



2014 – 2015 CATALOG



CENTRAL OREGON
community college

2014–2015 ACADEMIC CALENDAR

	Fall term 2014	Winter term 2015	Spring term 2015	Summer term 2015
First day of classes	September 29	January 5	March 30	June 22
Tuition deadline and end 100% refund period*	October 10*	January 16*	April 10*	July 2*
Begin late registration (\$30 fee)	October 13	January 20	April 13	July 6
Last day to change from audit or drop classes with no grade on transcript	November 14	February 20	May 15	August 7
Last day to drop classes, receive a "W" grade*	December 3	March 11	June 3	August 19
Holidays	November 11 Veterans' Day (COCC closed) November 27 and 28 Thanksgiving (COCC closed) Dec. 22-26 and Jan. 1 (COCC closed)	January 19 Martin Luther King Day (COCC closed)	May 25 Memorial Day (COCC closed)	July 3 Independence Day (COCC closed)
Final exams	December 8–12	March 16–20	June 8–12	Varies
Commencement			June 13	
Last day of term	December 14	March 22	June 14	August 30
Grades posted online	December 18	March 26	June 18	September 3

* These dates apply to full-term courses; proportional (or earlier) deadlines apply to part-term courses.

CAMPUSES

Bend Campus

541-383-7700
2600 NW College Way
Bend, Oregon 97701

College Switchboard

541-383-7700

Home Page

www.cocc.edu

Redmond Campus

541-504-2900
2030 SE College Loop
Redmond, Oregon 97756

Email

welcome@cocc.edu

Madras Campus

541-550-4100
1170 E Ashwood Road
Madras, Oregon 97741

Crook County Open Campus

541-447-9233
510 SE Lynn Blvd
Prineville, Oregon 97754

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The information contained 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 contained herein, including its calendar, procedures, policies, curriculum, course content and costs.



CENTRAL OREGON COMMUNITY COLLEGE

2014–2015 Catalog

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photo by Christian Columbres, YGH Architecture

WELCOME TO COCC

For 65 years, Central Oregon Community College has served the citizens of its District and 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.

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 50 years ago, in 1964.

Don 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 has served for 10 years and is scheduled to retire in September 2014. At that time, Dr. Shirley Metcalf, currently the dean of extended learning, will serve as interim president until a permanent president is chosen in 2015.

OUR DISTRICT

The Central Oregon Community College District encompasses all of Crook, Deschutes and Jefferson counties, as well as the southern part of Wasco and northern portions of Klamath and Lake counties. A seven-member board of directors governs the College, with members of that board elected from geographic zones in the District. The District covers a 10,000-square-mile area, making it larger than eight of the U.S. states.

OUR CAMPUSES

The College's main campus is located on the western edge of Bend, a city known for its natural beauty and its proximity to diverse recreational opportunities. The 200-acre Bend campus offers quiet, peaceful surroundings for study and reflection. With its location on the western slope of Awbrey Butte, students have a spectacular view of the Oregon Cascade mountain range from nearly every point on the grounds. The campus contains 26 buildings with a total of 575,000 square feet under roof. The newest buildings are the Health Careers Center and Science Center, funded by a voter-approved bond measure, both opening in fall 2012.

On the 25-acre Redmond Campus, there are three buildings, housing College administration, classrooms and a computer lab. The new Redmond Technology Education Center opens in Fall 2014, housing state-of-the-art facilities and programs.

In 2011, COCC opened new campuses in Madras and Prineville. The Madras Campus was funded by the 2009 bond measure and

placed on land donated to COCC by the local Bean Foundation, and the COCC Crook County Open Campus was funded jointly by the bond measure and a grant to Crook County from the U.S. Department of Commerce Broadband Technology Opportunity Program, and is on land donated by the County.

All campuses offer credit and non-credit courses and the necessary student services to help assure student success.

BOARD VISION AND GOALS

Mission statement

Central Oregon Community College promotes student success and community enrichment by providing quality, accessible, lifelong educational opportunities.

Vision statement

To achieve student success and community enrichment, COCC fosters student completion of academic goals, prepares students for employment, assists regional employers and promotes equitable achievement for the diverse students and communities we serve.

CORE THEMES

The Board has adopted four core themes that manifest the essential elements of COCC's mission. The core themes are:

Transfer and Articulation

Courses and programs paralleling the freshman and sophomore courses of colleges and universities for those who seek to transfer and then earn a baccalaureate degree.

Workforce Development

Career and Technical Education (CTE)

One- and two-year professional training programs for those who seek certificates or degrees that lead to employment in business, industry, the trades or government service as technicians or skilled workers.

Business, Professional and Employee Development

Non-credit business classes, resources, workshops and information to help individuals and businesses succeed.

Basic Skills

Several academic departments and the College's Adult Basic Skills program offer courses that prepare students for college-level classes that will count toward degree completion and are transferable to other institutions. These classes are frequently available online or in classrooms on the Bend and Redmond campuses or other sites throughout Central Oregon.

Lifelong Learning

Non-credit learning opportunities at times and places convenient to adult students, using traditional and nontraditional

instructional techniques. Course topics range from computers to cooking and language instruction to gardening and other outdoor activities.

BARBER LIBRARY

COCC's three-story, 72,000-square-foot Barber Library opened in March 1998 and serves the students, faculty and staff of COCC and OSU-Cascades.

The Barber Library collection features more than 200 online resources, over 80,000 books (both print and electronic), thousands of e-journals, a browsing print journal collection, DVDs and more than 10,000 streaming videos. The Library is a selective depository for U.S. federal documents and databases. Current, credit-enrolled COCC students, faculty and staff can access most of the Library's electronic resources from off campus.

COCC is a member in the Orbis Cascade Alliance, a consortium of academic libraries in the Northwest that provides services such as the Summit Catalog, Summit Borrowing, and database licensing opportunities. The Summit Catalog is accessible from the main Library Web page at www.cocc.edu/Library/. Current, credit-enrolled students, faculty and staff of COCC and OSU-Cascades may search for and place requests on 30 million Summit items. Materials are then delivered for pickup at the Library circulation desk or COCC campus of their choice within a few working days.

Wireless networks are available throughout the Library for students, faculty and staff, as well as community patrons and campus visitors. For more information, please refer to the Wireless Network Web page at www.cocc.edu/ITS/ITS-Services/Wireless/.

Each year the Barber Library hosts art exhibitions in the Rotunda Gallery, as well as a few literary events.

ACCREDITATION

Central Oregon Community College is accredited by the Northwest Commission on Colleges and Universities. Accreditation was most recently reaffirmed in 2012. Accreditation of an institution of higher education by the Northwest Commission on Colleges and Universities indicates that it meets or exceeds criteria for the assessment of institutional quality evaluated through a peer review process. An accredited college or university is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the Northwest Commission on Colleges and Universities is not partial but applies to the institution as a whole. As such, it is not a guarantee of every course or program offered, or the competence of individual graduates. Rather, it provides

reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding an institution's accredited status by the Northwest Commission on Colleges and Universities should be directed to the administrative staff of the institution. Individuals may also contact:

Northwest Commission on Colleges and Universities
8060 165th Avenue N.E., Suite 100
Redmond, WA 98052
(425) 558-4224, www.nwccu.org

A copy of COCC's official accreditation documentation is on reserve and available for review in the Barber Library during regular library hours. Questions regarding accreditation should be addressed to the vice president for instruction.

OUR FACULTY

COCC has 125 full-time faculty members, 50 adjunct faculty (semi-permanent faculty on annual contracts) and approximately 200 part-time instructors per term. The College's faculty is a committed, professional group of educators, which provides stimulating and meaningful learning experiences for the College's students. Faculty members serve as advisors to individual students, assisting them in planning academic programs and schedules. All COCC faculty are required to have at least a master's degree or equivalent training. Within the institution, there is strong motivation for continuing professional improvement by all faculty and administrators. About 40 percent of the faculty have doctorates in their disciplines, which is a very high percentage for a community college.

OUR STUDENTS

More than 10,000 students enrolled in credit classes at COCC last year. Each quarter, approximately 3,000 full-time and 4,000 part-time students are enrolled. While 40 percent of the students are under the age of 24, another quarter are 35 and older. About 40 percent of the students enroll in career and technical education programs and take career-oriented courses of study. The remainder enroll in courses that form the freshman and sophomore years of a four-year college program. Students in such a program usually intend to transfer to another college or university for their junior and senior years.

THE COCC FOUNDATION

Education changes lives. For more than 50 years, Central Oregon Community College Foundation scholarships have enabled students to learn new skills, earn technical certificates, complete two-year associate's degrees and be prepared to pursue the remainder of their undergraduate studies at a college or university. Students can apply for an annual scholarship for the next academic year from December 15 – July 15.

The COCC Foundation is the oldest community college foundation in Oregon. Its assets have grown significantly over the years, from the first gift of \$500 in 1955 to over \$15 million in assets today. In addition to scholarship support, these assets,

primarily endowment funds, provide support in a variety of ways, from supporting faculty positions to providing support for the Nancy R. Chandler Visiting Scholar Program. For 2013-2014, the Foundation awarded more than 320 scholarships totaling more than \$1 million. For more information, call 541-383-7225.

CONTINUING EDUCATION

COCC's Continuing Education Department offers innovative, high quality, community-driven, affordable noncredit classes and events to adults throughout the District. Classes provide opportunities to stay current with job skills, engage in a new hobby or expand outdoor activities.

Continuing Education classes are easy to access. There are no applications, no transcripts and no special qualifications. Students sign up and pay the class fee to enroll. For additional information visit www.cocc.edu/ContinuingEd or call 541-383-7270.

Professional and Career Development

A variety of high-quality professional education courses 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, computers, graphic and website design, project management, health care and wellness, landscaping, leadership and management. COCC can customize training so employees gain the specific knowledge they need to perform their job duties and contribute to a more productive and profitable business.

Community Learning

The Community Learning program provides hundreds of classes each term that encourage students to explore personal interests and learn new skills. Take classes for fun, business, health, recreation or personal growth—the choice is yours. Class schedules are mailed to households throughout the district and are available online at www.cocc.edu/community-learning/.

Small Business Development Center

The Small Business Development Center (SBDC) at COCC helps local business owners build a business that works for them. The SBDC delivers services to anyone who owns or operates a business or is planning to start a business. They work with businesses in every industry and at every stage of growth from start-ups to well-established companies, from one employee to 500.

Five experienced staff advisors are available to meet with businesses by appointment throughout the tri-county region. From Madras to La Pine and Sisters to Prineville, advising is free and available for anyone requesting assistance. In addition, the SBDC offers:

- Practical training and workshops
- Access to capital
- Strategic market research
- Small Business Management program
- Grow Oregon for larger traded-sector companies
- International trade assistance
- Government contracting assistance
- Discounted programs for veterans

The goal of the SBDC at COCC is to have a positive impact on the growth and sustainability of Central Oregon businesses. For more information on these services and others, contact the SBDC at 541-383-7290, sbdc@cocc.edu or go to www.cocc.edu/sbdc/.

Online Noncredit Courses

COCC offers a wide variety of online courses designed to minimize commute time and accommodate your schedule. Students gain skills to enhance their career or choose topics for just for fun and personal enrichment. Every course offered has been carefully engineered to provide quick and easy access to all course materials.

Registration

Registration information is provided on the Continuing Education website at www.cocc.edu/ContinuingEd/How-to-Register and in the Community Learning class schedule, which is published each term. Registrations are processed as received. Students may register by phone, mail, fax, online or in person.

Fees

Full payment of fees is required at the time of registration. Students may pay with Visa, MasterCard, Discover, check or cash.

Age requirements

Anyone age 16 or older may attend Community Learning classes or workshops.

ADULT BASIC SKILLS (ABS)

The Adult Basic Skills program provides instruction in basic reading, writing, math, and study skills as well as basic computer skills to prepare students for the General Education Development (GED) test, for college credit classes, and for work. The two options within the ABS program are the English Language Learning (ELL) program and the Adult Basic Skills/Adult Secondary Education (ABS/ASE) program for college and GED preparation through Basic Reading and Writing and Basic Math classes.

The English Language Learning program is designed for adults who need to learn the English language. The ELL classes focus on listening, speaking, reading and writing skill development. The ABS/ASE program offers courses that focus on skill development in reading, writing, and math for a variety of purposes including college and GED preparation.

