposed as a permanent course.

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 German discipline.

GER 199 Selected Topics: German (1-4 Credits)

Provides a learning experience in German not currently available; this course is in development to be proposed as a permanent course.

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 288 Special Studies: German (1-4 Credits)

Explores topics of current interest in the German discipline.

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.

ICH 188 Special Studies: Ichishkin (1-4 Credits)

Explores topics of current interest in the discipline.

ICH 199 Selected Topics: Ichishkin (1-4 Credits)

Provides a learning experience in Ichishkin not currently available; this course is in development to be proposed as a permanent course.

ICH 288 Special Studies: Ichishkin (1-4 Credits)

Explores topics of current interest in the discipline.

ICH 298 Independent Study: Ichishkin (1-4 Credits)**Prerequisites:** Instructor approval required.**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.

ICH 299 Selected Topics: Ichishkin (1-4 Credits)

Provides a learning experience in Ichishkin not currently available; this course is in development to be proposed as a permanent course.

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 188 Special Studies: Italian (1-4 Credits)

Explores topics of current interest in the Italian discipline.

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 288 Special Studies: Italian (1-4 Credits)

Explores topics of current interest in the Italian discipline.

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 188 Special Studies: Kiksht (1-4 Credits)

Explores topics of current interest in the Kiksht discipline.

KIK 199 Selected Topics: Kiksht (1-4 Credits)

Provides a learning experience in Kiksht not currently available; this course is in development to be proposed as a permanent course.

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 288 Special Studies: Kiksht (1-4 Credits)

Explores topics of current interest in the Kiksht discipline.

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.

KIK 299 Selected Topics: Kiksht (1-4 Credits)

Provides a learning experience in Kiksht not currently available; this course is in development to be proposed as a permanent course.

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

The Associate of Arts Oregon Transfer with a focus in world languages is for students seeking a bachelor's degree in French, Spanish, German, Italian, Chinese, a related area, or a teaching endorsement featuring world language, literature, and culture studies.

Statewide General Education Student Learning Outcomes

Please see the [General Education page](#) (p. 58) for statewide general education student learning outcomes.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met before enrollment. In addition, students should be aware that certain courses have recommended preparation.

Course Requirements

Course	Title	Credits
General Education/Foundational		
<u>Health:</u> (p. 58)		
Choose 3 credits ¹		3
<u>Mathematics:</u> (p. 60)		
Choose one course		4
<u>Oral Communication:</u> (p. 60)		
Choose one course		3-4
Recommend: COMM 115		
<u>Writing:</u> (p. 60)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4

or WR 227 Technical Writing

General Education/Discipline studiesCultural Literacy: (p. 63)

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

Arts and Letters: (p. 61)Choose three courses from at least two prefixes ² 9-12

Recommend: Second year world language courses

Social Science: (p. 68)Choose four courses from at least two prefixes ³ 12-16Science/Math/Computer Science: (p. 66)

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 90-106¹ 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

The COCC faculty member specific to each language can provide guidance to students who have previous language background.

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
<u>Mathematics:</u> (p. 60)	4
Oral Communication (recommend COMM 115)	4
WR 121 Academic Composition	4
Credits	15-16

Second Term

Discipline Studies Social Science (recommend ANTH 240)	4
Discipline Studies Arts & Letters (recommend world lanugague)	3-4
Elective	1
Health (3 credits with HHP or HHPA prefix)	3
WR 122 or WR 227	Argument, Research, and Multimodal Composition or Technical Writing
	4
Credits	15-16

Third Term

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

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	90-104

COURSES A-Z

Guidance on [how to read course information](#) (p. 5).

Related Course Lists:

- [General Education \(Foundational Requirements and Discipline Studies\) Courses](#) (p. 58)
- [CTE Courses](#) (p. 70)
- [Related Instruction Courses](#) (p. 75)
- [OSU Bacc Core Courses](#) (p. 76)

A

- [Allied Health \(AH\)](#) (p. 351)
- [Anthropology \(ANTH\)](#) (p. 351)
- [Apprenticeship \(APR\)](#) (p. 352)
- [Art \(ART\)](#) (p. 354)
- [Art History \(ARH\)](#) (p. 357)
- [Automotive \(AUT\)](#) (p. 358)
- [Aviation \(AV\)](#) (p. 360)

B

- [Baking and Pastry Arts \(BAK\)](#) (p. 366)
- [Biology \(BI\)](#) (p. 367)
- [Business \(BA\)](#) (p. 369)

C

- [Chemistry \(CH\)](#) (p. 371)
- [Chinese \(CHN\)](#) (p. 372)
- [Communication \(COMM\)](#) (p. 373)
- [Computer & Information Systems \(CIS\)](#) (p. 373)
- [Computer Science \(CS\)](#) (p. 377)
- [Criminal Justice \(CJ\)](#) (p. 377)
- [Culinary Arts \(CUL\)](#) (p. 379)

D

- [Dental Assisting \(DA\)](#) (p. 381)

E

- [Economics \(EC\)](#) (p. 383)
- [Education \(ED\)](#) (p. 384)
- [Emergency Medicine \(EMT\)](#) (p. 386)
- [Engineering \(ENGR\)](#) (p. 388)
- [English & Literature \(ENG\)](#) (p. 389)
- [Ethnic Studies \(ES\)](#) (p. 390)

F

- [Film Arts \(FA\)](#) (p. 390)
- [Fire Science \(FIRE\)](#) (p. 391)
- [Fish & Wildlife \(FW\)](#) (p. 394)
- [Foods & Nutrition \(FN\)](#) (p. 395)
- [Forestry \(FOR\)](#) (p. 395)
- [French \(FR\)](#) (p. 397)

G

- [General Science \(GS\)](#) (p. 397)
- [Geography / Geog Info Systems \(GEOG\)](#) (p. 398)
- [Geology \(G\)](#) (p. 399)
- [German \(GER\)](#) (p. 400)

H

- [Health & Human Performance \(HHP\)](#) (p. 400)
- [Health and Human Performance Activity \(HHPA\)](#) (p. 403)
- [Health Information Management \(HIM\)](#) (p. 405)
- [History \(HST\)](#) (p. 407)
- [Hospitality Management \(HM\)](#) (p. 408)
- [Human Development \(HD\)](#) (p. 409)
- [Human Services/Addictions Stds \(HS\)](#) (p. 410)
- [Humanities \(HUM\)](#) (p. 412)

I

- [Ichishkin \(ICH\)](#) (p. 413)
- [Italian \(IT\)](#) (p. 413)

J

- [Journalism \(J\)](#) (p. 414)

K

- [Kiksht \(KIK\)](#) (p. 414)

L

- [Library & Information Skills \(LIB\)](#) (p. 415)

M

- [Manufacturing \(MFG\)](#) (p. 415)
- [Massage Therapy \(LMT\)](#) (p. 418)
- [Mathematics \(MTH\)](#) (p. 420)
- [Medical Assistant \(MA\)](#) (p. 422)
- [Military Science \(MS\)](#) (p. 422)
- [Music \(MUS\)](#) (p. 423)
- [Music -Small Ensembles/Lessons \(MUP\)](#) (p. 425)

N

- [Nursing \(NUR\)](#) (p. 426)

O

- [Outdoor Leadership \(OL\)](#) (p. 428)

P

- [Pharmacy Technician \(PHM\)](#) (p. 430)
- [Philosophy \(PHL\)](#) (p. 431)
- [Physics \(PH\)](#) (p. 431)

- [Political Science \(PS\)](#) (p. 432)
- [Psychology \(PSY\)](#) (p. 433)

R

- [Reading \(RD\)](#) (p. 434)

S

- [Sociology \(SOC\)](#) (p. 434)
- [Spanish \(SPAN\)](#) (p. 435)
- [Sustainability \(SUS\)](#) (p. 436)

T

- [Theater Arts \(TA\)](#) (p. 436)

V

- [Veterinary Technician \(VT\)](#) (p. 437)

W

- [Women's Studies \(WS\)](#) (p. 439)
- [Writing \(WR\)](#) (p. 439)

Allied Health (AH)

AH 105 Calculations for Allied Health (3 Credits)

Prerequisites: MTH 015 (or higher) or minimum placement Math Level 7. 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).

AH 111 Medical Terminology I (3 Credits)

Covers terminology pertaining to medical term construction, body structure, integumentary, hematopoietic/lymph, cardiovascular, pharmacology, 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. Studies medical terms related to endocrine & neurologic systems and disorders; the digestive system; special senses (eye/ear); urinary system; male and female reproductive systems, obstetric terminology; child health; oncology; mental health; and gerontology. 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 188 Special Studies: Allied Health (1-4 Credits)

Explores topics of current interest in the allied health discipline.

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 288 Special Studies: Allied Health (1-4 Credits)

Explores topics of current interest in the allied health discipline.

AH 298 Independent Study: Allied Health (1-4 Credits)

Prerequisites: Instructor approval required.

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.

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. Cross-listed with: SOC 141; courses are identical and credit counts once.

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 236 The Primates: Behavior and Evolution (4 Credits)**Recommended preparation:** ANTH 234.

Examines the diversity of species within the primate order, ranging from the pygmy mouse lemurs of Madagascar to the mountain gorillas of Rwanda. Explores how primate behaviors related to sociality, reproduction, communication, competition, cooperation, and culture have evolved. As primates ourselves, studying primate behavior is essential to better comprehend the evolution of our own behavioral repertoire and assess our branch on the tree of life.

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 288 Special Studies: Anthropology (1-4 Credits)

Explores topics of current interest in the discipline.

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 199 Selected Topics: Apprenticeship (1-4 Credits)

Provides a learning experience in apprenticeship not currently available; this course is in development to be proposed as a permanent course.

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.

APR 299 Selected Topics: Apprenticeship (1-4 Credits)

Provides a learning experience in apprenticeship not currently available; this course is in development to be proposed as a permanent course.

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 Beginning Graphic Design (3 Credits)

Introduces standard graphic design concepts and principles. Introduces functionality of industry standard graphic design software. Includes projects that use these applications for the purposes of rendering and designing various forms of digital output and print.

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

Introduces concepts and principles of visual language and basic design in two dimensions. Applies the elements of art and principles of design to communicate ideas and solve problems. Emphasizes critical thinking and creative problem solving in a variety of two-dimensional artistic media.

ART 116 Basic Design: Color (3 Credits)

Introduces concepts and principles of color theory related to the visual arts. Make informed color choices to communicate ideas through studying scientific research (theory) and hands-on projects (practice). Emphasizes critical thinking and creative problem solving in a variety of media.

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.

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 Beginning Drawing (3 Credits)**Recommended preparation:** ART 115.

Emphasizes observing and developing fundamental drawing and composition skills. Uses still life material extensively. Covers historical and cultural approaches to drawing and drawing materials.

ART 132 Intermediate Drawing (3 Credits)**Recommended preparation:** ART 131.

Builds on drawing fundamentals from ART 131. Introduces use of color in drawings. Create and analyze projects that demonstrate critical and creative thinking. Demonstrate individual exploration of process and content. May be repeated for credit.

ART 141 Beginning Illustration (3 Credits)**Recommended preparation:** ART 115 and ART 116.

Introduces illustration as a means of communication. Covers visual problem solving, the process of illustration, and an introduction to markets: publication and advertising. Render in various traditional media, bitmap, and vector software through the use of reference and research. Explores personal style, self-promotion, and an introduction to business practices.

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 158B1 Jewelry - Casting I (3 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.

ART 158B2 Jewelry - Casting II (3 Credits)**Recommended preparation:** ART 158B1 and ART 157A1.

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

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

Introduces materials and techniques of painting, using alkyd oil, acrylic, and/or water-soluble oil paints. Provides essential painting skills such as building canvas supports, stretching canvas, and preparing painting grounds. Subject matter for paintings will vary.

ART 184 Beginning Watercolor (3 Credits)

Explores the unique qualities of watercolor as a painting medium. Emphasizes fundamental skills, color, and composition while painting from a variety of subjects.

ART 185 Intermediate Watercolor (3 Credits)**Recommended preparation:** ART 131 and ART 184.

Continues exploration watercolor's unique qualities as a painting medium. Emphasizes fundamental skills, color, and composition while painting from a variety of subjects. May be repeated for credit.

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 Portfolio Development (1 Credit)**Recommended preparation:** Developed body of art work suggested for this course.

Develop traditional and digital visual art portfolio. Create resume and other career search materials. 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. Developed body of art work suggested for the course.