Assessments are available to help students determine current skill levels and learning styles. Students may attend day or evening sessions, depending on the location. Students usually sign up for classes in class during the first week of each term. Please call the ABS office, 541-504-2950, or see the website at www.cocc.edu/Adult-Basic-Skills for exact times and locations.

ABS classes and services are offered throughout the district: Bend, Madras, Prineville, Redmond and Warm Springs.

OREGON STATE UNIVERSITY - CASCADES

OSU-Cascades is a branch campus of Oregon State University, Oregon’s leading public research university. It is the only baccalaureate and graduate degree granting institution based in Central Oregon.

Here, students find the excellence, resources and lifelong advantages of a research university, and a personalized, small-campus learning experience. A shared campus for undergraduate programs allows first- and second-year students to begin studies at Central Oregon Community College and continue upper-division coursework and degree completion at OSU-Cascades in a 2+2 program.

Students also transfer to OSU-Cascades from community colleges throughout Oregon. OSU-Cascades is an ideal next step for returning students.

As part of its expansion to a four-year campus, OSU-Cascades plans to offer freshman and sophomore courses beginning in fall 2015. Student opportunities include research and internship programs with Central Oregon’s business, government and nonprofit communities, as well as international programs in more than 80 countries. For information call 541-322-3100 or visit www.OSUcascades.edu.

OSU-CASCADES PROGRAMS

UNDERGRADUATE			GRADUATE
<p>Accountancy BA/BS</p> <p>American Studies BA/BS</p> <p>Applied Visual Arts BFA</p> <p>Art BA/BS</p> <p>Art History Minor</p> <p>Biology BS/Minor</p> <p>Business Administration BA/BS</p> <ul style="list-style-type: none"> • General Business • Hospitality Management • International Business <p>Business and Entrepreneurship Minor</p> <p>Computer Science BS</p> <ul style="list-style-type: none"> • Software, Web and Mobile Development <p>Early Childhood Development and Education Minor</p>	<p>Energy Systems Engineering BS</p> <p>English Minor</p> <p>Exercise and Sport Science BS</p> <p>General Science BS</p> <p>Human Development and Family Sciences BS</p> <ul style="list-style-type: none"> • Child Development • Human Services <p>International Studies BA-Double Degree</p> <p>Liberal Studies BA/BS</p> <p>Pre-Education Pre-Law Themes</p> <ul style="list-style-type: none"> • Community, Identity and Place • Law and Politics • Gender and Politics <p>Military Science Minor</p>	<p>Natural Resources BS/Minor</p> <ul style="list-style-type: none"> • Natural Resource Policy • Natural Resource Conservation • Conservation and Technology <p>Political Science Minor</p> <p>Psychology BA/BS/Minor</p> <p>Social Science BA/BS</p> <p>Speech Communication Minor</p> <p>Sustainability BS-Double Degree</p> <p>Tourism and Outdoor Leadership BS/Minor</p> <ul style="list-style-type: none"> • Adventure Leadership and Education • Eco and Adventure Tourism • International Ecotourism • Recreation Management <p>Visual Arts Minor</p>	<p>Counseling MS</p> <ul style="list-style-type: none"> • Clinical Mental Health Counseling • School Counseling <p>Creative Writing MFA (Low-Residency)</p> <p>Education MAT</p> <ul style="list-style-type: none"> • Early Childhood/Elementary School Authorization • Middle/High School Authorization
			PROFESSIONAL
			<p>Continuing Education for Licensed Teachers</p>

ENROLLMENT SERVICES – ADMISSIONS AND RECORDS/REGISTRATION

Central Oregon Community College is an open-door, equal-access institution. Enrollment Services is located in the Boyle Education Center. Services include admission, registration, student payment, financial aid, veterans' benefits, transcript evaluation, degree/certificate evaluation, student records, grade and transcript requests. Most services are also available at COCC's Redmond, Madras and Prineville Campuses.

COCC students can register for classes online and in person at specific dates during each term. Registration dates and times are available online and will be emailed to current students approximately three weeks prior to the beginning date. For a step-by-step guide to registration, see www.cocc.edu/Getting-Started/.

ADMISSION CRITERIA

New students

To qualify for admission, students must be 18 years of age or older, or possess a high school diploma or GED. Applications are available on the College website, www.cocc.edu, or at any campus. All new students (those who have never taken credit courses at COCC) are required to submit a \$25 non-refundable application fee at the time of application. Applications will not be processed without this fee.

Students returning after an absence

Students who have attended COCC but have been absent for four quarters or more must submit a new application as early as possible in order to receive timely registration information. No application fee is required.

Transfer students

First time COCC students transferring from another college or university must submit an application for admission and a \$25 application fee. In addition, all official transcripts from previous institutions must be submitted prior to advising and/or registration.

Students not seeking a certificate or degree

Many students take college credit courses at COCC, yet are not planning to earn a certificate or degree. Such students apply through the regular application process and are required to take the placement test prior to registration. Some students may be exempt from the placement test; see the College website for exemption criteria. Non-certificate/non-degree-seeking students are not required to participate in advising but are welcome to do so.

APPLICATION DATES

COCC accepts applications on a continuing basis and prospective students are encouraged to apply early in order to receive early, new-student registration information. For new student advising and registration dates, check the College website, www.cocc.edu. The application deadline for each COCC term is the Wednesday before the start of courses. COCC reserves the right to close admission prior to the application deadline. Students are strongly encouraged to apply early.

PLACEMENT TESTING

Prior to registering for courses, all COCC credit students must take COCC's placement test to determine their skills in writing, reading and math. Scores from the test will serve as tools for students and advisors to use when choosing courses and planning academic schedules. The placement test is offered year-round and takes about two hours.

Students are exempt from the test if they:

- have an associate, bachelor's or higher-level college degree and have submitted a copy of their transcript prior to advising and registration;
- have completed college level reading, writing and math courses with a "C" or better at another regionally accredited college and have submitted transcripts prior to advising and registration;
- have taken the placement test within the last two years and have submitted a copy of their testing scores prior to advising and registration; or
- are taking only HD 110 Career Planning, HD 190 Latino Leadership, studio art, foreign language, computer skills, music performance or HHP activity courses.

Note: Placement test scores are recommendations only, with some exceptions including WR 121, MTH 105 and MTH 244. For other courses or programs that may have prerequisites, see the online class schedule or the course descriptions, pages 187-281 in this catalog.

See the COCC website, www.cocc.edu, for placement testing dates and reservations.

ADVISING

Once placement testing is complete, all certificate- and degree-seeking students meet with an academic advisor. For new students, dates and times of group advising options are available on the COCC website. Current students should contact their advisor directly to schedule an advising appointment. Students can confirm the name of their advisor by contacting the CAP Center (located in the lower level of the Barber Library) or by logging on to their Bobcat Web account. All students who participate in group advising sessions will be emailed the name of an individual academic advisor, based on the major stated on

their admission application, shortly after the start of each term. Students can change their advisor by contacting the CAP Center, at 541-383-7200.

Note: Current students may choose to be self-advised, which means that the advising requirement is waived and students are responsible for choosing their courses and making sure that those courses fit their degree goal. To apply for and review the requirements for receiving self-advising status, visit the COCC advising website, www.cocc.edu/CAP/.

REGISTRATION

After submitting an application for admission, taking the placement test and meeting with an advisor (if degree-seeking), students may register for courses based on the dates and times listed on the COCC website. The registration schedule for credit students is based on enrollment status and number of credits earned at COCC. Degree-seeking students who have attended credit classes at COCC in Fall, Winter or Spring terms are eligible for priority registration. Transfer credits may meet some program requirements but are not counted toward “earned credits” for registration purposes. Students may view the priority registration schedule at www.cocc.edu/Registration-Home.aspx/. 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 web or data-entered into COCC’s computer 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.

HIGH SCHOOL STUDENTS

Students who are still attending high school, but wish to take credit courses at COCC, have these options:

Special admission/Concurrent enrollment

High school students 15 years and older are eligible to register in up to 19 credits at COCC. High school students who register at COCC are fully responsible for complying with all the policies and procedures of the College as outlined in the Special Admission Information for High School Students form. This form is sent to each high school student upon admission to COCC and is also available on the COCC website. It is important to note that parents cannot access student records (grades, class schedule, attendance, etc.) without written permission from the student. Although members of the College staff can provide academic advising, they cannot interpret high school requirements or act in a supervisory role. The student is responsible for all tuition, fees, books and related expenses.

College Now

COCC works with area high schools to offer students the opportunity to earn college credit for certain career and technical education and general education transfer courses they complete at their schools. Courses offered vary by high school and are designed for high school juniors and seniors. The fee is \$15 per college credit. General education transfer courses can be used to meet COCC certificate or degree requirements as well as for transfer to most Oregon community colleges and universities. Students should check with all colleges about their policies for transferring college credits earned in high school. For complete details and a listing of courses offered by high schools, contact the appropriate high school counselor, call COCC’s College Now office at 541-504-2930, or visit the College Now web page at www.cocc.edu/College-Now/.

Expanded Options

High school students have the opportunity to take credit courses at COCC with no charge to them for tuition, fees, supplies and books (transportation to and from COCC not included). Students interested in the Expanded Options program must submit an Intent to Enroll form to their high school counselor and meet the high school’s participation requirements. Check with the high school counselor or ASPIRE coordinator for more information on eligibility requirements.

STUDENTS UNDER AGE 15

Students under the age of 15 must meet with the director of admissions/registrar or designee to assess readiness for college-level work prior to applying for admission. Students must meet minimum placement test scores, provide a statement of support from their school counselor and obtain permission from each instructor every term. If admission is approved, the student must submit a Special Admission form at the time of registration. See www.cocc.edu/High-School-Options for complete details.

Students under age 15 who register at COCC are fully responsible for complying with all policies and procedures of the College. As such, parents cannot access student records (grades, class schedule, attendance, etc.) without written permission from the student. Although College staff members can provide academic advising, they cannot interpret high school requirements or act in a supervisory role.

TUITION AND FEES

Tuition and fees are due by the second Friday of the term. Payment may be made online with checking or savings account information, Visa 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 Enrollment Services 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 Center, laboratories and equipment in connection with courses for which the students are registered, access to the student newspaper and admission to special events sponsored by the College. No reduction in tuition and fees is made for students who do not intend to use these services.

The College reserves the right to make changes in tuition and fees without notice; however, any changes made during a term will not become effective until the next term. Courses with unusually high costs associated in its offering may include fees higher than the normal rate.

TUITION PAYMENT PLAN

A tuition payment plan is available in Enrollment Services, Boyle Education Center, for students registered in six or more credits. To initiate a payment plan, students must complete a contract and pay \$20 plus one-third of tuition and fees by the tuition due date. The balance will be due by August 13 for summer term, by November 19 for fall term, by February 25 for winter term and by May 20 for spring term. A \$50 late fee is charged for payments made after the deadline.

TUITION FOR CREDIT COURSES

FOR 2014-2015

In-district	\$87 per credit hour
Non-resident Veteran	\$100 per credit hour
Out-of-district/border state	\$115 per credit hour
Out-of-state	\$237 per credit hour
Audit	same as for credit

(CA, ID, NV and WA residents are charged out-of-district tuition)

Check the COCC credit class schedule for courses that require additional fees. There are program fees in the following areas: automotive, aviation, career planning, culinary, dental assisting, emergency medical services, forestry, health and human performance, health information technology, manufacturing, massage therapy, medical assisting, nursing, outdoor leadership, pharmacy technician, structural fire science, veterinary technician, and all online courses.

Full time: For the purposes of financial aid, veterans', Social Security and other benefit programs, 12 credits is considered full-time.

Fees for students enrolled in credit courses

Student Activities fee	\$1.50 per credit
Technology fee	\$5.50 per credit
Green Energy fee	25¢ per credit
Online course fee (applies to online courses only)	\$10 per credit
Optional Mazama Gym user fee (per term)	\$20
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

English Language Learning (ELL) classes	\$20
High school completion	\$100 per half credit

NSF 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 (or payer) will be required to pay tuition and fees with cash for one year.

COLLECTIONS POLICY

If a student fails to pay his/her tuition, fees, or other charges by the end of the term, the balance due amount will 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.

**ADDING AND AUDITING COURSES/
WAIT LISTS**

Courses may be added until 7 a.m. on the first day of the term for all classes. After this time, an instructor's permission is required to add a course. Students may add courses via their Bobcat Web Account (with electronic instructor approval) or in person at the Boyle Education Center, or at the Redmond, Madras and Prineville Campuses. A late registration fee of \$30 will be assessed for any course added after the second week of the term; \$50 will be assessed for an approved petition to add a course after the final exam rosters have been run.

Students may not begin attendance in a new class after the first week of the term.

Note that students may not register for two sections of the same course. If students wish to register for courses that overlap in time, they must receive permission from both course instructors.

Auditing courses

Full-term courses may be changed to/from audit through the seventh week of the term. Such changes must be done in person or by calling Admissions and Records. Audited courses do not apply toward financial aid. Note: Different deadlines exist for short-term courses; contact Admissions and Records, 541-383-7500, for details.

Wait lists

Students who are on a wait list for a course will automatically be registered into the course if a seat becomes available. The automated waitlist registration process turns off at 5pm the Friday prior to term start. (For information on short term classes, please contact Admissions and Records). Students will receive a message in their COCC email account notifying them they have been registered for the course and are now responsible for applicable tuition/fees. Students who are not automatically registered in the course and remain on the wait list can take a registration form to the first class session. If a seat is available, the instructor must sign the registration form. The student submits the form in person to Enrollment Services up to two business days after signature, to enroll in the class. Following that

time, the form is no longer valid. Alternatively, the instructor can submit electronic instructor approval so the student can add the class via the student's online services account, or call Enrollment Services to process the registration.

ATTENDANCE/ADMINISTRATIVE WITHDRAWAL

In order to assure that all available class seats are filled with students—both registered students and students from the waiting lists—COCC enforces an attendance policy during the first week of the term.

To maintain enrollment in each class, the student must attend the first class meeting and 100 percent of the first week's class and lab meetings. (For classes that do not span the entire term the student must attend the first class session.) Students who do not do so, will be administratively withdrawn from that class by the instructor at the time class role 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 by phone, fax, email or in person prior to the first class meeting if they wish to avoid administrative withdrawal.

The College is not responsible for liabilities associated with the administrative withdrawal of students.

The Administrative Withdrawal policy does not relieve students from full responsibility for officially dropping a course within the given deadline to not incur tuition charges and to not receive a grade for the course.

DROPPING COURSES/COMPLETE WITHDRAWAL

Students registered in courses are considered to be in attendance. Students who stop attending class but do not submit a drop form will receive a grade for that course and will owe all tuition and fees. This grade will be a permanent part of the student's academic record.

To drop one or more courses, students should complete the drop section on a registration form and submit it in person at the Boyle Education Center or at the Redmond, Madras or Prineville Campuses. Or students may call Admissions and Records, 541-383-7500, to drop a course over the phone.

Short-term courses

- For a refund or credit for courses with only one, two or three class meetings, students must submit a drop form at least seven days before the first class meeting.
- For a refund or credit for courses with four or more class meetings, but which do not span the full term, students must drop the course prior to the start of the second class.

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 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. From the eighth week of the term through the Wednesday before finals week, a student may submit a drop form, with an instructor's signature; no refund is available and a "W" will appear on the student transcript. No withdrawals will be accepted after this time or after a course has ended. See the academic calendar on COCC's website for specific dates.

Complete withdrawal

Students receiving federal financial aid may owe a repayment if they completely withdraw from courses. See Enrollment Services—Financial Aid (pages 12-15) for details.

Withdrawing Due to Active Military Duty

Active duty, guard and reserve military personnel (Army, Navy, Air Force, Marines and Coast Guard) who are enrolled at Central Oregon Community College and whose academic progress is interrupted due to deployment or activation mid-term may withdraw without tuition penalty. A student currently in a course will not be charged for the course, and the registration will be voided with no indication on the transcript. Students must submit a copy of their military duty assignment orders verifying deployment or activation along with their request to withdraw from the course to Admissions & Records. Copies of the orders must also be submitted to the COCC VA Certifying Officer if any military benefits are being used. This policy does not apply to retired military personnel or dependents.

TUITION REFUNDS FOR CREDIT COURSES

To qualify for a refund, the student is responsible for initiating a course drop in Admissions and Records by 5 p.m. on the deadline day; see the inside front cover of this publication for drop deadlines. (Note that drop deadline dates are also posted on the student's "Detailed Class Schedule," which is available by logging into the student's Bobcat Web Account.) Any debt owed to the College will be processed against the refund first, with the net balance remitted to the student within a reasonable processing period.

Please review carefully the attendance policy on page 9 of this catalog.

Short-term course refunds

To receive a tuition refund for courses with only one, two or three class meetings, students must submit a drop form at least seven days before the course begins.

For courses that have four or more class meetings, but do not span the full term, tuition is refundable up to the beginning of the second class meeting. Some specially priced courses do not follow this policy.

Full-term course refunds

Tuition is refundable up to 5 p.m. on Friday of the second week of the term. No portion of the tuition is refundable after this date. Students who fail to drop a course by this deadline will be responsible for tuition payment.

Students with federal financial aid may owe a repayment if they completely withdraw from courses. See Enrollment Services—Financial Aid, pages 12-15, for details.

Petitions

In cases of exceptional circumstance, 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 if applicable. 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. The Student Petition form, including instructions on how to complete it, is available in Enrollment Services on all COCC campuses. Please call 541-383-7500 for more information or have questions about petitions.

COCC TRANSCRIPTS

Transcripts must be requested by students via their secure Bobcat web account, in person in the Enrollment Services office, or in writing. Transcripts may be requested in advance and held until after grades or degrees are posted. The transcript processing fee must be paid before transcripts are mailed. No transcript requests will be processed during the first week of each term.

Processing fees

Online request (processed next business day)	\$5 per transcript
In-person, faxed or mailed request (processed 7-10 working days)	
first transcript	\$5
each additional transcript ordered at same time	\$1
Rush or faxed transcript	\$5 additional

COCC reserves the right to withhold transcripts from students who are in debt to the institution. For OSU-Cascades students, official transcripts will be available between COCC and OSU-Cascades at no charge to the student.

RESIDENCY POLICY

Determination of residency for purposes of tuition will be made according to the following definitions. Students applying to COCC’s nursing program must satisfy in-district residency requirements, as outlined in the nursing program application packet, prior to the application deadline.

In-district residency

An individual who, for one full year prior to beginning taking credit classes has either: a) owned property (or if under the age of 24, whose parent/guardian owns property); or b) maintained a permanent and continuous residence in the district will be classified as an in-district resident. The COCC District consists of all of Deschutes, Crook and Jefferson counties, the northern portions of Klamath and Lake counties, and the Warm Springs Indian Reservation in Jefferson and Wasco counties.

Out-of-district (in-state) residency

An individual who, for one full year prior to beginning taking credit classes has either: a) owned property (or if under the age of 24, whose parent/guardian owns property); or b) maintained a permanent and continuous residence in the state of Oregon (but outside the COCC District) will be classified as an out-of-district resident. The student will remain an out-of-district student for two calendar years after the term in which the student began courses; at that time, the student will convert to in-district residency.

Out-of-state residency (CA, ID, NV, WA residents see exemption below)

An individual who has not maintained a permanent and continuous residence in the state of Oregon during the year prior to the beginning of the first term of enrollment will be classified as an out-of-state resident. The student will remain an out-of-state student for two calendar years after the term in which the student began courses; at that time the student will convert to in-district residency.

Exemption

Per Oregon Administrative Rules, residents of California, Idaho, Nevada and Washington will be charged in-state (out-of-district) tuition.

Verification

Residency of each applicant for college credit courses is determined from information provided at the time of application. When there appears to be an inconsistency, the College staff may require documentation to verify residency.

Transferring to another Oregon institution

In-state residency classifications are different at Oregon community colleges than at Oregon University System schools and can affect tuition rates. Students are encouraged to check residency classifications before beginning their education in Oregon to avoid surprises later.

Oregon University System schools often classify people who move to Oregon to go to school as non-residents even if they have resided in the state for a year, attended a community college as an in-state resident, have registered to vote and own property in this state.

Students who moved to Oregon to attend school, with plans to start at a community college and then transfer to a university, should visit this Web page to plan a transfer: www.ous.edu/stucoun/prospstu/residency/.

Military personnel

Out-of-district or out-of-state chapter 30, 33, 35, 1606 and 1607 veteran students will be classified as "non-resident veteran" students for residency/tuition classification purposes.

The non-resident veteran tuition rate will be calculated to be the in-district tuition rate plus 50 percent of the difference between COCC's in-district rate and out-of-district/border state rate and complies with Oregon legislation. In order to receive this benefit, veteran students must have submitted all required paperwork to the COCC veteran student coordinator by the Friday prior to the term's start. Requests received after this date will be considered for the following term. 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.

Residency status will be determined using the same criteria as the Oregon University System residency policy for armed forces personnel. For details, visit the OUS website at www.ous.edu.

Tuition waiver for students 65 years of age and older

Students 65 years of age and older are eligible for a tuition waiver for COCC credit classes based on the following conditions:

- The student must have a current term application on file in order to register. The application deadline is the Wednesday before the term begins. (Under certain circumstances, COCC may close admission prior to this deadline. Students are encouraged to apply early.)
- The student must be 65 years or older at the beginning of the term in which the course is offered.
- Space is available in the course(s). Student may add courses under this policy only during the first two weeks of the term; instructor permission is required.
- The tuition waiver is valid for eight or fewer credits per term.
- The student is auditing the course(s).
- The student is responsible for all fees (application fee, student fees, course fees, etc.).
- Tuition Waiver forms will not be accepted after the tuition due date of the term.

Students requesting a tuition waiver must register in person and complete a Tuition Waiver form (available in the Admissions and Records office). At the time the Tuition Waiver form is submitted, students must show photo identification that includes date of birth. All fees must be paid in full by the tuition deadline in order to avoid late payment fees.

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. (Note that residents of the Confederated Tribes of Warm Springs are automatically charged in-district tuition.) For a listing of eligible tribes, visit COCC's website at www.cocc.edu/admissions/tuition-fees-payment/residency-policy/. Note that students must provide a copy of tribal enrollment documents prior to starting courses.

Residency appeals

Students may appeal their residency status by completing a residency petition, available through the Admissions and Records office. Residency petitions and supporting documentation must be submitted within 30 days of receipt of letter of admission or the Friday prior to the start of the term, whichever is sooner. Petitions received after the deadline will be considered for the following term. Any change in residency status will not be retroactive.

STUDENT RIGHT-TO-KNOW ACT

In order for students to make more informed decisions about attending college, Central Oregon Community College makes the following information available in accordance with the federal Student Right-to-Know Act and related regulations:

- General Institutional Information: services for disabled students, cost of attendance and additional program costs, student diversity, students' rights under the Family Education Rights and Privacy Act (FERPA), student concerns procedure, copyright infringement, net price calculator, non-discrimination policy.
- Financial Aid Information: refund policy, withdrawal policy and associated financial aid implications, 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.
- Student loan information: initial loan counseling for students, exit loan counseling for students, deferment options for peace corp and related service organizations.
- Academic information: academic warning standards, accreditation, degree options, academic programs, adult basic skills programs, campus academic facilities, faculty and staff contact information, transfer credit policy, international baccalaureate credit.
- Health and Safety Information: campus crime report/safety, alcohol/drug policy, drug and alcohol abuse prevention information, emergency procedures, sex offender information, vaccination policies, mandatory reporting-child protection policy.
- Student outcomes: graduation and transfer rates, retention rates, graduate employment status.

Student Right-To-Know information is available on the College's website at www.cocc.edu/srtk/.

ENROLLMENT SERVICES – FINANCIAL AID

Central Oregon Community College makes every effort to ensure that students with financial need have access to its programs and courses of study. Students with general questions may find their answers on the Financial Aid webpage at www.cocc.edu/Financial-Aid/. 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) as soon after January 1 as possible to be considered for maximum eligibility. The federal school code for COCC is 003188.

WHO MAY BE CONSIDERED FOR FINANCIAL AID?

In order to comply with general federal eligibility provisions at COCC, students must

- be U.S. citizens or eligible non-citizens with appropriate documentation;
- have a high school diploma, a GED certificate or complete a home school program at a secondary level;
- be enrolled as certificate-seeking or degree-seeking students with declared majors at COCC;
- maintain satisfactory academic progress;
- certify that they are not in default on a federal student loan and that they do not owe money on a federal student grant;
- and be registered with the Selective Service, if required.