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

This course is in development.

ART 230 Intermediate Graphic Design (3 Credits)**Prerequisites:** ART 110.**Recommended preparation:** ART 115 and ART 116.

Explores developing innovative solutions to problems of visual communication in graphic design. Emphasizes concept and creation of designs with targeted intention. Introduces graphic design practice, theory, methodologies, and delivery systems including branding, typography, print and digital advertising, packaging, and promotional design. Builds upon technical skills gained in ART 110. May be repeated for credit.

ART 234 Figure Drawing (3 Credits)**Recommended preparation:** ART 131.

Introduces drawing the clothed and unclothed figure using a variety of techniques and media. Uses models for the study of the human figure and portrait. Addresses representational and expressive approaches.

ART 241 Intermediate Illustration (3 Credits)**Recommended preparation:** ART 141.

Further explores visual problem solving, the process of illustration, rendering with traditional media, bitmap and vector software. Introduces markets: editorial and narrative illustration, and surface design. Focuses on developing illustrations in conjunction with type. Emphasizes professional presentation of work. May be repeated for credit.

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 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 281 Intermediate Painting (3 Credits)**Recommended preparation:** ART 181.

Continues exploration of the materials and techniques of painting with alkyd oil, acrylic, and/or water-soluble oil paints. Emphasizes color theory and personal expression. May be repeated for credit.

ART 288 Special Studies: Art (1-4 Credits)

Explores topics of current interest in the discipline.

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 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 297 Capstone Project (1 Credit)

Recommended preparation: Completion of secondary level course in chosen medium.

Provides advanced, individualized development in visual arts. Develop a unique project in chosen medium. Provides opportunity for final piece(s) to go through a jury process for a gallery show, call for art, or other juried art competition. May be repeated for credit.

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 or minimum placement Wr/Comm Level 7.

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 or higher or minimum placement Wr/Comm Level 7.

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 or higher or minimum placement Wr/Comm Level 7.

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 or higher or minimum placement Wr/Comm Level 7.

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 288 Special Studies: Art History (1-4 Credits)

Explores topics of current interest in the discipline.

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.

ARH 299 Selected Topics: Art History (1-4 Credits)

Provides a learning experience in art history not currently available; this course is in development to be proposed as a permanent course.

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 060 or higher or minimum placement Math Level 10.

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 with concurrency: 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 060 or higher or minimum placement Math Level 10.

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. P/NP grading.

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 060 or higher or minimum placement Math Level 10.

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 188 Special Studies: Automotive Technology (1-4 Credits)

Explores topics of current interest in the automotive discipline.

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: or to be taken with: MTH 060 or higher or minimum placement Math Level 10.

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 060 or higher or minimum placement Math Level 10.

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 with concurrency:** 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.

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 with concurrency:** 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 with concurrency:** 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:** or to be taken with: MTH 060 or higher or minimum placement Math Level 10.

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 - Rebuild (3 Credits)**Prerequisites:** AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.

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:** or to be taken with: MTH 060 or higher or minimum placement Math Level 10.

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 Theory (2 Credits)

This course is instructor lead which includes; 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 105 and 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.

AUT 288 Special Studies: Automotive Technology (1-4 Credits)

Explores topics of current interest in the automotive discipline.

AUT 298 Independent Study: Automotive Technology (1-4 Credits)**Prerequisites:** Instructor approval required.**Recommended preparation:** Prior coursework in the discipline.

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

AUT 299 Selected Topics: Automotive (1-4 Credits)

This course is in development.

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 060 or higher or minimum placement Math Level 10.

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 (3 Credits)**Prerequisites with concurrency:** AV 210 or AV 215.

Covers principles and operation of technologically advanced avionics systems in modern aircraft. Provides classroom discussion and hands-on training in programming and using electronic flight instruments, navigation radios, information systems, and technology safety/risk management.

AV 115 Private Pilot-Helicopter (5 Credits)**Recommended preparation:** MTH 060 or higher or minimum placement Math Level 10.

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 116 Airplane Fundamentals (3 Credits)

Covers the fundamentals of airplane flight, flight operations, airplane performance, navigation, airplane systems, aeronautical publications, airplane flight maneuvers, flight planning, radio procedures, meteorology, and human factors.

AV 117 Helicopter Fundamentals (3 Credits)

Recommended preparation: MTH 060 or higher or minimum placement Math Level 10.

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 102 (or one course from the foundational requirements math list) or minimum placement Math Level 14.

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).

Provides 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 and multi-engine 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 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 298 Independent Study: Aviation (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

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 102; CUL 104; 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.

Covers basic pastry dough production, the textural complexity of each dough, and their role in creating delicious pastries and desserts. Includes tart and pie dough, puff pastry, pâte a choux, crêpes, biscuits, shortbread, fritters, sweet yeasted doughs, strudel, phyllo, and cookies. Create a variety of products in each of these categories.

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)

Explores topics of current interest in the baking and pastry discipline.

BAK 199 Selected Topics: Baking and Pastry Arts (1-6 Credits)

Provides a learning experience in baking and pastry arts not currently available; this course is in development to be proposed as a permanent course.

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: BAK 140 or BAK 101 and CUL 140.

Apply principles and techniques of preparing lean yeasted, rich, and sourdough bread including flatbreads, baguettes, brioche, bagels, pretzels, sourdough, and rye bread. Emphasizes regional and international bread, natural fermentation, and the use of various flours and grains. Practice and apply traditional and innovative baking, shaping, and finishing 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 265 Comprehensive Retail Baking Operations (5 Credits)**Prerequisites:** BAK 140 or CUL 140.

Learn business concepts for building a successful bakery enterprise and apply those concepts in a real-world setting. The instructor guided lab is ideal for students wanting to start their own retail bakery and test ideas in a secure setting. Create and sell products in the bakery kiosk using current baking production methods and equipment. Apply baking production techniques and business theory in the retail arena.

BAK 280 Baking and Pastry Arts Industry Internship (1-6 Credits)**Prerequisites:** BAK 140.

Provides supervised work experience designed to expand career knowledge and experiential confidence while increasing knowledge, speed, timing, organization and the ability to execute industry skills repetitively. Includes a diverse work experience designed on a systematic rotation of different stations in the kitchen, dining room, and general operations positions.

BAK 288 Special Studies: Baking and Pastry Arts (1-6 Credits)

Explores topics of current interest in the baking and pastry discipline.

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.

BAK 299 Selected Topics: Baking and Pastry Arts (1-6 Credits)

Provides a learning experience in baking and pastry arts not currently available; this course is in development to be proposed as a permanent course.

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 108 Introduction to Human Genetics (4 Credits)

Designed for non-science majors and introduces students to basic principles of genetics and genetic technologies applied to human health and human affairs. Topics include classical (Mendelian) inheritance, complex inheritance, inherited disorders, analysis of pedigrees, gene structure and gene expression, epigenetic effects on gene expression, sex determination and the genetics of cancer. Some technologies introduced include: the use of DNA in genealogy and forensic biology, gene-editing technologies, and reproductive cloning technologies.

BI 114 Science Literacy (3 Credits)

Introduces the language and process of the scientific method and scientific studies. Provides tools to evaluate scientific information, including identifying pseudoscience and unethical uses of science. Promotes critical evaluation of scientific data and effective science communication.

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 the ecology, biodiversity, sustainability, and conservation of marine resources.

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

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

BI 199 Selected Topics: Biology (1-5 Credits)

Provides a learning experience in biology not currently available; this course is in development to be proposed as a permanent course.

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 211 Principles of Biology (5 Credits)**Prerequisites:** WR 065 or WR 121 or minimum placement Wr/Comm Level 7.**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 WR 121 or minimum placement Wr/Comm Level 7.

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 WR 121 or minimum placement Wr/Comm Level 7 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 298 Independent Study: Biology (1-4 Credits)**Prerequisites:** Instructor approval required.**Recommended preparation:** Prior coursework in the discipline.

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

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

This course is in development.

Business (BA)

BA 101 Introduction to Business (4 Credits)

Learn about the many exciting and challenging facets of business and its dynamic role in today's environment. Gain a working knowledge of components of business including discussion of management, marketing, entrepreneurship and finance. Introduces 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 Math Level 10.

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 Math Level 10.

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 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)

Introduces principles of effective customer service. 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 (or higher) or minimum placement Math Level 10.

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 or minimum placement Wr/Comm Level 7.

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 060 (or higher) or minimum placement Math Level 10.

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 (4 Credits)

Introduces students to all the elements of personal financial planning including the creation of a personal vision, and a plan for attaining the vision. Includes the appropriate evaluation of financial products such as investing, debt, risk management and budgeting.

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: BA 101 and (BA 214 or WR 121).

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 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 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)

Explores the theory and practice of interactions between people in the workplace. Examines individual perceptions and effective communications between diverse individuals to create collaborative work environments, build effective teams, and achieve organizational goals.

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.

BA 299 Selected Topics: Business (1-5 Credits)**Prerequisites:** instructor approval.

Provides a learning experience in business not currently available; this course is in development to be proposed as a permanent course.

Chemistry (CH)

CH 104 Introduction to Chemistry I (5 Credits)**Prerequisites:** MTH 095 (or higher) or minimum placement Math Level 14.

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 199 Selected Topics: Chemistry (1-5 Credits)

Provides a learning experience in chemistry not currently available; this course is in development to be proposed as a permanent course.

CH 221 General Chemistry I (5 Credits)**Prerequisites:** MTH 111 or MTH 112, or MTH 251 (or higher) or minimum placement Math Level 20.

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 241 Organic Chemistry I (5 Credits)**Prerequisites:** CH 223.

Builds on principles of general chemistry with an emphasis on the chemistry of carbon compounds for science and chemical engineering majors. Includes bond angles, molecular shape, Lewis structures, formal charge, electron orbitals, polar bonds, polar reactions, resonance, alkanes, alkenes, cycloalkanes, addition via carbocation, addition via cyclic intermediates, chirality, addition to alkynes, substitution, reaction mechanisms, and energy diagrams. The laboratory introduces standard lab techniques for separating, purifying and characterizing compounds on microscale and/or macroscale, while using record keeping methods acceptable in the discipline of chemistry.

CH 242 Organic Chemistry II (5 Credits)**Prerequisites:** CH 241.

Introduces additional principles of organic chemistry for science and chemical engineering majors. Includes substitution reactions, elimination reactions, radical reactions, conjugation and molecular orbital theory, aromaticity, infrared spectroscopy, mass spectroscopy, nuclear magnetic resonance spectroscopy, and synthesis. The laboratory introduces derivatization reactions, the effect of solvents, and instrumental techniques while using record keeping techniques acceptable in the discipline of chemistry.

CH 243 Organic Chemistry III (5 Credits)**Prerequisites:** CH 242.

Introduces additional principles of organic chemistry for chemistry, biology and chemical engineering majors. Includes electrophilic aromatic substitution, acidity and pKa of phenols, nucleophilic aromatic substitution, addition to a carbonyl, carboxylic acids and derivatives, enolate and enol nucleophiles, aldol and Claisen reactions and amines. The laboratory introduces synthetic methods and a synthesis project while using record keeping techniques acceptable in the discipline of chemistry.

CH 288 Special Studies: Chemistry (1-4 Credits)

Explores topics of current interest in the discipline.

CH 298 Independent Study: Chemistry (1-4 Credits)**Prerequisites:** Instructor approval required.**Recommended preparation:** Prior coursework in the discipline.

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

CH 299 Selected Topics: Chemistry (1-5 Credits)

Provides a learning experience in chemistry not currently available; this course is in development to be proposed as a permanent course.

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 188 Special Studies: Chinese (1-4 Credits)

Explores topics of current interest in the Chinese discipline.

CHN 199 Selected Topics: Chinese (1-4 Credits)

Provides a learning experience in Chinese not currently available; this course is in development to be proposed as a permanent course.

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 288 Special Studies: Chinese (1-4 Credits)

Explores topics of current interest in the Chinese discipline.

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.

CHN 299 Selected Topics: Chinese (1-4 Credits)

Provides a learning experience in Chinese not currently available; this course is in development to be proposed as a permanent course.

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 like those found in various workplaces.

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 288 Special Studies: Communication (1-4 Credits)

Explores topics of current interest in the discipline.

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)

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 includes 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. Explores the training and productivity habits essential for work in IT-related fields. 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. Course objectives are broken down into three modules: Computer Fundamentals, Key Applications, and Living Online. Provides 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.