In order to receive aid from COCC, students must complete the application materials, including the Free Application for Federal Student Aid (FAFSA) each year, be eligible according to applicable criteria, and be enrolled in and attend credit classes at COCC.

HOW STUDENT AID IS DISTRIBUTED

On the second Friday of each term, referred to as the "census date," enrollment is frozen and financial aid is applied to the student's account based on enrollment level. Aid is applied first to tuition, fees and authorized bookstore charges. 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 standards

To maintain eligibility for financial aid, a student must comply with the following standards. Failure to meet any of the standard requirements may result in denial of federal financial aid at COCC.

Financial aid applicants must have a cumulative GPA of 2.0 and a cumulative completion rate of 66.67 percent of their calculated credits at the end of each term. The term "calculated credits" is defined as credits for which a student has received a financial aid disbursement and/or attempted hours if the student did not receive financial aid. It also includes transfer credit hours that are accepted toward a student's educational program. If a student fails to meet these eligibility standards, an automatic WARNING status (see below) is enforced. Grades of A, B, C, D and P only will be evidence of successful completion of coursework for purposes of calculating institutional percentage completion rates. Aid eligibility is limited to 150 percent of a student's program

credit length (approximately 135 credits for two-year degree and 75 for one-year certificate) even if a certificate/degree is not earned. As soon as it is clear that a student cannot graduate within this period, he/she becomes ineligible for aid. Change of major or program may not be sufficient reason to extend the credit limit. Students pursuing more than one program at COCC will need to submit an appeal and documentation of its necessity if the maximum limit is reached.

Note: Students taking prerequisites toward any program leading to a selected admissions process (e.g. Nursing, Paramedic) will be limited to 90 calculated credits to allow for course work after admission to the program.

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. The student will be asked to complete a document acknowledging this change in status and the potential impact it may have on aid eligibility. If a student in WARNING status fails to meet the cumulative minimum standards for another term, he/she becomes ineligible for aid.

Failed status

A student in WARNING status who has failed to meet the cumulative minimums at the end of the next evaluation period will not be eligible for any federal 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

Reinstatement of aid is never automatic. A student must apply for redetermination of aid eligibility by completing a COCC Financial Aid Appeal form. A student may use the appeal process to petition any financial aid action the law

allows. Appeals are made through the Financial Aid office, on the official appeal form and will require the following: an explanation and documentation regarding why the student failed to make Satisfactory Academic Progress 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. Students will be allowed one appeal after failing SAP requirements.

Current COCC students will be allowed to petition for one program change. If the appeal is approved, the student's transcript will be re-evaluated for earned/transfer credits that apply to the new program. Those credits will be excluded from the requirements for the new program and 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 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 that is accepted and officially transcribed as transfer credit by COCC, will count toward the 150 percent maximum calculated credits as well as the cumulative completion rate. If the limit is exceeded, the student must submit an appeal to determine aid eligibility. GPAs from other schools are not considered in COCC's financial aid satisfactory progress policy.

Consortium agreements

Students enrolled in more than one institution under consortium agreements are subject to the home institution's Satisfactory Academic Progress policy.

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 60 through WR 95, MTH 10 through MTH 95, CIS 10 and CIS 70. However, developmental credits at or above the level required for the certificate or degree the 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) may be submitted as early as January 1 for the upcoming summer, fall, winter and spring award year. Students are encouraged to apply before January 30 because some funding is limited. Students apply on the web at www.fafsa.gov. A paper FAFSA is available by calling the Department of Education at 800-433-3243.

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

- go to the website, www.cocc.edu/Financial-Aid;
- send an email to coccfinaid@cocc.edu;
- send a letter to COCC Financial Aid, 2600 NW College Way, Bend, OR 97701; or
- telephone 541-383-7260.

Students should include their name and COCC ID number in all correspondence to the Financial Aid office.

WHAT TYPES OF AID ARE AVAILABLE?

Financial aid is money awarded to students to help them pay for tuition, fees, books, room and board, and transportation while they are working on a certificate or degree. There are four types of financial aid programs available: scholarships, grants, loans and work-study. These funds come from various sources. Program details, including eligibility criteria and dollar amounts, may differ from the following descriptions if applicable laws or regulations governing such programs change after printing of this material.

SCHOLARSHIPS

COCC has three primary types of scholarship programs: COCC Foundation scholarships are based primarily on financial need.

Honor scholarships and private scholarships encourage academic excellence and personal achievement.

Central Oregon Community College Foundation Scholarships

The Central Oregon Community College Foundation is comprised of a board of directors, administrative staff members and a group of interested and concerned private citizens from throughout the College District who donate their time and money to help COCC's students and to improve College programs. Each year, the COCC Foundation raises funds to finance a number of scholarships. A scholarship application is required. Applications are submitted online by logging into the Bobcat Web Account beginning in mid-December for the upcoming academic year.

Eligibility is determined by the COCC Scholarship Selection Committee and may be based on need, academic achievement, residency or other donor-specific criteria. The COCC Foundation Scholarship is not available for summer term.

Honor scholarships

Honor scholarships are awarded on the basis of academic excellence to the highest-ranking seniors graduating from in-district high schools. This scholarship may be renewed at COCC for second-year students with a minimum 3.5 cumulative grade-point average and completion of 12 credits per term totaling 36 credits during their first year. All honor scholarship recipients must meet the College definition for full-time enrollment.

Private scholarships

A growing number of private scholarship opportunities are available to students. For a list of available scholarships and scholarship search engines visit: www.cocc.edu/Financial-Aid or contact the Financial Aid office. High school seniors are encouraged to explore scholarship opportunities with the help of their high school counselors.

GRANTS

Grants are awarded on the basis of financial need. Grants do not have to be repaid and are another type of gift aid. Student financial aid packages include grant funds whenever student eligibility and funding levels permit. Funding for the grant programs administered at COCC comes from the Department of Education and the state of Oregon.

Federal Pell Grant (limited to 18 quarters)

The Federal Pell Grant program was established to provide financial aid for eligible undergraduate students with financial need. Eligibility for other federal aid is determined after the Pell Grant is taken into consideration. Grant awards in 2013-2014 ranged from \$605 to \$5,645 annually depending on financial eligibility and enrollment. Students with a prior bachelor's degree are not eligible.

Federal Supplemental Education Opportunity Grant (FSEOG)

FSEOG awards are federally funded. COCC is responsible for selecting eligible students and determining the amount of the award. The FSEOG is for undergraduates with exceptional financial need and gives priority to students who receive Federal

Pell Grants. Annual FSEOG awards were \$600 in 2013-2014 depending on federal funding allocations. The FSEOG is not available for summer term.

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.

LOANS

Note: Students are encouraged to borrow only the amount needed to cover educational expenses. Loan entrance and exit counseling are required.

Direct Loan Programs (DL)

To be eligible for a Direct Loan, students must be enrolled in at least six credit hours and must not be in default on a prior loan or owe a grant repayment. All loans must be repaid. Students must sign a promissory note (a legal agreement to repay) with the Department of Education before any loan money can be disbursed. The promissory note contains detailed information about the terms, responsibilities and repayment of the loan. Because students must repay educational loans, this kind of assistance is generally referred to as self-help aid. Direct loans are accessed through the normal financial aid process. (For details, go to www.cocc.edu/Financial-Aid/Loans/.)

Two specific types of Direct Loans are available:

- **Subsidized Federal Direct Loan program**

The subsidized loan program provides fixed interest, long-term 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 federal 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 of loans, with an initial 10-year repayment time limit.

- **Unsubsidized Direct Loan program**

The unsubsidized loan program provides fixed interest, long-term federal loans through the Department of Education. The unsubsidized loan is available to students who do not qualify for some or all of the need-based Subsidized Federal Direct 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 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 of loans, with an initial 10-year repayment time limit.

Parent Loan to Undergraduate Students program (Federal PLUS)

The PLUS is a non-need based, interest-bearing loan to parents. Loans may range up to the published cost of attendance for the institution minus other student aid. Interest accumulated during in-school time is fixed at 6.41 percent, and subject to change annually. For more information on the PLUS loan and other publications, visit www.studentaid.ed.gov/. In addition to the PLUS application, a FAFSA is required at COCC. Both are available online at www.cocc.edu/Financial-Aid/Loans/What-is-a-PLUS-loan/.

WORK-STUDY AND STUDENT EMPLOYMENT

Many students help finance their education by securing part-time employment either on or off campus. Since students work in order to receive funds from employment, this kind of assistance is considered a form of self-help aid.

COCC Career Services maintains a list of off-campus job opportunities for students seeking employment outside the Federal Work-Study program. Check their website for more information, www.cocc.edu/CAP/Career-Services/Student-Employment/.

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.

Students cannot be placed in a work-study job until they receive a financial aid award that includes work-study. Students will not receive any Federal Work-Study funds until they are actually placed and working in a work-study job. Due to the need to match job requirements with student skills, the College cannot guarantee employment to all eligible FWS recipients.

At COCC, work-study jobs provide experience in a variety of fields including physical education, library work, the sciences, health service and office work. Community service jobs are also available. For more information, visit www.cocc.edu/Financial-Aid/Work-Study/.

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 disabled veteran, should contact a veterans certifying official at 541-383-7264.

All veteran students at COCC must meet the same academic standards as other students to remain in good standing. However, to remain eligible for educational benefits, veterans and other students eligible for these benefits must comply with the following additional requirements:

Attendance

To receive educational benefit payments, students must attend classes. It is the responsibility of the registered veteran to notify the veterans coordinator when any changes are made to their schedule (add or drop classes). Failure to do so may result in incorrect payments to the student. Overpayments must be repaid.

Program of study

To be eligible for veteran educational benefits, students must be enrolled in a degree or certificate program offered by COCC and be approved by the state approving agency. Only courses required toward 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 Enrollment Services – Admissions and Records for evaluation. Certification will not continue past the first term if transcripts from all other sources (including military transcripts) have not been received by COCC.

Credit hour requirements

To receive full-time pay, students must take a minimum of 12 credit hours per term; for three-quarter time pay, students must take nine to 11 credit hours per term; and to receive half-time pay, students must take six to eight credit hours per term. Chapter 33 students have different requirements.

Satisfactory academic progress

Veteran students are considered in good academic standing with the College when they maintain a GPA of 2.0 and complete 66.67 percent at the end of each term. A 0.0 GPA results in immediate termination of veterans educational benefits.

All students are notified at the end of the term in which they have not made satisfactory progress. Veteran students may continue on probation for only one term. If a student who is on probation fails to meet the minimum standards for another term, the veteran will not be eligible for veterans educational benefits. All probations and terminations are reported to the Department of Veterans Affairs.

Once benefits are cancelled, the veteran student may appeal the termination by submitting a veterans petition to the veterans coordinator outlining the mitigating circumstances OR complete 12 credits with a 2.0 GPA or better in each class, paying for the courses at their own expense. Upon completion of 12 credits with a "C" grade or better in each class, the student can then submit a Veterans petition requesting reinstatement of Veterans benefits. Certification will resume starting the term following the completion of 12 credits.

Institutional responsibility

COCC is responsible for reporting to the VA if the student is no longer pursuing his or her educational objectives as certified.

STUDENT SERVICES

Central Oregon Community College offers a variety of academic and support services designed to foster student success. All prospective students are encouraged to contact Enrollment Services – Admissions and Records, 541-383-7500, or www.cocc.edu, for information and assistance in planning their education at COCC.

ACADEMIC ADVISING (CAP CENTER)

Academic advising at COCC is provided by both the CAP Center (Career services, Academic advising, and Personal counseling) and by full time faculty members in each department. The purpose of academic advising is to guide students toward achieving their educational goals and to help students become self-reliant in understanding College policies and practices. Various advising requirements are in place to support this purpose.

Prior to registering for classes, new certificate- and degree-seeking (CDS) students and students who have not attended for more than a year participate in small-group advising sessions. After the first advising session, students are assigned an advisor in their declared major and emailed the advisor's contact information. Students are required to meet with their advisor to develop long-range academic and career plans before the next term's registration. All CDS students are required to meet with an advisor prior to registration if they participated in a group advising session the previous term, or as determined by the advisor and at least once a year.

COCC provides an online tool, GradTracks, to help students and their academic advisor track progress toward graduation. GradTracks allows students to see how completed courses are applied toward their certificate or degree and identifies requirements and courses still needed to graduate. Students can also explore other certificate and degree options. Students can access GradTracks by logging on to their Bobcat Web Account and selecting the Student Services & Financial Aid Tab; clicking on the GradTracks link and again on the GradTracks button. Students must be taking credit classes in order to view information in GradTracks.

Students are responsible for monitoring their advising requirement and for completing the advising steps in a timely manner. COCC recommends that students plan their advising appointments well in advance of the opening of registration. Students who want to find their assigned advisor's name and contact information and see if they have an advising requirement for an upcoming term, should look in their student Bobcat Web Account. To do so, go to www.cocc.edu and select "Student Login." After logging in, select "Student Services and Financial Aid," then "Registration," and then the "Can I Register for Credit Classes?" page.

Students may request a specific advisor or a change in advisors if their major changes. Students not seeking a certificate or degree are not required to meet with an advisor, but are welcome to meet with a CAP Center advisor. Contact the CAP Center, Barber Library lower level, 541-383-7200, for advising options.

ASSOCIATED STUDENTS OF COCC (ASCOCC)

ASCOCC provides students with numerous opportunities for governance, advocacy and social programming. The council is responsible for allocating student fees, appointing students to campus governing committees, advocating for the entire student body and providing diverse social and educational programs and services. The ASCOCC council offers a limited number of paid positions each year.

Contact ASCOCC, 541-383-7595 or visit the website, www.cocc.edu/ASCOCC, to find out about current activities and how to get more involved with the student council.

BASIC SKILLS

For those students who need to sharpen their skills in reading, writing, math and basic computer, the College offers courses in these areas. Using placement test results, advisors will recommend courses that will provide the most help. These courses are at the pre-college level. Although non-transferrable, they are extremely valuable courses for students who need preparation for success in retraining and re-entry into academic studies. See page 32 for more information.

BOOKSTORE

The Campus Bookstore, located in Newberry Hall on Bend's main campus, sells textbooks, class materials, educational and personal supplies, gifts, convenience food and beverages. Textbooks can be ordered 24 hours a day at www.cocc.edu/Bookstore/. For more information about the Bookstore, call 541-383-7570 or visit its website, listed above.

Redmond Campus Bookstore (Building 1, Room 111) sells textbooks, class materials and educational supplies. Please visit www.cocc.edu/Bookstore for hours or call 541-504-2929.

THE BROADSIDE STUDENT NEWSPAPER

The Broadside is a student-run newspaper serving COCC, OSU-Cascades and the larger community. The staff publishes a minimum of 25 issues per school year with a circulation of 1,500 to campus and other locations around Central Oregon. The newspaper provides a forum for student free speech as well as a focus on college news, features and sports. The newspaper's website, www.TheBroadsideonline.com, offers year-round advertising opportunities and ongoing, updated news information.

Each year The Broadside offers dozens of students 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 advisor, 541-383-7252, or email The Broadside editor-in-chief at broadsidemail@cocc.edu.

CAMPUS PUBLIC SAFETY

The COCC 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, 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.

Please report all incidents to the department at the numbers below. Active emergencies should be reported first to 9-1-1, then call the appropriate number (*below*):

Campus Public Safety can be reached 24 hours each day, 7 days per week at 541-383-7272 or ext. 7272 from campus phones.

All students who park on campus must register their vehicles and display registration decals. Parking, traffic and other regulations may be found in the Parking and Traffic Regulations handbook available, along with registration decals, in the Boyle Education Center at either the Campus Public Safety office or in the Information Office. There is no charge for parking permits. Certain parking areas on campus are reserved for guests, carpool commuters, staff and vehicles displaying valid disabled parking decals.

CAP CENTER (CAREER SERVICES, ACADEMIC ADVISING, PERSONAL COUNSELING)

The CAP Center offers a variety of student services to support COCC students in setting and meeting their educational goals. The CAP Center is located in the lower level of the Barber Library. Call the CAP Center for more information about each of these services, 541-383-7200, or go online, www.cocc.edu/CAP/.

CAREER SERVICES (CAP CENTER)

COCC Career Services assists students with career planning and exploration, finding part-time student employment (including work-study job placement), developing job search skills and locating career placement resources. Local employers can use these services to locate students and graduates with the specialized knowledge and skills needed in today's workplace. Career Services is part of the CAP Center, located in the lower level of the Barber Library and offers personal appointments, print-based and Web-based resources, and workshops open to COCC students and alumni. Call the CAP Center, 541-383-7200, or visit www.cocc.edu/CAP/Career-Services for more information.

CLUB SPORT/INTRAMURAL AND RECREATION PROGRAMS

The COCC Club Sport/Intramural and Recreation programs offer a wide range of traditional and nontraditional sports and recreational activities along with special events and tournaments for people of all interests and abilities. The spacious Mazama complex features top-flight sports and recreation facilities.

COCC Club Sports provide opportunities for competition, skill development, leadership and recreation. Clubs are organized by students with guidance from coaches, students, faculty, staff and community members. Current clubs include alpine ski racing, baseball, basketball, body building, bowling, cycling, disc golf, golf, martial arts, nordic skiing, rugby, soccer (indoor and outdoor), swimming, volleyball and running.

Organized intramural activities are available at convenient times for COCC students, faculty and staff. The emphasis is on having fun, making friends and staying fit. Some activities feature friendly competition while others are purely recreational. Activities include basketball, bench-press tournaments, cycling (recreational and races), indoor soccer, day hikes, disc golf tournaments, flag football, golf tournaments, soccer (outdoor), softball (coed), swimming, table tennis, tennis, ultimate frisbee and volleyball.

COCC promotes lifetime fitness for everyone. Facilities are available for drop-in use throughout the week for a small per-term user fee. Informal recreational activities and organized sports are available to all. Passes for local recreation facilities are available to students at no cost (swimming and bowling). Call 541-383-7794 or visit online at www.cocc.edu/Sports for more information.

CLUBS

ASCOCC offers many opportunities for students to participate in campus clubs. Clubs must involve at least four current COCC students, have a faculty or staff advisor and create a budget. Those having questions or ideas about forming a student club or participating in an existing club can contact ASCOCC at 541-383-7595 or visit its website: www.cocc.edu/Student-Life/ASCOCC/Clubs-and-Programs/Clubs/.

COMPUTER LABS

COCC offers a variety of computing resources to students registered in its credit classes, Community Learning classes or Oregon State University-Cascades programs.

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. Additionally, the COCC Madras and Prineville Campuses have computer labs that are scheduled for classes and drop-in use. There are computer labs specific to Math, Networking, Computer-Aided Drafting and Design, Science, and Geographic Information Systems on the Bend campus and additional computer classrooms located on all campuses. All drop-in computer labs are staffed by student workers who offer assistance logging into student accounts and answering general questions.

Computers at COCC use the Windows operating system and most Microsoft Office programs along with class-specific programs. Drop-in labs are equipped with black-and-white and color laser printers, flatbed scanners, and adaptive workstations. All non-classroom printing has a pay-to-print fee. Payment is by COCC/OSU-Cascades student ID card or COCC print card.

COPY CENTER AND MAIL SERVICES

The Copy Center, located in the Bookstore (Newberry Hall) on the Bend campus, is a full-service copy center. Services include black and white as well as color copies, transparencies, binding and general mail services including UPS. For more information about the Copy Center and/or Mail Services, call 541-383-7579.

COUNSELING (CAP CENTER)

Professional counselors are available at no charge to help COCC students identify and resolve personal issues. Counselors can help with stress management, depression, test anxiety, eating

disorders, substance abuse, relationship issues or any other problems that may affect college success. All students who are enrolled in at least one credit or in Adult Basic Skills/English Language Learning courses are eligible to receive short-term counseling at no charge. For further information visit www.cocc.edu/CAP/personal-counseling/. Counseling appointments are confidential and can be made through the CAP Center (Career services, Academic advising and Personal counseling) in the lower level of the Barber Library or at 541-383-7200.

FOOD SERVICE AND CATERING

Quality food service is available across campus, with the main campus dining services available in the Campus Center. For details on locations, prices and options, visit the Food Service website at www.coccdining.com or contact Herb Baker, the Food Service Director, hbaker@cocc.edu.

LATINO PROGRAMS

The Latino Program assists in the recruitment, retention and academic success of immigrant and native Latino students. The Program Coordinator assists students to meet their educational goals and contribute to the campus community. The Coordinator advises the Latino Club with planning and implementing of relevant educational programs and social activities.

For more information, contact the Latino Program Coordinator at 541-318-3726. The Latino Program website is at: www.cocc.edu/Multicultural/Latino/Latino-Students-Program/.

iAVANZA! (Moving Forward!) Latino College Preparation Program
The goal of iAVANZA! is to encourage Latino/a youth to graduate from high school and to pursue higher education, and ultimately, to obtain a rewarding career and contribute to their communities. To reach this goal, the program offers a dynamic curriculum that integrates leadership, college preparation and culturally relevant themes for the Latino/a students.

For more information, contact the iAVANZA! Program Coordinator at 541-318-3717. The iAVANZA! Program website is at: www.cocc.edu/Multicultural/Avanza/.

LIBRARY

The Barber Library serves the research and information needs of the College, Oregon State University-Cascades and residents of Oregon. Staff can be reached at 541-383-7560. The Library is on the Web at www.cocc.edu/Library/. The Library catalog and its extensive collection of online resources are available from the web page.

Information help desk

A librarian or staff member is available at the reference desk to assist with reference and research questions. Help is also accessible online via email or through 24/7 chat service. (See the "Need Help?" link on the Library Web page, www.cocc.edu/Library/.)

Computer workstations and wireless access

The Barber Library has 54 networked computer workstations available to students for their own research, as well as wireless

accessibility for students, faculty, staff, community patrons, and campus visitors. For more information, refer to the Wireless Network Web page, www.cocc.edu/ITS/ITS-Services/Wireless/. The Library also houses a computer classroom and a 38-workstation computer lab.

Library collection

The Barber Library collection consists of online reference sources, print and e-books, print and e-journals, magazines, DVDs, streaming video, Web resources and online article databases supporting COCC and OSU-Cascades academic programs. Students at the Redmond, Madras, and Prineville campuses have access to services and academic resources available through the Library. All online resources are available via the Library's website at www.cocc.edu/Library/.

Technology equipment

Students, faculty and staff may also check out laptops, iPads, Kindles, digital cameras and camcorders, projectors, and assorted multimedia accessories from the Library.

Books and articles from other libraries

Students can request materials not available in the Barber Library. The Library is a member of the Orbis Cascade Alliance, a consortium of college and university libraries in the Northwest.

The Alliance's joint catalog, Summit, provides access to approximately 30 million books, audio-visual materials and more. It is accessible from the main Library Web page, www.cocc.edu/Library/. Current, credit-enrolled students, faculty and staff of COCC and OSU-Cascades may self-initiate requests for Summit items, most of which arrive in three to five working days.

Other interlibrary loan services are also available to COCC students, faculty and staff for materials not available in Summit or for journal articles not found in the Library or in the Library's full text databases.

Materials on reserve for classes

Print and AV course reserves are available at the circulation desk at the front of the Library. Students also may retrieve a number of e-reserve materials, which are available 24 hours a day, seven days a week, through the electronic reserves site on the Library Web page.

Government documents

The Barber Library is a selective depository library for U.S. federal documents.

Library instruction

Faculty librarians work closely with faculty in all disciplines to provide research instruction in classes when appropriate. The Library also offers stand-alone credit courses in research skills at three levels—LIB 100, LIB 127, LIB 227. See course descriptions for more information.

Library events

Literary events and art exhibitions are held regularly in the Barber Library. Watch for announcements in the student newspaper, *The Broadside*, and on the College and Library Web pages.

MULTICULTURAL ACTIVITIES

The Office of Multicultural Activities promotes the development of a respectful and inclusive campus community by sponsoring cultural events and educational programs.

The Multicultural Center, located in Room 217, Campus Center Building, fosters cross-cultural understanding and respect by providing a welcoming setting for learning, sharing and connection. For more information, contact the director of multicultural activities at 541-383-7412 or visit the Multicultural Activities website at www.cocc.edu/Multicultural/.

NATIVE AMERICAN PROGRAM

The Native American Program focuses on the recruitment and retention of Native American students. The program coordinator offers students individualized assistance as they navigate academic and administrative aspects of student life. As the advisor to the First Nations Student Union, the coordinator supports club members as they volunteer in the community, plan education and social events, and organize the annual Salmon Bake.

For more information, contact the Native American program coordinator at 541-318-3782 or visit the website: www.cocc.edu/Multicultural/Native-American/.