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)

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.

Introduces the most popular desktop database software, Microsoft Access. Prepares students for the latest Microsoft Office Specialist certification for Access exam which helps students validate the skills industries require. Create and modify database tables, forms, queries and reports. Focuses on optimizing databases for efficient data entry and generating comprehensive reports. Database design issues are discussed but not emphasized.

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 Microsoft Excel 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.

Explore features and techniques of both Microsoft Word and Microsoft Excel, focusing on skills that are common to IT and business users. Focus on skills needed to prepare for the Excel and Word Associate Microsoft Office Specialist Certifications.

CIS 133JS Introduction to JavaScript (4 Credits)

Prerequisites: CIS 122.

Recommended preparation: CIS 195.

Learn programming fundamentals and object-oriented concepts using vanilla JavaScript syntax. Add interactivity and custom behaviors to web applications by employing front-end JavaScript techniques combined with HTML and CSS.

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.

Learn HTML (for structure) and CSS (for style) while exploring the fundamentals of web development. Use different techniques to create webpage elements used by modern and successful websites. Style webpages that are functional, for both desktop and mobile users, and demonstrate best practices for usability and design.

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 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 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.

Gain a deeper understanding of HTML (for structure) and CSS (for style) while creating multi-page websites suitable for businesses and organizations. Explore web development's more advanced techniques useful for improving usability and user experience. Plan and design websites for desktop and mobile users.

CIS 297 CIS Professional Capstone (4 Credits)**Prerequisites with concurrency:** CIS 244.

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.

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:** MTH 231.

Emphasizes the development of data structures, algorithm analysis, recursion, and sorting. Also explores several basic programming constructs, inheritance, interfaces, exceptions, and files/streams. Covers software engineering methods, proper program development, and attention to program planning and documentation.

CS 188 Special Studies: Computer Science (1-4 Credits)

Explores topics of current interest in the computer science discipline.

CS 199 Selected Topics: Computer Science (1-4 Credits)

Provides a learning experience in computer science not currently available; this course is in development to be proposed as a permanent course.

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.

CS 288 Special Studies: Computer Science (1-4 Credits)

Explores topics of current interest in the computer science discipline.

CS 298 Independent Study: Computer Science (1-4 Credits)**Prerequisites:** Instructor approval required.**Recommended preparation:** Prior coursework in the discipline.

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

CS 299 Selected Topics: Computer Science (1-4 Credits)

Provides a learning experience in computer science not currently available; this course is in development to be proposed as a permanent course.

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)

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 203 Critical Incident Management for Criminal Justice Professionals (3 Credits)

Provides an introduction to concepts of critical incident management for criminal justice professionals including: crisis intervention, building crisis intervention skills and evaluation of personal coping skills and emotional reactions.

CJ 204 Controversies in Criminal Justice (3 Credits)

Defines, describes and evaluates the crises and conflicts which face law enforcement agencies today. Includes 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 288 Special Studies: Criminal Justice (1-4 Credits)

Explores topics of current interest in the discipline.

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.

CJ 299 Special Topics: Criminal Justice (1-4 Credits)

Presents selected topics of study in criminal justice offered on a temporary or experimental basis.

Culinary Arts (CUL)

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. P/NP grading.

CUL 104 Applied Math for Culinary Arts (4 Credits)

Prerequisites: MTH 015 (or higher) or minimum placement Math Level 7. 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 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 102; CUL 104; 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)

Prerequisites with concurrency: CUL 140.

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.

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 203 Food Truck Operations (4 Credits)**Prerequisites:** CUL 170 or BAK 170.**Recommended preparation:** CUL 200.

Covers owning and operating a food truck or cart. Uses the tools needed to formulate a food truck concept to turn it into a standardized plan. Focuses on menu planning, truck/cart design and location, government regulations, licenses, and permits. Requires local travel.

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 with concurrency:** 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 288 Special Studies: Culinary Arts (1-6 Credits)

Explores topics of current interest in the discipline.

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.

CUL 299 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.

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: AH 105 (or course from the foundational studies math list); BA 214 or WR 121; CIS 120 or Computer Competency Test; HHP 252; Choose one of the following Psychology Courses: PSY 101, PSY 201, PSY 215 or PSY 216; Choose one from the following HR courses: AH 115 or BA 178 or COMM 115 or COMM 218 or COMM 219.

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 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 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)

Provides a learning experience in dental assisting not currently available; this course is in development to be proposed as a permanent course.

DA 299 Selected Topics: Dental Assisting (1-4 Credits)

Provides a learning experience in dental assisting not currently available; this course is in development to be proposed as a permanent course.

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: WR 121 or minimum placement WR/Comm Level 9 and MTH 111 or MTH 112 or MTH 251 (or higher) or minimum placement Math Level 20.

Introduces microeconomics, the study of how individuals and firms make choices in the face of scarcity. Builds economic intuition about the consequences of consumption and production decisions. Examines personal decision making as well as economic history to help facilitate critical thinking and analysis. Considers 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. Examples from both personal and corporate finance link this course to practical real-world applications. Need not be taken in sequence.

EC 202 Macroeconomics (4 Credits)

Recommended preparation: WR 121 or minimum placement WR/Comm Level 9 and MTH 111 or MTH 112 or MTH 251 (or higher) or minimum placement Math Level 20.

Introduces macroeconomics, a branch of economics that focuses on the behavior and collective decision-making of an economy as a whole and studies the role of government in determining the pace of economic growth, maximum sustainable employment, and stable inflation. Examines how the governments use taxes, spending, laws and policies to influence important domestic issues such as levels of employment, healthcare, education, debt, wealth, poverty and inequality. Examines concepts like inflation, unemployment, interest rates and the behavior of governments and central banks during boom and bust cycles. Provides tools to understand individual behaviors such as saving, spending, investing and voting. Explores various theories, models and applications relating to business cycles, productivity, technological advancement, and globalization. Need not be taken in sequence.

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 095 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 288 Special Studies: Economics (1-4 Credits)

Explores topics of current interest in the discipline.

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.

EC 299 Selected Topics: Economics (4 Credits)

Provides a learning experience in economics not currently available; this course is in development to be proposed as a permanent course.

Education (ED)

ED 101 Introduction to Education Practicum and Seminar (3 Credits)

Recommended to be taken with: WR 121.

Provides 60 hours of K-12 classroom experience to help students decide early whether teaching is a good fit. Provides weekly reflection and discussion in seminar related to the course content and field placement observations. Requires a criminal history check for placement in a K-12 classroom.

ED 103 Outdoor Teacher Training (1 Credit)

Offers experience in an outdoor learning environment. Includes training to lead a cabin group of students through a three to five day camp session. Covers leading outdoor education sessions, campfire programming, and team-building activities. Requires a criminal history check, recording observations, and completing reflection assignments.

ED 110 Education Theory in Action (1 Credit)

Recommended to be taken with: ED 112 or ED 200 or ED 216 or ED 219 or ED 253.

Provides experience in a K-12 classroom. Applies course content and learning theories in an interactive learning environment. Places students in classroom with mentor teacher guidance. Requires criminal history check. May be repeated to add classroom experience to ED 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 114 Mathematics for Early Learning Educators (4 Credits)

Prerequisites: MTH 015 (or higher) or minimum placement Math Level 7.

Covers core concepts of mathematics recommended by state and national guidelines for early childhood educators. Facilitates development of the skills and dispositions needed to design, teach, and support classroom curriculum for mathematics to children through six years of age.

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 195 Early Childhood Education/Education Conference (1 Credit)

Attend the annual Early Learning Conference, held in collaboration with the Central Oregon Chapter of the Oregon Association for the Education of Young Children and community education partners on COCC's Bend Campus. Includes latest education research, teaching strategies, culturally responsive pedagogy, and other topics presented by leading working educators. Participate and reflect on the conference sessions attended.

ED 199 Selected Topics: Early Childhood Education (1-4 Credits)

This course is in development.

ED 200 Introduction to Education (3 Credits)

Surveys education field and foundations, especially the teaching profession and education's societal role. Explores philosophical, economic, legal, ethical, historical, psychological, and social foundations of teaching and learning. Provides overview of educational methods and approaches. Addresses field specializations and prospective teacher training requirements.

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 Foundations of Education (3 Credits)

Recommended preparation: WR 121.

Analyzes the system of education in a democratic society. 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.

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 280 Co-op Work Experience Early Childhood Education (1-4 Credits)

Prerequisites: Instructor approval required.

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

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 minimum placement Wr/COMM Level 9; and MTH 015 (or higher) or minimum placement Math Level 7.

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 history 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 for the Emergency Medical Provider (3 Credits)

Covers intervention in behavioral crises caused by crises of sudden death, suicide, rape, murder, vehicle accidents, disease, trauma, and child abuse. Includes resources, supporting behavioral patterns, and handling emotional stress of the patient as well as coping with emotional conflict within one's self.

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 field 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 100 Introduction to Engineering I (3 Credits)

Prerequisites: MTH 111 or higher or minimum placement into Math Level 20.

Explores the spectrum of engineering programs along with professional and academic expectations. Builds basic team skills in a problem solving environment. Identifies significant academic tools and resources to advance critical thinking skills. Analyzes and fabricates possible solutions to engineering challenges.

ENGR 102 Introduction to Engineering II (3 Credits)

Prerequisites: MTH 111 or higher or minimum placement into Math Level 20.

Recommended preparation: ENGR 100 and MTH 112.

Explores design strategies and design thinking to define multiple options to engineering problems that satisfy technical and social requirements. Practices professional engineering and communication skills that contribute to the success of teams. Applies appropriate hardware and software tools to implement one or more solutions to a design problem.

ENGR 103 Introduction to Engineering III (3 Credits)

Prerequisites: MTH 111 or higher minimum placement into Math Level 20.

Recommended preparation: ENGR 100 and ENGR 102.

Introduces fundamental computational concepts and practices with algorithmic thinking in the context of engineering problem solving. Explores problem-solving skills, algorithm design, debugging, and writing programs using universal design principles. Examines limitations in these problem solutions related to social or structural inequities. Applies these skills and insights through applications to engineering problems.

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.

ENGR 288 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 298 Independent Study: Engineering (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

ENGR 299 Selected Topics: Engineering (1-6 Credits)

Provides a learning experience in engineering not currently available; this course is in development to be proposed as a permanent course.

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.

Examines 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. Explores 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.

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.

Study representative plays from Shakespeare's early and middle periods and sonnets relevant to play elements.

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.

Surveys children's literature for all ages in genres that may include picture books, myths and folklore, poetry, nonfiction, historical fiction, and fantasy, making connections to the historical, cultural, institutional, and psychological contexts related to production and reception. Examines how texts represent childhood and reflect assumptions about the social and educational function of children's and young adult 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 250 Introduction to Folklore and Mythology (4 Credits)

Recommended preparation: WR 121.

Surveys and compares representative texts from world mythology and folklore. Explores common mythological and folkloric themes and genres. Examines mythology as an interdisciplinary field that incorporates anthropology, sociology, history, literary studies, psychology, and religion.

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 298 Independent Study: English and Literature (1-4 Credits)**Prerequisites:** Instructor approval required.**Recommended preparation:** Prior coursework in the discipline.

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

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 188 Special Studies: Ethnic Studies (1-4 Credits)

Explores topics of current interest in the Ethnic Studies discipline.

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 288 Special Studies: Ethnic Studies (1-4 Credits)

Explores topics of current interest in the Ethnic Studies discipline.

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 188 Special Studies: Film Arts (1-4 Credits)

Explores topics of current interest in the discipline.

FA 199 Selected Topics: Film Arts (1-4 Credits)

Provides a learning experience in film arts not currently available; this course is in development to be proposed as a permanent course.

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.

Fire Science (FIRE)

FIRE 100 Firefighter Type II Training (3 Credits)

Trains 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, and L-180.

FIRE 101 Introduction to Emergency Services (4 Credits)

Provides an overview to fire protection and EMS. Includes career opportunities, related fields, philosophy and history, organization and function of public and private agencies, nomenclature, functions. In addition, provides a broad overview of college and life success strategies as related to this field. This course is a FESHE core requirement and is equivalent to NFA C0273.

FIRE 102 Fire Service Safety and Survival (3 Credits)

Introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for culture and behavior change through the fire and emergency services. This course is a FESHE core requirement and is equivalent to NFA C0281.

FIRE 110 Building Construction for Fire Personnel (3 Credits)**Prerequisites with concurrency:** FIRE 114.**Recommended to be taken with:** FIRE 112.

Introduces the relationship of building construction to firefighter and life safety. Explores the elements of construction and design of structures, key factors when inspecting buildings, preplanning fire operations, and operating at emergencies. This course is a FESHE core requirement and is equivalent to NFA C0275.

FIRE 111 Tactical Decision Simulations (2 Credits)**Prerequisites:** FIRE 100.

Uses simulations of specific problem situations to learn and apply tactical decision-making skills in the fire environment. Includes anticipating or predicting problem fire behavior during fireline operations, utilizing lookouts, communications, escape routes and safety zones. Upon completion of the course students will receive a Fireline Handbook and Incident Response Pocket Guide (IRPG). P/NP grading.

FIRE 112 Public Education and Fire Prevention (3 Credits)**Recommended to be taken with:** FIRE 114.

Provides fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspections; fire and life safety education; and fire investigation. This course is a FESHE core requirement and is equivalent to NFA C0286.

FIRE 114 Fire Codes and Ordinances (3 Credits)**Recommended to be taken with:** FIRE 110 and FIRE 112.

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. Provides the students with fundamental knowledge of the role of code enforcement in a comprehensive fire prevention program. This course is a FESHE Fire Prevention model curriculum.

FIRE 120 Fire Protection Systems (3 Credits)**Recommended preparation:** FIRE 101 and FIRE 102.

Introduces features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers. Apply concepts in field exercises. This course is a FESHE core requirement and is equivalent to NFA C0288.

FIRE 121 Fire Law (1 Credit)**Recommended preparation:** FIRE 101 and FIRE 102.

Introduces the modern legal system with emphasis on cases related to fire service. Reviews case law affecting modern fire service agencies and explores laws relating to medical treatment of patients, fire protection, codes, emergency response and department activities on the fire ground. This course is a FESHE non-core requirement and is equivalent to NFA C0270.

FIRE 122 Fire Department Budget (1 Credit)

Covers the budget process as required by Oregon laws. Includes types of budgets, the process of preparing the budget and classifying expenditures.

FIRE 123 HazMat Awareness & Operations (3 Credits)**Prerequisites with concurrency:** FIRE 175 or department approval based on agency affiliation.

Prepares individuals to safely respond to hazardous materials emergencies. Includes 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). Students will be prepared to test for IFSAC certification.

FIRE 130 Rescue Practices (3 Credits)**Recommended preparation:** FIRE 101.

Explores techniques and applications of specialized rescue practices in modern fire service. Addresses specialized techniques used in vehicle rescue, steep-angle rescue, swift-water rescue and basic overviews of ice rescue, electrical rescue and trench rescue. Incorporates field exercises to practice techniques and tool use. Combine with Emergency Medical Technician-Basic training to integrate fire and EMS skills for emergency rescue.

FIRE 131 S-131, Firefighter Type I (1 Credit)**Prerequisites:** FIRE 100.

Provides Firefighter Type 1 (FFT1) training. Topics include operational leadership, communications, LCES, and tactical decision-making. Includes class discussion and tactical decision games designed to facilitate learning. This course is an NWCG S-131 Certified course and students must be qualified as a Wildland Firefighter Type II (FFT2) per NWCG to take this course.

FIRE 175 NFPA Firefighter 1 Academy (7 Credits)

Provides new firefighters the practical and cognitive training needed to operate safely and effectively on the fireground. Meets the requirements outlined by NFPA 1001 (National Fire Protection Association), the Oregon Department of Public Safety Standards and Training (DPSST), and the International Fire Service Accreditation Congress (IFSAC) for firefighter training. Focuses on an intense hands-on approach to firefighter, which promotes both skill competency and an understanding of the fireground. Students will be tasked to complete numerous fireground evolutions that apply their skills to a variety of scenarios. Successful completion of finger printing/background check is required prior to DPSST certification. Requires a high level of physical fitness.

FIRE 188 Special Studies: Fire Science (1-4 Credits)

Explores topics of current interest in the fire science discipline.

FIRE 199 Selected Topics: Fire Science (1-4 Credits)

This course is in development.

FIRE 200 S-200 Initial Attack Incident Command (1 Credit)**Prerequisites:** FIRE 230.

Designed to meet the training needs of the Incident Commander Type 4 (ICT4). Presented in a discussion/exercise format. The six instructional units include Foundation Skills; Intelligence Gathering and Documentation; Size Up the Incident; Develop a Plan of Action; Post-fire Activities; Evaluate Incident Objectives and Manage the Incident. This is an NWCG certified course. NWCG requires students be qualified as any single resource boss to take this course.

FIRE 201 NFPA Instructor 1 (3 Credits)

Explores the job performance requirement of the National Fire Protection Agency, 1041 Standard for Fire Service Instructor Professional Qualifications and the National Wildfire Coordinating Group. Prepares students for instruction: planning, using a variety of instructional methods, teaching diverse learners, and evaluating course outcomes. Includes guidelines for addressing the critical issues of safety and the legal issues of training. This course is articulated with DPSST to provide NFPA Instructor 1 Certification. P/NP grading.

FIRE 203 S-203 Introduction to Incident Information (3 Credits)**Prerequisites:** Instructor approval based on agency nomination.

Provides students with the knowledge and skills they need to serve as public information officers (PIOF). Includes establishing and maintaining an incident information operation, communicating with internal and external audiences, working with the news media, handling special situations, and long term planning and strategy. This course is an NWCG certified course.

FIRE 205 Fire Behavior & Combustion (3 Credits)**Prerequisites:** FIRE 101, FIRE 102, FIRE 110 and FIRE 120.**Prerequisites with concurrency:** GS 105 or CH 104 or higher.

Explores theories and fundamentals of how and why fires start, how they spread, and how they are controlled. This course is a FESHE core requirement and is equivalent to NFA C0276.

FIRE 210 FI-210 Wildfire Origin/Cause (2 Credits)**Prerequisites:** Department approval.

Provides a knowledge and skill base for the wildland fire origin and cause determination investigator (INVF). Trains an INVf to perform at an acceptable level on a national basis without regard to geographic boundaries. This course is an NWCG certified course and NWCG recommends students have law enforcement or firefighter experience with wildland fire investigation responsibilities.

FIRE 210S Structure Fire Investigation (2 Credits)**Prerequisites:** FIRE 101, FIRE 102, FIRE 110, FIRE 112, FIRE 120, FIRE 175, and FIRE 205.

Provides the technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire setter, and types of fire causes. This course is a FESHE non-core requirement and is equivalent to NFA C0283.

FIRE 211 S-211 Portable Pumps (1 Credit)**Recommended preparation:** FIRE 100 and MTH 015 (or higher).

Covers skills needed to design, setup, operate, troubleshoot, and shut down portable water delivery systems. Focuses on portable pumps, not water delivery for engines. Topics include portable water delivery systems, equipment, roles and responsibilities, and system design and hydraulics. Includes an applied field exercise. This is an NWCG certified course.

FIRE 215 S-215 Fire Operations in the Urban Interface (3 Credits)**Prerequisites:** FIRE 131 and FIRE 290.

Focuses on tactical decisions needed to confront wildland fire that threatens life, property, and improvements in the wildland/urban interface. Includes 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. This is an NWCG certified course and NWCG requires students be qualified as a Firefighter Type 1 (FFT1).

FIRE 215S S-215 Fire Operations in Urban Interface for Structure Fire (3 Credits)**Prerequisites:** FIRE 100, FIRE 101, FIRE 102, FIRE 123, and FIRE 175.

Focuses on the structure fire duties in relation to the urban interface. 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.

FIRE 219 S-219 Fire Operations (2 Credits)**Prerequisites:** FIRE 100.

Introduces the roles and responsibilities of a firing boss (FIRB) and outlines duties of other personnel who may engage firing operations. Discusses and illustrates common firing devices and techniques. Although comprehensive in nature, the course work is not a substitute for the dynamic fire environment. This is an NWCG certified course and students are required to be qualified as a firefighter type 2 (FFT2) for certification.

FIRE 230 S-230 Crew Boss (2 Credits)**Prerequisites:** FIRE 131 and FIRE 290.

Trains students 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. This is an NWCG certified course. Students are required to be qualified as firefighter type 1 (FFT1) and have successful completion of S-290.

FIRE 231 S-231 Engine Boss (1 Credit)**Prerequisites:** FIRE 131, FIRE 230 and FIRE 290.**Recommended preparation:** FIRE 215, FIRE 219, FIRE 270, FEMA 1-200 and a certified driver course.

Trains students to perform all duties associated with the single resource engine boss. Topics include engine and crew capabilities and limitations, information sources, fire size up considerations, tactics, and wildland/urban interface. This is an NWCG certified course and students must be qualified as a firefighter type 1 (FFT1) and have successfully completed S-230.

FIRE 232 Fire Protection Hydraulics and Water Supply (4 Credits)**Prerequisites:** FIRE 101, FIRE 102, FIRE 120, FIRE 175, FIRE 205, and MTH 098 (or higher) or minimum placement Math Level 14.

Provides a foundation of theoretical knowledge in the principles of the use of water in fire protection and in the application of hydraulic principles to analyze and solve water supply problems. This course is a FESHE non-core requirement and is equivalent to NFA C0277 and DPSST certification in NFPA Pumper Operator.

FIRE 236 S-236 Heavy Equipment Boss (1 Credit)**Prerequisites:** FIRE 230 and FIRE 290.

Trains for the role of 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. This is an NWCG certified course and students are required to be qualified as firefighter type 1 (FFT1) and have successfully completed S-230.

FIRE 248 S-248 Status/Check-In Recorder (2 Credits)**Recommended preparation:** FEMA I-200, L-180 Human Factors, and basic computer skills.

Introduces tools and techniques used to perform the duties of a status check-in recorder (SCKN). Provides an overview of what a student can expect if dispatched to an incident. This is an NWCG certified course.

FIRE 261 S-261 Applied Interagency Incident Business Management (2 Credits)**Recommended preparation:** ICS I-100; NWCG certification of S-260, Interagency Incident Business Management, S-110, Basic Willand Fire Suppression Orientation; I-Suite, Time Module component, and L-180 Human Factors on the Fireline.

Provides the prerequisite skills/knowledge necessary to perform the tasks of the entry-level finance positions in the Incident Command System (ICS). Designed to be taken after completion of Interagency Incident Business Management (S-260). This is an NWCG certified course and students are required to have completed S-260, Interagency Incident Business Management.

FIRE 263 Human Behavior in Fire (3 Credits)**Prerequisites:** FIRE 101, FIRE 102, FIRE 110, FIRE 112, FIRE 114, FIRE 120, FIRE 205, and MTH 098 (or higher) or minimum placement Math Level 14.

Provides fundamental information on human behavior as it relates to fire and mass casualties, understanding human behavior, building design, evacuation and fire department operations. Discusses issues associated with large populations and disabled or persons with limited mobility. This course is a FESHE fire prevention curriculum requirement and is equivalent to NFA C0276.

FIRE 265 Capstone: Fire and Emergency Service Administration (3 Credits)**Prerequisites:** FIRE 101, FIRE 102, FIRE 110, FIRE 112, FIRE 114, FIRE 175, FIRE 120, and WR 065 (or higher) or placement into Wr/Comm Level 9.**Prerequisites with concurrency:** FIRE 205.**Recommended preparation:** Recommended to be taken your second year. Introduces the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency service ethics and leadership from the perspective of the company officer. This course is a FESHE non-core requirement (equivalent to NFA C0272) and meets DPSST Fire Officer I requirements.**FIRE 270 S-270 Basic Air Operations (2 Credits)****Recommended preparation:** FIRE 100.

Covers aircraft types and capabilities, aviation management and safety, tactical and logistical uses of aircraft, and requirements for helicopter take-off and landing areas. NOTE: The regulations, procedures, and policies addressed in this course are primarily those governing federal agency and ICS operations. State, county, and other political subdivisions using this course will need to consult their agency having jurisdiction with respect to regulations, procedures and policies. This is an NWCG certified course.

FIRE 275 Capstone: Tactics & Strategies (3 Credits)**Prerequisites:** FIRE 101, FIRE 102, FIRE 110, FIRE 112, FIRE 114, FIRE 120, FIRE 123, FIRE 175 and FIRE 205.**Prerequisites with concurrency:** FIRE 232.