OFFICE OF STUDENT LIFE

Participation in campus activities beyond the classroom is encouraged in order to complement college academic programs and to enhance the educational experiences of students. Through exposure to and participation in intellectual, vocational, cultural, recreational and social programs, students may explore their potential as individuals and develop meaningful relationships with others. For more information, contact the office of Student Life in the Campus Center, 541-383-7590 or visit www.cocc.edu/Student-Life/Student-Life/.

SERVICES FOR STUDENTS WITH DISABILITIES

The Services for Students With Disabilities (SSD) office endeavors to ensure equal access to all students with qualifying, documented disabilities at all COCC campuses and Community Learning centers, as defined by federal legislation. Awareness of students' needs and goals helps to create an atmosphere in which learning and growth can occur. We encourage referral of students by staff and faculty to the SSD office for consultation and determination of eligibility. For more information, visit the SSD website at www.cocc.edu/Disability-Services or drop in to the office at the Boyle Education Center, Rooms 115, 124 and 125.

SHUTTLE BUS

A free campus shuttle services the Bend campus. The 12-person bus features two bike racks and automatic snow chains. Shuttle maps with pick-up and drop-off times are available in the Boyle Education Center, Campus Services office, Campus Center or online at www.cocc.edu/Campus-Services/Campus-Shuttle/.

STUDENT EMAIL ACCOUNT

COCC provides qualifying COCC students with an email account via Microsoft Office 365. COCC's primary means of communicating with students is through their COCC email account. This includes billing statements, registration and wait

list information and important announcements. Students are expected to regularly check their COCC email account.

To access your Office 365 email account, visit the COCC homepage at www.cocc.edu and click the "Student Login" button in the upper right-hand corner. Next, click the web email button, to access the login page and Cloud 365 information page.

Students can find their username and password at www.cocc.edu by clicking on the "Student Login" button in the upper right-hand corner, then the "Bobcat Web Account" button. Once logged in, select the Personal Information link followed by the View Email Address(es) link. If a COCC email address has been assigned, it will be displayed on this page, along with a comment, which includes the initial password for campus computers, email and Blackboard. The information will not include the correct password if the student has changed it previously. Passwords are case sensitive.

STUDENT HEALTH INSURANCE

Central Oregon Community College does not offer student health insurance. At the same time, the College does not require students to have health insurance coverage in order to enroll in courses and 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 Web page listed below.

COCC does not endorse any particular insurance, but it does have information on a few options. For information about contacting the carriers and other local resources in the community visit the Student Life Web page at www.cocc.edu/Student-Life/Student-Resources/Student-Health-Insurance/.

STUDENT HOUSING – ON CAMPUS

Juniper Hall houses 102 male and female students each year in a coed, academically focused, on-campus housing environment. Located near Grandview Hall at the top of the COCC campus, Juniper Hall offers shared double rooms, local cable, Internet access, laundry rooms and recreational facilities along with a full meal plan and what some say is the best view on campus. Contact the Office of Residence Life at 541-383-7588, or visit www.cocc.edu/Residence-Life for more information.

Space in Juniper Hall is limited. Students seeking accommodations are encouraged to submit a Housing Application and Agreement at their earliest convenience. All paperwork and deadline dates are available online. Upon signing a Housing Application and Agreement, students must be prepared to pay a security deposit to guarantee a space in the hall. The room and board rate for the 2014-15 academic year (fall, winter, spring) has been set as follows: (see next page)

Room and Board Package for Juniper Hall

2014-2015	Fall	Winter	Spring	Total
double occupancy	\$ 3,654	\$ 3,265	\$ 2,079	\$ 8,998

Note: Students living in Juniper Hall for spring term only will be assessed an additional \$300 for spring term.

STUDENT HOUSING – OFF CAMPUS

Availability of off-campus housing varies from season to season and year to year. The Office of Student Life accepts postings electronically on its website from the community for off-campus housing opportunities. Available housing options include apartments for rent, rooms for rent in homes, and homes for rent.

To view current submissions visit www.cocc.edu/Student-Life/Student-Resources/Off-Campus-Housing/. This website also provides other community resources that may be helpful in locating off-campus housing. The College provides this information as a service to students; however, it does not assume responsibility for screening rentals.

STUDENT NETWORK ACCOUNT

The student network account is a free account that permits students to connect to the College's computer network system. Once logged on to COCC computers, users will find their personal folder (identified with their name) on the desktop. Each folder contains 200 MB of space. Students are responsible for reading and adhering to COCC's Acceptable Use of Technology Resources policy. See www.cocc.edu/ITS/Computer-Labs/Acceptable-Use-of-Information-Technology-Resources/.

STUDY ABROAD

The College seeks to provide opportunities for students to study abroad while earning COCC transfer credit. For specific offerings, visit www.cocc.edu/Study-Abroad/. Current programs include:

- Spring Quarter in London (2015). The heart of British history, government and culture offers Oregon students not only access to the theater district and the riverside lifestyle, but dozens of museums, cathedrals and historical sites, such as Oxford and Stonehenge, to enrich their study-abroad experience. This program will alternate every other year with the program in Barcelona.
- Fall Quarter in Barcelona (2015). 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. This program will alternate every other year with the program in London.
- Summer two-week intensive Spanish study, followed by a two-week field biology course in Costa Rica. Students experience a home stay and language study near the capital, San Jose; then study lowland tropical jungle wildlife at La Selva research station, dry forest ecology and marine biology at Cabo Blanco on the Pacific Coast, and mountain rainforest ecology at the University of Georgia Ecological in Monteverde Cloud Forest.

For questions about COCC's Study Abroad program, contact Sara Henson, 541-330-4357, shenson@cocc.edu.

TUTORING AND TESTING CENTER

The Tutoring and Testing Center is located in the lower level of the Barber Library with the Tutoring Annex in the back of the first floor of the Library. Hours of operation are available at www.cocc.edu/Tutoring-and-Testing/. Math tutoring occurs when the Barber Library is open; proctored testing starts a half-hour after the building opens and ends a half hour before the building closes. Math/Writing/CIS tutoring and limited test proctoring is available on the Redmond, Madras and Prineville campuses.

Tutoring

Tutoring services are free to COCC students for the COCC courses in which they are currently enrolled. Drop-in tutoring is offered for math, writing, sciences, foreign languages, business administration, computer science and the social sciences, as well as Career and Technical Education subjects. Tutoring is conducted on both an individual and a group basis. Tutor-led study groups are also an option for some key courses. Resources include printed materials, textbooks and graphing calculators. The Writing Center and computer science tutoring is located in the Tutoring Annex on the first floor of the Library in Bend. Students are encouraged to bring in their writing assignments for one-on-one help with any stage of the writing process. Tutoring sessions for Science related topics are conducted in the Science building. Just in Time Math Tutoring is available on a limited basis in Grandview Hall.

Testing

The COCC Testing Center is a regional testing center serving a diverse constituency of students and community members. A charter member of the Consortium of College Testing (www.ncta-testing.org/cctc) and a certified PearsonVUE Virtual University Enterprise (www.pearsonVUE.com), Prometric APTC (www.prometric.com) and Computer Assisted Testing Service (www.catstest.com) FAA test 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 (www.cocc.edu/Tutoring-and-Testing/GED-Testing/). For a current list of tests offered, visit the COCC Tutoring and Testing Center's website listed below. For more information about tutoring and testing services, contact the Tutoring and Testing Center at 541-383-7538 or visit www.cocc.edu/Tutoring-and-Testing/.

TRANSPORTATION

In addition to the free campus shuttle bus, the region offers local transit service for the general public, Cascades East Transit (CET). For more information visit www.cascadeseasttransit.com/.

Notice

The student services and activities descriptions in this catalog are valid for this academic year. Student services and activities are evaluated yearly to assess student needs and available College resources.

ACADEMIC INFORMATION AND 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.

GRADING POLICY

End-of-term grades are available via the student's Bobcat Web account only and will not be mailed or given out over the phone.

Only the grades in the following list may be assigned. All courses graded with a P, NP, W, X, I and IP do not apply to GPA.

To calculate GPA, multiply the number of credits for each course by the grade points for the grade received in that course (grade points listed below). Add these numbers together and divide by the total number of graded credits for that term (include "F" grades and exclude P, NP, W, X, I and IP grades).

Grade points

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

Note: Courses in which "D" grades are earned may not be used in the AAOT or to fulfill foundational requirements in other certificate or degree programs and may have limitations in specific certificate or degree programs. "D" grades are not considered passing for pre-requisite courses.

F	0	not passing
P		pass: not computed in GPA, applies toward percentage of credits completed, may be awarded only in authorized classes
NP		no pass: not computed in GPA, may be awarded only in authorized classes
W		withdraw: not computed in GPA, must be assigned by Records Office
IP		course in progress
I		incomplete: not computed in GPA, will convert to "F" if requirements of the Incomplete Grade Contract are not met by the end of the following term
X		audit: not computed in GPA, does not meet graduation requirements; not eligible for financial aid

Pass (P)/No Pass (NP)

"Pass" is interpreted as a "C" or better. The "pass/no pass" option is used for certain courses where it is deemed inappropriate to use the regular grading system. Credits are awarded but not calculated in GPA.

Challenge course pass/no pass

All challenge examinations will be graded on the "pass/no pass" basis. The standard for a "P" in challenge courses is performance at the level of a grade of "B-" or better. Credits are awarded but not calculated in GPA.

Withdrawal (W)

Students who withdraw from full-term courses between the eighth week of the term and the Wednesday before finals week will receive a "W" on their transcripts. Note: Permission of the instructor is required to withdraw from the course. A "W" is not computed in a student's GPA.

In Progress (IP)

This notation is made on a transcript if the course ends after the normal grading period. At the end of the course, a grade will be entered.

Incomplete (I)

An Incomplete (I) grade is assigned when a student successfully completes approximately 75 percent of course requirements, but for reasons acceptable to the instructor, the student is unable to complete remaining requirements during the given term. An "I" grade is not a substitution for a failing grade, but indicates that there is a reasonable expectation that the student will pass the course. An incomplete grade will not count toward academic warning, but it may affect Financial Aid and Satisfactory Academic Progress.

Students may request an Incomplete (I) grade by contacting the instructor prior to the end of the term. Students must complete the remaining requirements within one quarter after the end of the original course (summer term excluded) unless the instructor designates a later completion date. Instructors will submit a grade change to the Admissions and Records office within one week of the student completing the course requirements; if no grade is submitted, it is assumed the student did not complete the requirements and the "I" grade will convert to an "F." (Note that if the student has earned a different grade without completion of these requirements, the instructor has the option to submit that letter grade instead.)

Students and instructors are strongly encouraged to complete an Incomplete Grade Contract in order to outline remaining requirements. Please see "Incomplete Grade Contract" on COCC's website for more information.

Audit (X)

Students who want the experience of taking a particular class but do not want to receive college credit may register as audit students in any of the College's courses. Audit students are not required to meet specific course requirements but should

participate fully in class activities. If students wish to audit a class, they must indicate so at the time of registration and note the following:

- "X" appears on the transcript.
- "X" is not figured 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.

GRADE CHANGES

The responsibility of assigning grades at COCC is entirely the instructor's. A student who disputes the final grade (A–F, P, NP) in a course should meet with the instructor to review the grade. If not satisfied, the student may meet with the department chair, who can further review the grade with the instructor. If the student believes that the grade is arbitrary or capricious, the student has recourse through the College's grade appeal procedure found in the Academic Procedures Manual on the COCC website.

Students who wish a change of grade to or from "W" or "X" must submit a petition directly to Enrollment Services – Admissions and Records. Requests for grade changes are considered only within one year of the grade being awarded.

MIDTERM GRADE REPORTS

Midway through each term, instructors have the option to file grades of "D" and "F" or "NP" for those students whose performance indicates it, including those who are not regularly attending class. It is entirely the instructor's discretion to submit or not submit a midterm grade report. If an instructor submits a midterm grade, the student will be sent an email at his/her college email address.

Students must take responsibility for withdrawing if they do not wish to continue in a class.

DEAN'S LIST

Students enrolled in 12 or more graded credits who receive a term GPA of 3.60 or better will have a Dean's List notation on their official transcript each term that the GPA is earned. The Dean's List will also be published each term.