Provides a capstone experience to the Fire Science AAS program. Includes an in-depth analysis of the principles of fire control using personnel, equipment, and extinguishing agents on the fire ground. Taken in the final term prior to program completion. This course is a FESHE non-core requirement and is equivalent to NFA C0279.

FIRE 280 Co-op Work Experience Fire Science (1-4 Credits)**Prerequisites:** Instructor approval.

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

FIRE 281 L-280 Followership/Leadership (2 Credits)**Prerequisites:** FIRE 100.

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, and after action review techniques. This is an NWCG certified course. P/NP grading.

FIRE 286 Pacific Northwest Engine Academy (3 Credits)**Prerequisites:** FIRE 100 and FIRE 211.

Training in water handling and engine operation skills, applicable to both fuels management and fire suppression activities. The student will be instructed using ICS terminology. P/NP grading.

FIRE 288 Special Studies: Fire Science (1-4 Credits)

Explores topics of current interest in the fire science discipline.

FIRE 290 S-290 Intermediate Wildfire Behavior (3 Credits)**Prerequisites:** FIRE 100.

Prepares the prospective fireline supervisor to undertake safe and effective fire management operations. 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. This is an NWCG certified course.

FIRE 291 S-300 IC Extended Attack (1 Credit)**Prerequisites:** FIRE 200 and FIRE 292.

Meets the training needs of the incident commander, type 3 (ICT3). Focuses on the lessons of leadership and command as they relate to the ICT3 position. Includes tactical decision games for students to practice concepts. Units include: Foundational Skills, Situational Awareness, Command and Control, Managing the Incident, Transitional Activities, Post-Fire Activities and a Final Simulation. This is an NWCG course and requires qualification as an Incident Commander Type 4 (ICT4) and Task Force Leader (TFLD) OR qualified as ICT4 and Strike Team Leader and any two single resource boss positions - one must be Crew (CRWB) or Engine (ENGB).

FIRE 292 S-330 Task Force/Strike Team Leader (1 Credit)**Prerequisites:** FIRE 230 and FIRE 290.

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. The student is expected to perform in high risk simulations. This is an NWCG certified course and students are required to be qualified as any single resource boss.

FIRE 293 S-339 Division Group Supervisor (1 Credit)**Prerequisites:** FIRE 200, FIRE 290 and FIRE 292.

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. This is an NWCG certified course and students are required to be qualified as a Task Force Leader (TFLD); OR qualified as Incident Commander Type 3 (ICT3); OR qualified as Incident commander Type 4 (ICT4) AND any two (2) Strike Team Leader positions (one must be STCR or STEN).

FIRE 294 S-390 Fire Behavior Calculation (3 Credits)**Prerequisites:** FIRE 230 and FIRE 290.

Introduces fire behavior calculations by manual methods, using nomograms and the Fire Behavior Handbook Appendix B: Fire Behavior. Gain an understanding of the determinants of fire behavior by studying inputs such as weather, slope, fuels, and fuel moisture. Learn how to interpret fire behavior outputs, documentation processes, and fire behavior briefing components. This is an NWCG (National Wildfire Coordinating Group) Certified course; requires qualification as a single resource boss.

FIRE 298 Independent Study: Fire Science (1-4 Credits)**Prerequisites:** Instructor approval.**Recommended preparation:** Prior coursework in the discipline.

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

FIRE 299 Selected Topics: Fire Science (1-4 Credits)

Provides a learning experience in Fire Science not currently available; this course is in development to be proposed as a permanent course.

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 188 Special Studies: Fish and Wildlife (1-4 Credits)

Explores topics of current interest in the fish and wildlife discipline.

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.

FW 257 Hunting in Modern Society (4 Credits)

Examines the role of recreational hunting in modern society, including its history and development, the use of harvests as a conservation and management tool, and varying ethical perspectives on recreational hunting. Focuses on recreational hunting as a social, biological, and conservation activity, and compares the North American model of wildlife conservation with management and conservation models for wildlife in other countries and cultures.

FW 288 Special Studies: Fish and Wildlife (1-4 Credits)

Explores topics of current interest in the fish and wildlife discipline.

FW 298 Independent Study: Fish and Wildlife (1-4 Credits)**Prerequisites:** Instructor approval required.**Recommended preparation:** Prior coursework in the discipline.

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

FW 299 Selected Topics: Fish/Wildlife (1-4 Credits)

Prerequisites: instructor approval.

Provides a learning experience in fish/wildlife studies not currently available; this course is in development to be proposed as a permanent course.

Foods & Nutrition (FN)

FN 188 Special Studies: Foods and Nutrition (1-4 Credits)

Explores topics of current interest in the foods and nutrition discipline.

FN 199 Selected Topics: Foods & Nutrition (1-4 Credits)

Provides a learning experience in foods and nutrition not currently available; this course is in development to be proposed as a permanent course.

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.

FN 288 Special Studies: Foods and Nutrition (1-4 Credits)

Explores topics of current interest in the foods and nutrition discipline.

FN 298 Independent Study: Foods and Nutrition (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

FN 299 Selected Topics: Foods & Nutrition (1-4 Credits)

Provides a learning experience in foods and nutrition not currently available; this course is in development to be proposed as a permanent course.

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 soil science basics, from physical properties to use and management. Discusses traditional agricultural, wildlands and rangelands, watersheds, and modern environmental perspectives on soil. Reviews new soil applications and soil science to better understand the role soil has in our lives. Includes lab component with indoor and outdoor experience 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 102 or a course from the foundational requirements math list.

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 102 or a course from the foundational requirements math list 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 102 or a course from the foundational requirements math list and 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. 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 use 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. Emphasizes 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 288 Special Studies: Forestry (1-4 Credits)

Explores topics of current interest in the discipline.

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 141 Paris: City of Lights: History, Culture and Politics (3 Credits)

Examines the history of Paris chronologically from the founding of Paris to the present. Explores the political, cultural, and societal changes in 2,000 years of Parisian history. Examines the city from political, social, geographical, and cultural viewpoints. Taught in English.

FR 188 Special Studies: French (1-4 Credits)

Explores topics of current interest in the French discipline.

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 FR 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 288 Special Studies: French (1-4 Credits)

Explores topics of current interest in the French discipline.

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.

FR 299 Selected Topics: French (1-4 Credits)

Provides a learning experience in French not currently available; this course is in development to be proposed as a permanent course.

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 060.

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 060.

Provides an introduction to properties and structures of matter, chemical bonding, solutions, equilibrium, electrolytes, and acids and bases. Includes quantitative discussions of the mole, stoichiometry, and solution concentration.

GS 106 Physical Science: Geology (4 Credits)

Recommended preparation: MTH 060 or minimum placement Math Level 10.

Introduces students to the study of the ever-changing Earth, with a focus on hands-on exploration. Designed for students with limited geology background. Field trips will occasionally substitute for labs.

GS 107 Physical Science: Astronomy (4 Credits)

Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 060.

Introduces astronomy, including the 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 101 Introduction to Geospatial Science & GIS (4 Credits)

Introduces science underlying geospatial technologies including geographic information systems, global positioning systems, satellite and unmanned aerial systems imagery, and cartography. Introduces how geospatial technology can be used with the scientific method to investigate questions in a broad range of fields including the sciences, social sciences, and humanities.

GEOG 106 Economic Geography (4 Credits)

Recommended preparation: WR 060 (or higher) or minimum placement Wr/Comm Level 5.

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: WR 060 (or higher) or minimum placement Wr/Comm Level 5.

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 188 Special Studies: Geography (1-4 Credits)

Explores topics of current interest in the geography discipline.

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 Cartography (4 Credits)

Develops skills needed to produce maps with ArcGIS software. Outlines cartographic principles and map use. Emphasizes mapping techniques within a geographic information system (GIS). Intended for students enrolled in GIS or unmanned aerial systems programs.

GEOG 212 Tourism And Recreation (3 Credits)

Recommended preparation: WR 060 (or higher) or minimum placement Wr/Comm Level 5.

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 geographic information systems (GIS), while providing experience using ArcGIS and Spatial Analyst software. Develops both theoretical understanding of GIS and experience in accessing GIS datasets. Covers raster and vector GIS.

GEOG 266 ArcGIS (4 Credits)

Recommended preparation: or to be taken with GEOG 265.

Provides working knowledge of ArcGIS software. Covers designing and developing a geographic information system database, performing spatial analysis, creating maps, and generating a report with software.

GEOG 267 Geodatabase Design (4 Credits)

Recommended preparation: GEOG 266.

Covers fundamentals of creating, using, editing, and managing spatial and attribute data in ArcGIS. Explores data migration; data loading; topology rules; use of subtypes, attribute domains, and relationship classes. Includes creating, editing, and analyzing geometric networks.

GEOG 270 Map Interpretation and Design (4 Credits)

Recommended preparation: MTH 060 (or higher) or minimum placement Math Level 10.

Looks at the world of maps. Covers 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 (4 Credits)

Provides the skills to collect location information for integration with a geographic information system (GIS). Focuses on proper use of the Global Positioning System 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 (4 Credits)

Recommended preparation: GEOG 285.

Provides a capstone experience to the Geographic Information Systems (GIS) program. Presents criteria to complete the project, including project planning, designing and developing a GIS database, collecting and editing data, performing spatial analysis, creating maps, generating reports, and presenting 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 required.

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

GEOG 284 GIS Customization (4 Credits)

Customize ArcGIS software with a current programming language. Publish content to the internet and servers.

GEOG 285 Data Conversion and Documentation (4 Credits)

Recommended preparation: GEOG 266.

Covers techniques to collect and to convert data between formats, projections, and coordinate systems. Cultivates research and experimentation with data and enhances problem-solving skills. Emphasizes metadata use, which allows the data user to determine whether a particular data set is suitable for its proposed use.

GEOG 286 Remote Sensing (4 Credits)

Introduces theory and methods of remote sensing with satellite imagery. Covers use of SPOT, Landsat, and QuickBird images with ArcGIS and IMAGINE analysis software. Perform digital analysis, 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 Spatial Analysis (4 Credits)

Recommended preparation: GEOG 266.

Explores analytical capabilities of geographic information systems. Covers techniques to locate and to describe features and moves to advanced techniques based on higher-level spatial objects. Use the ArcGIS Spatial Analyst extension to analyze raster datasets in the lab.

GEOG 288 Special Studies: Geography (1-4 Credits)

Explores topics of current interest in the geography discipline.

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 161 Field Geology: Study of Landscape Evolution (3 Credits)

Introduces students to the processes by which landscapes evolve in a field based setting. Learn how to observe the landscape using methods from field sciences such as geology and ecology, and then apply ideas from these sciences to interpret how landscapes change. The course will take place primarily outdoors, including hiking to field sites and camping for an extended period of time.

G 162CV Field Geology: Cascade Volcanoes (3 Credits)

Explores Central Oregon's spectacular volcanic landscape. Meets for lecture followed by all-day field trip to volcanic sites in Central Oregon. Appropriate for non-majors.

G 163 Field Geology: Rivers, Lakes and Springs of Central Oregon (3 Credits)

Explores Central Oregon's water bodies with emphasis on their interactions with the volcanic landscape. Meets for lecture followed by all-day field trip to sites in Central Oregon. Appropriate for non-majors.

G 188 Special Studies: Geology (1-4 Credits)

Explores topics of current interest in the geology discipline.

G 199 Selected Topics: Geology (1-6 Credits)

This course is in development.

G 201 Geology I - The Dynamic Earth (4 Credits)

Examines the dynamic Earth through the lens of plate tectonics. Uses a geologic perspective to consider how humans and the geologic world impact each other. First course in sequence. Appropriate for non-majors.

G 202 Geology II - Earth's Surface (4 Credits)

Recommended preparation: G 201.

Examines Earth's dynamic landscapes through the lens of surface processes. Uses a geologic perspective to consider how humans and the geologic world impact each other. Second course in sequence.

G 203 Geology III - Earth History (4 Credits)

Recommended preparation: G202.

Examines Earth's history from an Earth's systems perspective including the geosphere, biosphere, hydrosphere, and atmosphere. Considers how humans and the geologic world impact each other. Third course in sequence.

G 207 Geology of the Pacific Northwest (4 Credits)

One-term introductory lab science course in geology. 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. Requires weekend field trip.

G 288 Special Studies: Geology (1-4 Credits)

Explores topics of current interest in the geology discipline.

G 298 Independent Study: Geology (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.

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 German discipline.