REPEAT GRADE POLICY

Courses in music or theater performance, studio art, Cooperative Work Experience (CWE) and HHP activity classes may be repeated for credit. The grades and credits for such courses will be recorded on the transcript and totaled cumulatively. In some cases, there may be a limit to the number of total credits allowed from those courses when used toward a certificate or degree.

Students may choose to repeat other courses. The original course and grade will remain on the transcript, with an "R" indicating it is later repeated. The original course grade will not be counted in that term's GPA or the 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. If students wish to use the grade repeat policy for music or theater performance, studio art, Cooperative Work Experience (CWE) 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. See the COCC website for an illustration of the repeat grade policy.

Note: This option became available fall 2006. A student must be a student under a catalog in which this policy was in place in order to take advantage of the repeat grade policy (e.g., former students cannot request a grade change unless they enroll in the repeated course fall 2006 or later).

TRANSFER REPEAT POLICY

If a student takes the same course twice, whether at COCC or another institution, only one course may be used to satisfy a certificate or degree requirements. If two or more of the same courses exist, the College will use the following criteria to determine which course applies to needed requirements:

- The most recent COCC course with a grade "C" or better.
- If both courses came from other institutions, the transfer course with the best grade will be selected.
- Some degrees and certificates have specific policies on permissible age of transfer courses. Please refer to the applicable Program Description.

ACADEMIC WARNING POLICY

Students are considered to be in good academic standing if they earn a minimum 2.0 GPA each term. Certificate- and degree-seeking students not meeting this requirement receive an academic warning. All students on academic warning will be sent an email to their COCC email address specific to their situation the day after grades are processed; it is the responsibility of the students to monitor their academic standing and complete academic warning requirements in a timely manner.

Academic warning descriptions and requirements are as follows:

First Academic Warning

When students earn less than a 2.0 term GPA, they are placed on First Academic Warning. At this stage, students are strongly encouraged to meet with their advisor prior to registration.

Second Academic Warning

When students earn less than a 2.0 term GPA for two consecutive terms, they are placed on Second Academic Warning. At this stage, students are required to meet with an academic advisor and complete the Second Academic Warning

worksheet. The worksheet must be submitted to Enrollment Services no later than 5 p.m., on Monday of the second week of the following term. If students are preregistered and fail to complete these steps, their registrations will be voided and a full tuition and fees refund issued. (Bookstore expenses may not be refundable.) Second academic warning students will be prevented from registering for one calendar year or until such time as they complete the Second Academic Warning worksheet.

Third Academic Warning

When students earn less than a 2.0 term GPA for three consecutive terms, they are placed on Third Academic Warning. In order to attend classes, students must complete the Academic Reinstatement petition with their advisor and submit the petition to Enrollment Services no later than 5 p.m., on Monday of the second week of the following term. The Academic Reinstatement Committee will review completed petitions no later than Wednesday of that week. The Committee has three options:

- Approve the petition as is: Students continue attending classes, following the requirements of the petition. If students fail to follow the academic plan or requirements, their registration in classes may be voided and their petition is considered "denied."
- Approve the petition with revisions: If students fail to follow the revised academic plan or requirements, their registration in classes may be voided and their petition is considered "denied."
- Deny the petition: If denied, students will not be allowed to continue or register for classes; any current registrations will be voided and a full-tuition/fee refund will be issued. (Bookstore expenses may not be refundable.) Students may petition for reinstatement the following term or cease to attend classes for one calendar year. After one year, students may re-enroll and begin classes as if no academic warnings existed (grades on students' transcripts remain the same).

All petitions are final and are not subject to appeal unless there is information pertinent to the outcome that was not submitted at the time of the initial request.

Note: All students on third academic warning are required to participate in an activity (or activities) specifically chosen to address why they received three academic warnings. Depending on circumstances, this could be attending a study skills class or workshop; meeting with a personal counselor to talk about time management, stress management, depression or other personal situations; attending a career counseling workshop or class; or other option recommended by the advisor. If students do not follow through with this activity or activities, they will be dropped from that term's classes. Financial aid recipients will need to pay back a prorated amount of their funding. (See the Financial Aid withdrawal penalty policy on page 13.)

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 students' transcripts, however, will remain the same.

Notes:

1. Students who do not have an assigned advisor may request one through the CAP Center or Enrollment Services – Admissions and Records.
2. Students on academic warning may not be self-advised, and students who were self-advised must meet with an advisor.
3. Students may not change advisors while on academic warning.

ADVANCED STANDING AND TRANSFER CREDIT

In keeping with the philosophy that college-level knowledge can be validated and documented in various ways, Central Oregon Community College recognizes many educational experiences for credit. A guiding principle of our transfer credit practice is that acceptable transfer credit is applied in the same manner as is COCC credit.

Transfer credits earned at another regionally accredited institution generally will be accepted as they apply to COCC degree requirements. Students who wish to use previous college credits toward a COCC degree should order official transcripts from the previous college. COCC will articulate the transcript toward the certificate or degree listed on the student's admission application. The articulation will be viewable on GradTracks, COCC's online degree audit tool.

Limits on college credit transfer are:

- Subject matter may not duplicate that for which credit has previously been awarded in transfer or at COCC.
- Credit awarded by another institution for life experience is not transferable to COCC.
- Courses which espouse a particular religious view normally do not equate to COCC courses.
- In some cases, science credits more than five years old may not be applicable to specific programs.
- Transfer credit is only considered for courses where a grade (of A, B, C, D, pass, satisfactory) and credit have been awarded. Note that a "D" will not be accepted for the AAOT degree, foundational requirements and for some programs. (See individual program requirements.)
- Students working toward a COCC degree must complete a minimum of 24 COCC credits. Certificate-seeking students must complete a minimum of 18 COCC credits. Challenge, Advanced Placement (AP), College Level Examination Program (CLEP) and Credit for Prior Certification (CPC) credits do not meet this requirement.

Noncollegiate and nonaccredited institutions:

COCC will evaluate records for Career and Technical Education students from noncollegiate and nonaccredited institutions (such as business and trade schools) under the following guidelines:

- Only coursework that is technical in nature and certificate- or degree-applicable will be evaluated.
- Coursework will be evaluated by the appropriate Career and

Technical Education program director.

- Sufficient documentation (transcripts, certificates, course descriptions, etc.) must be submitted to enable an informed review. Documentation must be received directly from the originating institution or program. The American Council on Education (ACE) guides will assist in evaluating the credentials. In some cases, COCC faculty will be consulted for evaluation of a particular credential.
- Material must be equivalent to regular credit courses offered at COCC. Credit is not considered based on what the student "knows," but on the content of, and recorded achievement in, the course itself.
- Material may not duplicate that for which credit has previously been awarded in transfer or at COCC.

Advanced Placement Exams (AP)

Credit will normally be awarded following approved guidelines from COCC academic departments. Typically, credit is considered only when it is equivalent to regular course offerings at COCC and when it is not duplicated

Advanced Placement (AP) will be evaluated at COCC as listed below.

AP Language and Composition, score 3+	WR 121
AP Lit and Comp, score 3+4 credits in one of: ENG 104, 105, 106, 107, 108, 109 (No writing credits earned with Literature and Comp tests)	
AP French Language, score 3	FR 101, 102, 103
AP French Language, score 4	FR 103, 201, 202
AP French Language, score 5	FR 201, 202, 203
AP Spanish Language, score 3	SPAN 101, 102, 103
AP Spanish Language, score 4	SPAN 103, 201, 202
AP Spanish Language, score 5	SPAN 201, 202, 203
AP Biology, score 4+	BI 101, 102, and 103
AP Chemistry, score 4+	CH 221, 222, 223
AP Physics B, score 4+	PH 201, 202, 203
AP Physics C, score 5	PH 201, 202, 203
AP Physics C, Mechanics, score 4+	PH 211
AP Physics C, Elect, score 4+	PH 212
AP Math Calculus AB, score 3	MTH 251
AP Math Calculus AB, score 4+	MTH 251, 252
AP Math Calculus BC, score 3	MTH 251, 252
AP Math Calculus BC, score 4+	MTH 251, 252, 253
AP Statistics, score 4+	MTH 243
AP Comp Science A, score 4+	CIS 161
AP Comp Science AB, score 3	CIS 161
AP Comp Science AB, score 4+	CIS 161, 162
AP US Government, score 3-5	PS 201
AP US History, score 4+	HST 201
AP European History, score 3+	HST 101, 102
AP Psych, score 3+	4 credits, psychology prefix, discipline studies list
AP Microeconomics, score 3+	EC 201
AP Macroeconomics, score 3+	EC 202
AP World History, score 4+	8 credits, history electives (not discipline studies)

International Baccalaureate (IB)

COCC recognizes International Baccalaureate (IB) achievement by awarding credit to students who score 5 or above on Standard or High-level IB exams. A grid outlining how credit will be awarded is maintained on the COCC website. Credit is applied to a student's record after the student has been admitted to COCC and official transcripts or score reports have been received by the Admissions and Records office.

CREDIT FOR PRIOR LEARNING

Credit for Prior Learning (CPL) is defined as credit obtained through evidence-based assessment of learning that occurs outside of traditional college-level coursework. The Northwest Commission on Colleges and Universities limits CPL credits to a maximum of 25% of the credits needed for a degree. COCC awards credit through these types of assessments:

- ACE Credit Recommendation (Military Service, noncollegiate learning)
- College Level Examination Program (CLEP)
- Credit for Prior Industry Certifications
- Institutional Challenge Exams

ACE Credit Recommendations:

The American Council on Education (ACE) is a college credit recommendation service that evaluates workforce training and makes suggestions for academic credit. In most cases COCC will accept the recommendations in the National Guide. To be considered for college credit students must submit official ACE transcripts.

The ACE guidelines will be used when considering military credit for courses (not occupations) documented on the DD-214 and/or other official training documents. Typically, credit is considered only when it is equivalent to regular course offerings at COCC, when it is not duplicated and when it is applicable to a student's degree requirements.

College Level Examination Program (CLEP)

CLEP exams will be evaluated at COCC as listed below.

The following scores are listed as minimum.

CLEP English Comp,	No credit
CLEP Humanities, score 50+	9 credits of Arts and Letters discipline studies list
CLEP Am Lit, score 50+	ENG 253, 254, 255
CLEP Eng Lit, score 50+	ENG 101, 102, 103
CLEP Foreign Language, (no more than 12 credits per language)	
French: score 50+	FR 101, 102, 103
French: score 59+	FR 201, 202, 203
Spanish: score 50+	SPAN 101, 102, 103
Spanish: score 60+	SPAN 201, 202, 203
CLEP General Math	No credit
CLEP College Algebra, score 50+	MTH 111
CLEP College Mathematics, score 50+	MTH 105
CLEP Calculus with Elem. Function, score 50+	MTH 251
CLEP Calculus with Elem. Function, score 60+	MTH 251, 252
CLEP Biology, score 50+	BI 101, 102, 103
CLEP Chemistry, score 50+	CH 221, 222, 223
CLEP General Exam in Natural Sciences, score 50+9 non-lab science credits for "additional courses" or electives	
CLEP Princ. of Mgmt., score 70+	equivalent course credit as elective in business
CLEP Accounting, score 70+	equivalent course credit as elective in business
CLEP Intro Business Law, score 70+	equivalent course credit as elective in business
CLEP Princ. of Marketing, score 70+	equivalent course credit as elective in business
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
CLEP Sociology, score 50+	SOC 201
CLEP Microeconomics, score 50+	EC 201
CLEP Macroeconomics, score 50+	EC 202

Students may arrange to take the CLEP tests at the COCC Tutoring Center, 541-383-7539.

Credit for Prior Certification (CPC)

Several COCC Career and Technical Education programs offer credit for prior certification if students 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 Admissions and Records office, along with a Credit for Prior Certification request form. Admissions and Records will then forward the documentation to the appropriate department for review and notify the student of any outcomes. If credit can be awarded, the student must pay a \$40/course fee prior to having credits transcribed.

Credits will be posted at the top of the student's transcript in a section titled "Credit for Prior Certification" so as to not be confused with regular COCC coursework. COCC's transcription of credit does not guarantee that the credit will be accepted by another higher education institution. Each institution establishes its own credit for prior certification policy and will evaluate prior certification based on that policy.

Credits transcribed 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. For Career and Technical Education programs, a maximum of 24 credits for prior certification will be awarded for associate degrees; 12 credits for certificates. With the exception of apprenticeship programs, credit for prior certification does not apply toward the minimum 24 COCC credits required to complete a COCC degree (18 COCC credits for a certificate).