GER 199 Selected Topics: German (1-4 Credits)

Provides a learning experience in German not currently available; this course is in development to be proposed as a permanent course.

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 288 Special Studies: German (1-4 Credits)

Explores topics of current interest in the German discipline.

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: WR 065 or WR 121 or minimum placement Wr/Comm Level 9.

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: WR 065 or WR 121 or minimum placement Wr/Comm Level 9.

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 WR 121 or minimum placement Wr/Comm Level 9.

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: Health & Human Performance (1-4 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 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 228 Health and Social Justice (4 Credits)

Recommended preparation: HHP 100.

Introduction to the intersection of health and social justice, to better understand socially unjust health differences (inequities) present in communities across the United States and abroad. Particular attention will be paid to the social ecological framework for health promotion and the social determinants of health. The course takes a deeper dive into public health challenges by exploring current health issues in the United States and globally. Examination of relevant historical issues, theories of justice, human rights, and empirical evidence of health inequities, with an emphasis in critical analysis and applied knowledge. Community-engaged strategies and service learning activities will be used to explore social injustices and health inequities.

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 WR 121 or minimum placement Wr/Comm Level 9.

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 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 WR 121 or minimum placement Wr/Comm Level 9.

First aid and 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; 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 a first aid card and an American Heart Association Basic Life Support for Provider Adult & Pediatric CPR card.

HHP 252A Fitness/First Aid (3 Credits)

Recommended preparation: WR 065 and MTH 015.

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 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 WR 121 or minimum placement Wr/Comm Level 9.

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.

Introduces the science of human movement (kinesiology). Explores the anatomical elements, such as muscle action and joint structure and function involved in the gross motor movement. Emphasizes structural anatomy, primary movers of each joint, and muscle utilization for specific sport actions.

HHP 261 Exercise Physiology (4 Credits)**Recommended preparation:** MTH 015 (or higher) or minimum placement Math Level 7 and WR 065 or WR 121 or minimum placement Wr/Comm Level 7.

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 065 or higher or minimum placement Wr/Comm Level 7.

Farmer and author Wendell Berry once wrote that eating is an "agricultural act". It is also an ethical, social, political, and environmental act. In order to more fully understand the impact of our food choices, this course explores American food production from start to finish, past to present, and field to fork. Along the way we answer questions like: How does a plant grow? What is the difference between conventional vs. organic agriculture? How and why did our current food system develop? How much does a 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 288 Special Studies: Health & Human Performance (1-4 Credits)

Explores topics of current interest in the discipline.

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 (1-6 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 108 Introduction to Canoeing (1 Credit)

Introduces the sport of canoeing, including the selection of appropriate gear, effective paddling techniques, and canoe maneuvers on lakes and other calm-water venues. Develops an understanding of the use of canoeing as a recreational activity and further develops a sense of the canoe as a method of outdoor/wilderness travel. Students do not need any previous paddling experience. Canoes, paddles, and personal flotation devices will be provided.

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 188 Special Studies: Health and Human Performance (1-4 Credits)

Describe current topics associated with health and human performance.

HHPA 199 Selected Topics: Health and Human Performance (1-4 Credits)

This course is in development.

HHPA 288 Special Studies: Health and Human Performance (1-4 Credits)

Describe current topics associated with health and human performance.

HHPA 299 Selected Topics: Health and Human Performance (1-4 Credits)

Provides a learning experience in health and human performance not currently available; this course is in development to be proposed as a permanent course.

Health Information Management (HIM)

HIM 103 Introduction to Health Information Management (4 Credits)

Prerequisites: AH 111, BA 214 or WR 121, and CIS 120.

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 (4 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 (4 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 and tools.

HIM 182 Introduction to Reimbursement and Classification Systems (4 Credits)

Prerequisites: Instructor approval.

Introduces healthcare reimbursement methodologies and healthcare classification (coding) systems. Provides foundational skills for understanding healthcare financing and reimbursement. Introduces the use of classification systems with a focus on the Current Procedural Terminology and the International Classification of Diseases Clinical Modification.

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 188 Special Studies: Health Information Management (1-4 Credits)

Explores topics of current interest in the health information management discipline.

HIM 190 HIPAA for Practical Experience (2 Credits)

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 199 Selected Topics: Health Information Management (1-4 Credits)

This course is in development.

HIM 201 Legal and Ethical Aspects of Health Care (4 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 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 (2 Credits)

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 265 Health Information Management Community Service Learning Project (2 Credits)

Prerequisites: Instructor approval.

Service learning combines meaningful service, academic instruction, and critical reflective thinking to enhance student learning and civic responsibility. Design, create, and implement a cooperative project related to accumulated HIM knowledge. Includes work with members of the community throughout the project.

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. Course emphasizes 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. Focuses on specific statistical analysis of common health care data, percentile use, research, and descriptive data presentations.

HIM 282 Reimbursement Systems (4 Credits)

Prerequisites: Instructor approval required based on completion of first-year HIM curriculum.

Provides an overview of third party payers in a variety of healthcare settings. Includes commercial health insurance, government payers, workman's comp, and liability. This course also addresses coding compliance, coding for medical necessity and completion and submission of claims, including their electronic versions.

HIM 283 Coding Classifications I (4 Credits)

Prerequisites: Instructor approval required based on completion of first-year HIM curriculum.

Provides intermediate skill development in correct code assignment based on the health record documentation and application of coding standards, guidelines and conventions for the Current Procedural Terminology, and the International Classification of Diseases Clinical Modification.

HIM 284 Coding Classifications II (5 Credits)

Prerequisites: Instructor approval based on completion of first-year HIM curriculum.

Develops advanced skills in applying the Current Procedural Terminology and the International Classification of Diseases Clinical Modification. Introduces skills required for correct code assignment based on the health record documentation and application of coding standards, guidelines and conventions for HCPCS Level II, and International Classification of Diseases Procedure Classification.

HIM 285 Revenue Cycle Management (5 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 perspective versus the patient perspective. Application of knowledge, skills, and abilities accumulated in prior terms related to classification and reimbursement systems.

HIM 288 Special Studies: Health Information Management (1-4 Credits)

Explores topics of current interest in the health information management discipline.

HIM 293 Professional Practice Experience (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.

HIM 298 Independent Study: Health Information Management (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

HIM 299 Selected Topics: Health Information Management (1-4 Credits)

Provides a learning experience in health information management not currently available; this course is in development to be proposed as a permanent course.

History (HST)

HST 101 Europe: The Classical Era (pre-history to 600 C.E.) (4 Credits)

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 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 history 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)

Covers political, social, and religious developments in the Islamic world from 600 C.E. to the 1960s. 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 288 Special Studies: History (1-4 Credits)

Explores topics of current interest in the history discipline.

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 104.

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.

HM 160 Wine and Specialty Beverage Management and Service (3 Credits)

Explores organization of a beverage program within the operation of a hospitality business. Introduces the world of wine and beverage including beer and distilled beverages. Emphasizes major wine regions, varietals, viticulture, the winemaking process, and food and wine pairings.

HM 188 Special Studies: Hospitality Management (1-4 Credits)

Explores topics of current interest in the hospitality management discipline.

HM 190 Dining Room Operations (5 Credits)

Covers elements of customer service in a real-life dining room setting including culture and delivery, standards of service, causes of service breakdowns, and service recovery techniques. Provides customer service strategies using systems, technologies, and communication skills to serve diverse customer needs. Emphasizes service styles and guidelines, guest relations, management systems, and equipment identification and handling. Results in the following industry certifications: Oregon Liquor Control Commission (OLCC) Alcohol Service Permit and the Federation of Dining Room Professionals (FDRP) Dining Room Associate and Wine Steward Associate Certificates.

HM 199 Selected Topics: Hospitality Management (1-4 Credits)

This course is in development.

HM 210 Menu Composition and Analysis (3 Credits)

Prerequisites: CUL 104.

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: (BA 214 or 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 288 Special Studies: Hospitality Management (1-4 Credits)

Explores topics of current interest in the hospitality management discipline.

HM 290 Career Success and E-Folio Presentation (2 Credits)

Prerequisites: CUL 170 or BAK 170.

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.

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.

HM 299 Selected Topics: Hospitality Management (1-4 Credits)

Provides a learning experience in hospitality management not currently available; this course is in development to be proposed as a permanent course.

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 human development discipline.

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 288 Special Studies: Human Development (1-4 Credits)

Explores topics of current interest in the human development discipline.

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 and WR 121.

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 and WR 121.

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 human services 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 and WR 121.

Presents the foundations for developing the skills and sensitivities needed to practice as culturally alert counselors. Explores 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 288 Special Studies: Human Services (1-4 Credits)

Explores topics of current interest in the human services discipline.

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 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 humanities 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. Considers Native American works in their national, historical, cultural, geographical, political, and legal contexts.

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 288 Special Studies: Humanities (1-4 Credits)

Explores topics of current interest in the humanities discipline.

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.

Ichishkin (ICH)

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.

ICH 188 Special Studies: Ichishkin (1-4 Credits)

Explores topics of current interest in the discipline.

ICH 199 Selected Topics: Ichishkin (1-4 Credits)

Provides a learning experience in Ichishkin not currently available; this course is in development to be proposed as a permanent course.

ICH 288 Special Studies: Ichishkin (1-4 Credits)

Explores topics of current interest in the discipline.

ICH 298 Independent Study: Ichishkin (1-4 Credits)**Prerequisites:** Instructor approval required.**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.

ICH 299 Selected Topics: Ichishkin (1-4 Credits)

Provides a learning experience in Ichishkin not currently available; this course is in development to be proposed as a permanent course.

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 188 Special Studies: Italian (1-4 Credits)

Explores topics of current interest in the Italian discipline.

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 288 Special Studies: Italian (1-4 Credits)

Explores topics of current interest in the Italian discipline.

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 journalism discipline.

J 199 Selected Topics: Journalism (1-4 Credits)

This course is in development.

J 215 Publications Lab (1 Credit)

Recommended preparation: J 216.

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.

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 288 Special Studies: Journalism (1-4 Credits)

Explores topics of current interest in the journalism discipline.

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 188 Special Studies: Kiksht (1-4 Credits)

Explores topics of current interest in the Kiksht discipline.

KIK 199 Selected Topics: Kiksht (1-4 Credits)

Provides a learning experience in Kiksht not currently available; this course is in development to be proposed as a permanent course.

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 288 Special Studies: Kiksht (1-4 Credits)

Explores topics of current interest in the Kiksht discipline.

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.

KIK 299 Selected Topics: Kiksht (1-4 Credits)

Provides a learning experience in Kiksht not currently available; this course is in development to be proposed as a permanent course.

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)

Covers reading and interpreting 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 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)

Introduces solid modeling software (computer aided drafting) used in design and manufacturing. Includes using the software to capture design intent through part development and creating assemblies with 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 161 CNC Project I (4 Credits)

Provides opportunity to complete a culminating project representing the skills developed in the CNC Machining one-year certificate.

MFG 188 Special Studies: Manufacturing Technology (1-4 Credits)

Explores topics of current interest in the discipline.

MFG 199 Selected Topics: Manufacturing (1-4 Credits)**Prerequisites:** instructor approval.

Provides a learning experience in manufacturing not currently available; this course is in development to be proposed as a permanent course.

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 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 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 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:** MFG 100.

Introduces additive manufacturing concepts including various processes used in rapid prototyping. Design and create sample parts with a three-dimensional 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 256 CNC Mill Programming (4 Credits)

Prerequisites: MFG 100 and MFG 110.

Recommended to be taken with: MFG 257.

Introduces basic programming skills used on the CNC Mill.

MFG 257 CNC Mill Setup & Operation (4 Credits)

Prerequisites: MFG 100 and MFG 110.

Prerequisites with concurrency: MFG 256.

Introduces basic operation and setup used with Fanuc compatible CNC Mill machining centers.

MFG 258 Mastercam Mill (4 Credits)

Prerequisites: MFG 100, MFG 110 and MFG 119.

Introduces Mastercam Mill operational basics. Includes terminology relevant to computer aided drafting/computer aided modeling work. Covers the use of the Mastercam Mill menu structure and system management.

MFG 259 CNC Lathe Programming (4 Credits)

Prerequisites: MFG 100 and MFG 110.

Recommended to be taken with: MFG 260.

Introduces basic programming skills used on the CNC lathe.

MFG 260 CNC Lathe Setup & Operation (4 Credits)

Prerequisites: MFG 100 and MFG 110.

Prerequisites with concurrency: MFG 259.

Introduces basic operation and setup used with Fanuc compatible CNC Lathe machining centers.

MFG 261 Mastercam Lathe (4 Credits)

Prerequisites: MFG 100, MFG 110 and MFG 119.

Recommended to be taken with: MFG 259 and MFG 260.

Introduces Mastercam Lathe operational basics. Includes terminology relevant to PC-based CAD/CAM work. Covers the use of the Mastercam Lathe menu structure and system management, 2 1/2 axis wireframe geometry creation, and toolpath creation for output of CNC "G" code for CNC lathe.

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 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.

Covers gas torch, air carbon arc, and plasma gas cutting. Includes torch setup and maintenance, flame setting, diagnostics, track torch operations, circle cutting, and carbon arc scarfing practice.

MFG 268 Production CNC Operations Mill (3 Credits)

Prerequisites: MFG 256 and MFG 257.

Prerequisites with concurrency: MFG 258 and MFG 270.

Provides opportunity to evaluate efficiency of a parts manufacturing process using a mill. Covers methods to improve efficiency.

MFG 270 CNC Fixture Design Mill (3 Credits)

Prerequisites: MFG 119 and MFG 257.

Provides methods beyond the basic use of a vice in order to hold and machine irregularly shaped parts using a mill.

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 277 Production CNC Operations Lathe (3 Credits)

Prerequisites: MFG 259 and MFG 260.

Prerequisites with concurrency: MFG 261 and MFG 278.

Provides opportunities to evaluate the efficiency of a parts manufacturing process using a lathe. Covers methods to improve efficiency.

MFG 278 CNC Fixture Design Lathe (3 Credits)

Prerequisites: MFG 119, MFG 250, MFG 257.

Covers methods beyond the basic use of a chuck in order to hold and machine irregularly shaped parts using a lathe.

MFG 279 CNC Project II (4 Credits)

Prerequisites: MFG 259, MFG 260, MFG 261.

Provides opportunity to complete a culminating project representing the skills developed during second year of the Manufacturing Machining Technician AAS.

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 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.

MFG 299 Selected Topics: Manufacturing (1-4 Credits)**Prerequisites:** instructor approval.

Provides a learning experience in manufacturing not currently available; this course is in development to be proposed as a permanent course.

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 placement in Wr/Comm Level 7; MTH 015 (or higher) or minimum placement in Math Level 7.**Recommended preparation:** BI 105 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. 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 placement in Wr/Comm Level 7; MTH 015 (or higher) or minimum placement in Math Level 7.**Corequisites:** LMT 155, LMT 170.**Recommended preparation:** BI 105 or BI 231.

Introduces 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)

Explores managing a massage practice, including business structures, legal, and tax documentation requirements. Formulate a marketing plan including advertising, market analysis, and professional goals.

LMT 140 Pathology for Massage Therapy (4 Credits)**Recommended preparation:** BI 105 or BI 231.

Covers effects of massage therapy on body systems, including indications and contraindications to massage. Reviews medical terminology and basic mechanisms of disease process.

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 113 and LMT 145.

Introduces theory and practice of various modalities including deep tissue, trigger point therapy, muscle energy technique, and stretching. Incorporates client assessment and treatment planning for a massage session.

LMT 155 Eastern Theory & Practice (2 Credits)**Prerequisites:** WR 065 or higher or placement in Wr/Comm Level 7; MTH 015 or higher or minimum placement in Math Level 7.**Corequisites:** LMT 130, LMT 170.**Recommended preparation:** BI 105 or BI 231.

Focuses on Chinese medicine as the primary model. Introduces Eastern philosophy and its complimentary healing techniques in a philosophically neutral way.

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 placement in Wr/Comm Level 7; MTH 015 or higher or minimum placement in Math Level 7.**Corequisites:** LMT 130, LMT 155.**Recommended preparation:** BI 105 or BI 231.

Explores professional and ethical boundaries governing massage therapy practice. Examines and discusses Oregon Administrative Rules and Revised Statutes applicable to licensed massage therapists.

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 206 The Spirit of Massage (1 Credit)

Explores 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 Fundamentals (2 Credits)

Introduces essential oils' properties, benefits, and effects on the body when used in clinical and holistic settings.

LMT 217 Aromatherapy Applications (2 Credits)

Advanced exploration and utilization of essential oils.

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.

Explores insurance billing, retail selling, target marketing, bookkeeping, credentialing and other issues a massage practice may encounter.

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 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 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 015 Basic Mathematics (4 Credits)

Recommended preparation: Minimum placement Math Level 4.

Introduces mathematics and its application, explains language and symbols used in math, develops concepts in whole numbers, fractions, decimals, percents, ratio, proportion, and integers, while emphasizing study and learning skills necessary for success in math courses and overcoming anxiety toward math.

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 015. May be taken concurrently with another math class. P/NP grading.

MTH 060 Beginning Algebra (4 Credits)

Recommended preparation: MTH 015 or higher or minimum placement Math Level 7.

Introduces 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 095 Intermediate Algebra (4 Credits)

Recommended preparation: MTH 060 or minimum placement Math Level 10.

Continues the algebra foundation necessary to study college level algebra. Includes polynomial, exponential, radical, and rational expressions. Linear and quadratic functions will be used to model situations and interpret data. An understanding of the connection between narrative, numeric, algebraic, and graphical representations of functions is emphasized. Graphing by hand and using technology are implemented as appropriate. Graphing calculator required (TI-83 or TI-84 recommended).

MTH 098 Math Literacy (4 Credits)

Recommended preparation: MTH 015 or minimum placement in Math Level 7.

Builds on MTH 015 to present mathematics in the context of "math you encounter in your daily life". Introduces and applies pattern recognition, estimation and number sense, working with units, negative numbers, order of operations, and using basic equations and formulas. Explores how to clearly communicate arguments supported by quantitative evidence using words, tables, graphs, and when appropriate, equations and mathematical models.

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 102 Applied Technical Mathematics (4 Credits)

Prerequisites: MTH 060 or higher or minimum placement Math Level 10. Presents algebraic, geometric, and trigonometric concepts in a practical and applied workplace problem-solving context. Includes mathematical operations with real numbers, measurement, ratios, proportions, percentages, dimensional analysis, order of operations, solving equations numerically and symbolically, right triangle trigonometry, area, perimeter, surface area, volume, and weights.

MTH 105 Math in Society (4 Credits)

Recommended preparation: MTH 095 or MTH 098 or higher or minimum placement Math level 14.

Math in Society is a rigorous mathematics course designed for students across multiple disciplines in both transfer degrees and career and technical degrees and certificates. 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 or minimum placement Math Level 18.

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 or minimum placement Math Level 20.

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 188 Special Studies: Mathematics (1-4 Credits)

Explores topics of current interest in the mathematics 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 or minimum placement Math Level 18.

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 or minimum placement Math Level 22.

Examines 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. Expands and explores symbolic, numerical, and graphical representations of mathematical concepts. Emphasizes 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 or minimum placement Math Level 20.

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 MTH 241 or MTH 251) or MTH 105 or minimum placement Math Level 20.

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 251 Calculus I (4 Credits)**Recommended preparation:** MTH 112 (or higher) or minimum placement Math Level 22.

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 or minimum placement Math Level 24.

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 288 Special Studies: Mathematics (1-4 Credits)

Explores topics of current interest in the mathematics discipline.

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.

MTH 299 Selected Topics: Mathematics (1-4 Credits)

Provides a learning experience in math not currently available; this course is in development to be proposed as a permanent course.

Medical Assistant (MA)

MA 110 Introduction to Clinical Medical Assisting (7 Credits)

Prerequisites: Instructor approval.

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 (4 Credits)

Corequisites: MA 110.

Introduces medical assistant key competencies related to office practices and administrative responsibilities defined by the Commission on Accreditation of Allied Health Education Programs and the Medical Assisting Educational Review Board. Includes concepts related to professionalism, diversity, confidentiality, communication, telephone techniques, legal concepts, scheduling, triage skills, and office safety.

MA 120 Clinical Medical Assisting II (7 Credits)

Prerequisites: MA 110 and MA 111.

Corequisites: MA 121.

Covers key medical assistant clinical cognitive, psychomotor, and affective competencies defined by the Commission on Accreditation of Allied Health Education Programs and the Medical Assisting Educational Review Board. Expands skills required to assist with diagnostic testing, outpatient procedures, and office-based lab testing. Increases mastery of standard precautions, infection control, medical and surgical asepsis, patient preparation, delivery of oral and parenteral medications, and patient nutritional needs.

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, 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 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 Assistant (1-4 Credits)

Explores topics of current interest in the medical assistant 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 288 Special Studies: Medical Assistant (1-4 Credits)

Explores topics of current interest in the medical assistant discipline.

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.

MA 299 Selected Topics: Medical Assistant (1-4 Credits)

Provides a learning experience in medical assisting not currently available; this course is in development to be proposed as a permanent course.

Military Science (MS)

MS 111 Military Science I: Introduction to Leadership (1 Credit)

Introduces effective leadership and communication skills. Explores personal development of life skills, comprehensive fitness related to leadership, officership, and the Army profession. Introduces basic land navigation skills and techniques for tactical decision making. Part of a series of military science leadership classes.

MS 112 MS I: Leadership (1 Credit)

Continues developing effective leadership and communication skills, personal development of life skills, comprehensive fitness related to leadership, officership, and the Army profession. Continues the process of developing their land navigation skills and techniques for tactical decision making. Part of a series of military science leadership courses.

MS 113 MS I: Applied Leadership (1 Credit)

Apply effective leadership and communication skills, develop life skills and comprehensive fitness related to leadership, officership, and the Army profession. Apply land navigation skills and techniques for tactical decision making. Part of a series of military science leadership courses.

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 188 Special Studies: Military Science (1-4 Credits)

Explores topics of current interest in the military science discipline.

MS 199 Selected Topics: Military Science (1-4 Credits)

Provides a learning experience in military science not currently available; this course is in development to be proposed as a permanent course.

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 288 Special Studies: Military Science (1-4 Credits)

Explores topics of current interest in the military science discipline.

MS 298 Independent Study: Military Science (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

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: Basic understanding of the fundamentals of music theory. Recommended to be taken with: MUS 114.

Focuses on harmony of the common-practice period with attention to part writing, and analysis techniques.

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)

Recommended to be taken with: MUS 111.

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 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)

Explores topics of current interest in the music discipline.

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 (1-4 Credits)

This course is in development.

MUS 201 Introduction to Music: Antiquity-1800 (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 from the Medieval, Renaissance, Baroque and Classical eras.

MUS 202 Introduction to Music: 1800-Present (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 from the Romantic, Twentieth Century and Contemporary eras.

MUS 203 Introduction to Music: World Music (3 Credits)

Focuses on the place of music in human society. Examines instruments, people, and activities surrounding musical events in diverse parts of the world. Introduces the field of ethnomusicology, the discipline that studies music and music cultures of the world, how they make music, and how they interpret and engage with the music that they make.

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 288 Special Studies: Music (1-4 Credits)

Explores topics of current interest in the music discipline.

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.

MUS 299 Selected Topics: Music (1-4 Credits)

Provides a learning experience in music not currently available; this course is in development to be proposed as a permanent course.

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)

Recommended to be taken with: MUS 197A.

A select group of singers that focuses on various jazz idioms: blues, funk, Latin and straight-ahead. Enrollment is by audition. 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 199 Selected Topics: Music Lessons (1-4 Credits)

Provides a learning experience in music lessons not currently available; this course is in development to be proposed as a permanent course.

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 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.

MUP 298 Independent Study: Music - Small Ensembles/Lessons (1-4 Credits)**Prerequisites:** Instructor approval required.**Recommended preparation:** Prior coursework in the discipline.

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

MUP 299 Selected Topics: Music Lessons (1-4 Credits)

Provides a learning experience in music lessons not currently available; this course is in development to be proposed as a permanent course.

Nursing (NUR)

NUR 103 Nursing Assistant (9 Credits)**Prerequisites:** Department approval based on proof of holding a current American Heart Association, BLS Provider CPR card, passing a criminal history check, passing a urine drug screen, and meeting immunization and TB test requirements.

Covers basic nursing assistant level one care and effective communication skills for clients in acute and long-term care facilities. Discusses issues of confidentiality, client rights, and role of the nursing assistant. Students are eligible to sit for the Oregon State Board of Nursing sanctioned certified nursing assistant level one examination upon completion of the course. Clinic takes place in acute and long-term care facilities.

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. Focuses on technical skills, interpersonal skills and communication, safety, and infection control with the outcome of demonstrated proficiency in knowledge, skills and abilities in these areas. Includes clinical component to be scheduled at a clinical partner. Requires: a current unencumbered Oregon CNA 1 certificate (verified prior to registration); current American Heart Association BLS Provider CPR card; a criminal history check; immunization and tuberculosis test (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 112 Introduction to Community Nursing (2 Credits)**Prerequisites:** NUR 106.

Introduces foundational content for the community-based nurse, to better prepare a student for a career in community nursing. Includes community health topics such as epidemiology, environment, culture, ethics, health policy, global health topics and emerging infectious disease. Explore strategies to promote healthy partnerships in schools, faith communities, marginalized groups, and with the elderly as well as gain an understanding of the role of health policy in relationship to healthy communities.

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) or minimum placement Wr/Comm Level 7.

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 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 188 Special Studies: Outdoor Leadership (1-4 Credits)

Explores topics of current interest in the outdoor leadership discipline.

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 194AC Avalanche Level II (2 Credits)

Recommended preparation: OL 194AA.

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 288 Special Studies: Outdoor Leadership (1-4 Credits)

Explores topics of current interest in the outdoor leadership discipline.

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.

OL 299 Selected Topics: Outdoor Leadership (1-4 Credits)

Provides a learning experience in outdoor leadership not currently available; this course is in development to be proposed as a permanent course.

Pharmacy Technician (PHM)

PHM 100 Pharmacy Technician Practice I (5 Credits)

Corequisites: PHM 101, PHM 115, PHM 120.

Recommended preparation: MTH 015 (or higher) or minimum placement Math Level 7; WR 065 (or higher or BA 214) or minimum placement Wr/Comm Level 7; and BI 105.

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: PHM 100, PHM 101 and PHM 120.

Corequisites: PHM 130, PHM 140.

Recommended preparation: MTH 015 (or higher) or minimum placement Math Level 7.

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 than 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 than 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 Pharmacy Technician 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 288 Special Studies: Pharmacy Technician (1-4 Credits)

Explores topics of current interest in the discipline.

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.

PHM 299 Selected Topics: Pharmacy Technician (1-4 Credits)

Provides a learning experience not currently available in the pharmacy technician program; this course is in development to be proposed as a permanent course.

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 188 Special Studies: Philosophy (1-4 Credits)

Explores topics of current interest in the philosophy discipline.

PHL 199 Selected Topics: Philosophy (1-4 Credits)

Provides a learning experience in philosophy not currently available; this course is in development to be proposed as a permanent course.

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 higher) or minimum placement Math Level 14 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 288 Special Studies: Philosophy (1-4 Credits)

Explores topics of current interest in the philosophy discipline.

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.

PHL 299 Selected Topics: Philosophy (1-4 Credits)

Provides a learning experience in philosophy not currently available; this course is in development to be proposed as a permanent course.

Physics (PH)

PH 188 Special Studies: Physics (1-4 Credits)

Explores topics of current interest in the physics discipline.

PH 199 Selected Topics: Physics (1-5 Credits)

Provides a learning experience in physics not currently available; this course is in development to be proposed as a permanent course.

PH 201 General Physics I (5 Credits)**Recommended to be taken with:** MTH 111.

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.

PH 202 General Physics II (5 Credits)**Recommended to be taken with:** MTH 112.

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.

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 288 Special Studies: Physics (1-4 Credits)

Explores topics of current interest in the physics discipline.

PH 298 Independent Study: Physics (1-4 Credits)**Prerequisites:** Instructor approval required.**Recommended preparation:** Prior coursework in the discipline.

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

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:** WR 121.

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 288 Special Studies: Political Science (1-4 Credits)

Explores topics of current interest in the discipline.

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)

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 higher) or minimum placement Wr/Comm Level 5.

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 higher) or minimum placement Wr/Comm Level 5.

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 higher) or minimum placement Wr/Comm Level 5.

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 210 Introduction to Cognitive Psychology (4 Credits)**Recommended preparation:** WR 060 or minimum placement Wr/Comm Level 5.

Introduces cognitive psychology, a sub-discipline within psychology that focuses on the mental structures and processes that make sensation, perception, attention, memory, learning, language, problem solving and decision making possible. Gain fundamental knowledge that is applicable to every area of modern psychology.

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 215 Developmental Psychology (4 Credits)**Recommended preparation:** WR 060 (or higher) or minimum placement Wr/Comm Level 5.

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:** PSY 202 or SOC 201 and WR 060 (or higher) or minimum placement Wr/Comm Level 5.

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 higher) or minimum placement Wr/Comm Level 5.

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 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 higher) or minimum placement Wr/Comm Level 5.

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 higher) or minimum placement Wr/Comm Level 5.

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 Indonesian Field Study I: Preparation to Study Abroad (3 Credits)

Prerequisites: Instructor approval based on completion of Field Study Readiness Checklist.

This course is the first of a three-class sequence. Prepares students for international field research training about conservation, sustainability and biodiversity. Topics include Indonesian people, culture and history, Indonesian language. Students will development and design a conservation-related field research project that will be conducted in Indonesia.

PSY 262 Indonesian Field Study II: Global Health: Field Training and Research (6 Credits)

Prerequisites: PSY 261 and instructor approval based on completion of requirements outlined in PSY 261.

This course is conducted in Indonesia. Provides hands-on field research training and outreach experiences related to international conservation, sustainability and biodiversity. Student projects developed in PSY 261 are conducted in this course. P/NP grading.

PSY 263 Indonesian Field Study III: Communicating Indonesian Field Experience (3 Credits)

Prerequisites: PSY 262 and instructor approval based on completion of requirements outlined in PSY 261 and PSY 262.

Provides the opportunity to summarize, reflect, and discuss experiences with international field study and field research techniques completed in PSY 262 in Indonesia. Includes formal and informal presentation styles; discusses oral, written and visual formats for scientific communication. P/NP grading.

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 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. Cross-listed with: ANTH 141; courses are identical and credit counts once.

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 288 Special Studies: Sociology (1-4 Credits)

Explores topics of current interest in the discipline.

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 (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.

Sustainability (SUS)

SUS 101 Introduction to Sustainability (4 Credits)

Explores the environmental, social, and economic dimensions of sustainability. Defines and applies basic principles of sustainability to address today's most pressing environmental and social challenges. Develops an understanding of how individual behaviors affect community and global health. Approaches sustainability from a multidisciplinary perspective by integrating faculty from across the curriculum, including public health, biology, natural resources, sociology, and economics. Includes 4 hours of service learning at an off-campus location.

SUS 180 Co-op Work Experience Sustainability (1-4 Credits)

Recommended preparation: 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.

SUS 188 Special Studies: Sustainability (1-4 Credits)

Prerequisites: instructor approval.

Explores topics of current interest in Sustainability.

SUS 199 Selected Topics: Sustainability (1-4 Credits)

Prerequisites: instructor approval.

Provides a learning experience in Sustainability not currently available; this course is in development to be proposed as a permanent course.

SUS 280 Co-op Work Experience Sustainability (1-4 Credits)

Recommended preparation: 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.

SUS 288 Special Studies: Sustainability (1-4 Credits)

Prerequisites: instructor approval.

Explores topics of current interest in Sustainability.

SUS 298 Independent Study: Sustainability (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.

SUS 299 Selected Topics: Sustainability (1-4 Credits)

Prerequisites: instructor approval.

Provides a learning experience in Sustainability not currently available; this course is in development to be proposed as a permanent course.

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 288 Special Studies: Theater (1-4 Credits)

Explores topics of current interest in the discipline.

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; CH 104 or CH 221; MTH 095, or MTH 111 (or higher) or minimum placement Math Level 18; WR 121; and COMM 218; instructor approval based on admission into the veterinary technician program.

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 (3 Credits)

Corequisites: VT 101, VT 102, VT 117.

Introduces veterinary medical records, admitting procedures, record maintenance, resume writing and job interview techniques. Covers basic bookkeeping skills, inventory control measures, marketing, client communication, the use of veterinary computer software, and professional development.

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 (4 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, VT 117 and MTH 095 or MTH 111 (or higher) or minimum placement Math Level 18.

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 (5 Credits)

Prerequisites: Acceptance into the Veterinary Technician Program.

Corequisites: VT 101, VT 102, VT 103.

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 (4 Credits)**Prerequisites:** VT 101, VT 102, VT 103 and VT 117.**Corequisites:** VT 108, VT 110, VT 114.

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 199 Special Topics: Veterinary Technician (1-4 Credits)

Provides a learning experience not currently available in the veterinary technician program; this course is in development to be proposed as a permanent course.

VT 200 Radiation Safety (2 Credits)**Prerequisites:** VT 111, VT 112, VT 113 and VT 116.**Corequisites:** VT 201, VT 203, VT 209, VT 212.

Introduces x-radiation and safety principles involved in using x-ray machines.

VT 201 Anesthesiology and Surgery Techniques (4 Credits)**Prerequisites:** VT 111, VT 112, VT 113, and VT 116.**Corequisites:** VT 200, VT 203, VT 209, 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 209, and VT 212.**Corequisites:** VT 204, VT 206, VT 208.

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 209, 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 209 and VT 212.**Corequisites:** VT 202, VT 206, VT 208.

Covers the operation and use of fixed, portable, and dental x-ray machines; creating diagnostic images; 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 209 and VT 212.**Corequisites:** VT 202, VT 204, VT 208.

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 209.

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 (9 Credits)**Prerequisites:** VT 202, VT 204, VT 206 and VT 208.**Corequisites:** VT 281.

This is the first of two practicum courses that provides two three-week practicums where students link prior coursework with off-campus learning experiences. Students gain hands-on experience working with live animal cases in a veterinary hospital. Each student is expected to attend 120 total hours for each three-week period at the practicum sites for a total of 240 hours. The course also reviews the Veterinary Technician program curriculum for preparation for sitting for the Veterinary Technician National Exam (VTNE).

VT 281 Clinical Practicum II (5 Credits)**Prerequisites:** VT 202, VT 204, VT 206 and VT 208.

Second of two practicum courses; students will spend three weeks in a veterinary hospital continuing to link prior coursework with off-campus learning experiences using advanced skills. Students can request to attend a specialized clinic. Each student is expected to attend 120 total hours in the three-week time period. The course also continues to review the Veterinary Technician program curriculum for preparation for sitting for the Veterinary Technician National Exam (VTNE). Students will return the last week to reflect on their practicum experience and take a program exit exam.

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: Veterinary Technician (1-4 Credits)

Provides a learning experience not currently available in the veterinary technician program; this course is in development to be proposed as a permanent course.

Women's Studies (WS)

WS 101 Introduction to Women's and Gender Studies (4 Credits)

Recommended preparation: WR 121.

Offers an introduction to Women's and Gender Studies, an interdisciplinary field that asks critical questions about the meanings of sex and gender in society. Examines the issues raised for all genders by feminism and the women's movement; integrates analysis of contemporary and historical experiences of women; and considers the multiple ways that sex and gender interact with race, class, nationality, and other social identities. Students will become familiar with key issues, questions, and debates in the field.

Writing (WR)

WR 060 Rhetoric and Critical Thinking I (4 Credits)

Recommended preparation: Minimum placement Wr/Comm Level 3.

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 Wr/Comm Level 5.

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 098 Writing Seminar (2 Credits)

Prerequisites: WR 065 or minimum placement Wr/Comm Level 7.

Corequisites: WR 121.

A companion course to WR 121 for students who place into WR 098. 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 minimum placement Wr/Comm Level 9.

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 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.

Introduces forms and genres of prose fiction. Uses individual and collaborative workshop activities to develop skills in drafting and revision, these may include critical reading of published authors, prose craft exercises and constructive response to other student work. Presents effective strategies for writing fiction and craft fundamentals including conflict and plot, story, character, dialogue, theme, setting, narration, and point of view. Includes creation of a portfolio of works reflecting various stages of the writing process.

WR 242 Introduction to Creative Writing: Poetry (4 Credits)

Recommended preparation: WR 121.

Introduces 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 original poems 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 298 Independent Study: Writing (1-4 Credits)

Prerequisites: Instructor approval required.

Recommended preparation: Prior coursework in the discipline.

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

WR 299 Selected Topics: Writing (1-4 Credits)

This course is in development.

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