Challenge Courses

Students who feel they have knowledge and experience similar to a particular course and who cannot gain credit by one of the methods listed under Advanced Standing (see below) may challenge a course and receive credit for that course. However, in some cases, students may wish to discuss course requirement waivers with program faculty. There is no limit on the number of credits that may be earned by challenge with the following exceptions:

- Students cannot challenge courses at a lower level than ones in which they have already demonstrated competency, nor at a lower level than ones in which the students have already registered.
- Students may not challenge courses which they have already taken.
- Students may not challenge courses in which experiencing the course itself is essential.
- Challenged courses do not apply toward meeting residency requirements for a certificate or degree.
- Challenged courses do not count in determining financial aid eligibility.

In order to assess whether or not the student has a reasonable chance of successfully challenging a course, a student must receive permission from a faculty member in the subject area and the department chair prior to challenging a course. If approved, the student and department complete the Challenge

Petition form. This must be completed by the end of the sixth week of the term. The challenge paper or final must be completed prior to the end of the term.

Challenged courses are charged the regular tuition rate payable at the time the completed petition is processed in Enrollment Services – Admissions and Records. It is the student's responsibility to schedule challenge examinations with the instructor. The exam may be rescheduled, only at the instructor's discretion, in extraordinary circumstances. A grade of Pass or No Pass is assigned, where a Pass is earned for performance equivalent to a grade of "B–" or better. Students may not rechallenge a course if they do not pass the first attempt. Go to www.cocc.edu/General-Procedures-Manual/Academic and read "Course Challenge" section for complete details.

Computer competency requirement

Some COCC associate degrees (AS, AAS and AGS) require students to demonstrate basic computer skills prior to graduation. To meet this requirement, students must successfully complete CIS 120 Computer Concepts, or pass Key Application and either LivingOnLine or Computer Fundamentals of the IC3 exams.

The IC3 exams may be taken at the COCC Tutoring and Testing Center or any authorized Certiport Testing Center. Locally, appointments can be made through the Tutoring and Testing Center located in the lower level of the Barber Library. A \$30 fee is charged for each test; one free retake is included in the \$30 fee. If a student needs to retake the exam a third time, another \$30 fee is charged. Successfully passing all three exams will award 4 credits for CIS 120. 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. Students who have proof they have previously received the IC3 certification will also receive a notation that the competency requirement has been met (documentation must be submitted to the Admissions and Records office).

Note: CIS courses may be required in some AS or AAS programs and the competency test will not substitute for that requirement. See individual program descriptions for details.

INTERNATIONAL CREDENTIALS

International credentials will be evaluated using the following principles:

- Coursework must be completed at a nationally recognized, university-level institution and must be at a level of achievement comparable to COCC's A, B, C and D grades. Note that a "D" will not be accepted for the AAOT degree and foundational requirements and for some programs. See individual program descriptions, pages 46-186. The applicability of such transfer credit will be evaluated as is credit from U.S. institutions.
- NAESA: Association of International Educators and American Association of College Registrars and Admissions Officers (AACRAO) guidelines will be used in evaluating the credentials.

- The student will pay for any 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 COCC Admissions and Records office, Boyle Education Center. English taught outside the United States may not meet COCC's English composition requirement. Degrees from foreign countries do not waive the general education or writing competency requirements.

GRADUATION REQUIREMENTS

Students may use GradTracks, COCC's online degree evaluation tool to track progress to completion. Students who wish to earn a certificate or associate degree from COCC should submit an online Application for Degree up to two terms prior to the intended term of completion. The application may be found at www.cocc.edu/admissions/graduation-and-honors/graduation/. After the evaluation, students receive a notification of audit results via COCC email. COCC provides advising toward its certificates and degrees; however, students are ultimately responsible for being informed about degree requirements and for selecting appropriate classes.

Please note that during the 2014-15 academic year, COCC will transition to automatic degree awarding.

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 (see pages 34-42)
- Earn a minimum 2.0 cumulative grade-point average at COCC
- Owe no debt to the College
- Complete at least 24 degree-applicable residency credits for an associate's degree; 18 certificate-applicable residency credits for a certificate
- Meet at least one of the following criteria:
 1. Students have three years to complete their program under the catalog in which they began or any subsequent catalog.
 - a. The student's default catalog year is the year the student is admitted to COCC and the student may graduate under that default catalog year or either of the next two catalog years.
 - b. If the student has a break in enrollment for four consecutive terms, the student must reapply to COCC and the default catalog year will now be the year the student is readmitted.

- c. The student's choice of catalog years is limited to two catalog years prior to the student's year of graduation. If the student does not graduate within three catalog years of student's admittance, the default catalog year will be updated yearly to the subsequent catalog year.

2. The student transfers back to COCC other college credit and meets degree requirements listed in the current college catalog or the previous two catalog years.

When a student's completion of degree requirements coincides with the last term attended, the degree will be posted in that term. When the student uses transfer credit after an absence from the College, the degree will be posted in the term in which the degree evaluation is successfully completed, and when it has been determined that all degree requirements have been met.

Multiple/concurrent degrees

Students applying for multiple or concurrent degrees must meet the degree requirements outlined above and as listed for each degree on the following pages. For each additional degree, students must complete at least 15 COCC credits that are different from those used for the other degree(s) and are applicable to the additional degree requested.

Graduation Honor Roll

Honors will be listed on the transcripts of COCC graduates based on the following cumulative GPA from the end of the term prior to the student's graduation:

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, for students who have earned a certificate (45 credits or more) or an associate degree. All graduates who have completed their degrees in the previous academic year—beginning summer term—may participate. Those students who complete their required coursework in the summer term immediately following the commencement ceremony may also participate. Commencement information is sent in April to all students who applied for a degree or certificate. Students must submit their online Application for Degree by May 1 in order for their name to appear in the commencement program. Students wishing to participate in the commencement ceremony must submit participation confirmation in their Bobcat Web Account when made available and attend the commencement rehearsal.

TRANSFERRING CREDITS TO A FOUR-YEAR UNIVERSITY

As a general rule, four-year institutions of the Oregon University System will accept up to 124 lower-division quarter hours of transferable college credit. It is ultimately the responsibility of the students to know and meet the course requirements of the four-year college or university to which they wish to transfer. Students may obtain assistance from academic advisors.

Grades of A, B or C earned in transfer courses (numbered 100-299) are generally accepted by other colleges; other grades may have limited transferability. COCC has also made arrangements with select programs at four-year colleges and universities for the transfer of certain Career and Technical Education (CTE) courses.

Students seeking a Bachelor of Arts or a Bachelor of Science degree should be aware of foreign language and other degree or major-specific requirements. See pages 34-37 for a listing of degree requirements between COCC and various universities.

STUDENT EDUCATIONAL RECORDS AND DIRECTORY INFORMATION

Enrollment Services – Admissions & Records maintains all official academic records of enrolled students including 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. Enrollment Services – Financial Aid maintains all student aid and scholarship records.

Central Oregon Community College follows the Federal Health Education and Welfare Guidelines for the Family Education Rights and Privacy Act of 1974–Pell-Buckley Amendment (FERPA), which gives students attending post-secondary institutions the right to inspect their educational records. Those rights are:

1. The right to inspect and review their education records within 45 days of the day COCC receives a request for access.

Students should submit to the registrar written requests that identify the specific record(s) they wish to inspect. The registrar will make arrangements and notify the student of the time and place where the records may be inspected.

The College reserves the right to withhold transcripts from students who are in debt to the institution. Students have the right to discuss the matter with a representative empowered to resolve such disputes.

2. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading. Students should write the registrar, clearly identify the part of the record they want changed and specify why it is inaccurate or misleading. If the College decides not to amend the record as requested by the student, COCC will notify and advise the student of the decision and of his or her right to a hearing regarding the request for amendment. The College also

will provide additional information regarding the hearing procedures.

3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by COCC in an administrative, supervisory, academic, research or support staff position (including law enforcement unit personnel and health staff); a person or company with whom COCC has contracted (such as an attorney, auditor or collection agent); a person serving on the Board of Directors; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has legitimate educational interest if the official needs to review an educational record in order to fulfill his or her professional responsibility.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by COCC to comply with the requirements of FERPA. The name and address of the office that administers FERPA is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, D.C. 20202-5901.

DIRECTORY/RELEASE OF INFORMATION

The College does not publish a student directory. Requests for directory information must clearly state the student's name.

Central Oregon Community College considers the following information to be directory information and may release it if requested on an individual basis:

- student's full name
- terms of attendance (not daily attendance)
- major field of study
- full- or part-time enrollment status
- degrees, certificates and honors awarded
- address and telephone number
- email address
- participation in officially recognized activities and sports
- most recent previous school attended
- class standing (freshman or sophomore status)

Students who do not wish the above information to be released by the College must submit a signed statement requesting that this information be withheld. Contact Enrollment Services for the necessary form and additional information. The request to withhold information remains in effect until the student submits a signed statement indicating that directory information may be released. Students should keep the College notified of current addresses and telephone numbers. Students can update this information through the College website, www.cocc.edu, via the Bobcat Web Account.

Information such as grades, progress in coursework, financial aid status and class schedule will not be released, except as authorized by law. If students wish to have this information released to parent/guardians, employers or other non-college entities, students must submit a Release of Information form, in writing, to Enrollments Services – Admissions and Records in the Boyle Education Center. The release is valid until June 30 of each year and must be refiled annually.

RELEASE OF DIRECTORY INFORMATION FOR MILITARY RECRUITING PURPOSES

Under the Solomon Amendment Interim Rule to implement the National Defense Authorization Act of 1995 and of 1996, and the Omnibus Consolidated Appropriations Act, 1997, schools receiving Title IV funding must provide military access to directory information for students 17 years of age or older. For purposes of the act, directory information is defined as name, address, telephone listing, date and place of birth, level of education, degrees received and the educational institution in which the student most recently was enrolled. Students who have formally requested COCC to withhold all directory information from third parties will not be included.

SOCIAL SECURITY NUMBER/ INFORMATION CONSENT

The College adheres to the following policy statement of the Oregon Department of Community Colleges and Workforce Development:

"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."

OAR 589-004-0400 authorizes Central Oregon Community College to ask students to provide their social security numbers. The numbers will be used by the college for reporting, research and record keeping. The numbers will also be provided by the college to the Oregon Community College Unified Reporting System (OCCURS), which is a group made up of all community colleges in Oregon, the State Department of Community Colleges and Workforce Development and the Oregon Community College Association. OCCURS 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 colleges to support the progress of students and their success in the workplace and other education programs.

OCCURS or the College may provide a student's social security number to the following agencies or match it with records from the following systems:

- State and private universities, colleges and vocational schools, to find out how many community college students go on with their education and to find out whether community college courses are a good basis for further education.
- The Oregon Employment Department, which gathers information, including employment and earnings, to help state and local agencies plan education and training services to help Oregon citizens get the best jobs available.
- The Oregon Department of Education, to provide reports to local, state and federal governments. The information is used to learn about education, training and job market trends for planning, research and program improvement.
- The Oregon Department of Revenue and collection agencies only for purposes of processing debts and only if credit is extended to the student by the College.

State and federal law protects the privacy of student records. The social security number will be used only for the purposes listed above. However, there may be times when solicitation and disclosure of a student's social security number is mandated by federal law.

CONCERNS PROCEDURE

COCC has a college concerns procedure designed to provide employees, students and citizens a way to appeal decisions made within the College. Contact Student Life at 541-383-7590 for a copy of the procedure, or view it online at www.cocc.edu/Human-Resources/Employment/Equal-Opportunity/.

CONCERNS REGARDING GENDER DISCRIMINATION, SEXUAL HARASSMENT, OR MISCONDUCT, DATING VIOLENCE, DOMESTIC VIOLENCE AND STALKING

Students or employees who believe they have experienced or witnessed discrimination, sexual harassment, or misconduct, dating violence, domestic violence, or stalking are encouraged to report this information to the College's EEO/Title IX Officer, 541-383-7216 or the Director of Student Life, 541-383-7592. These staff can provide assistance and resources and discuss possible responses for the situation. Do not wait to report concerns until the situation becomes too serious (i.e., severe, pervasive or persistent). Off-campus harassment, misconduct or violence by members of the College community should be brought promptly to the attention of the College staff listed above.

NO RETALIATION STATEMENT

No one at the College may reprimand, discriminate or otherwise retaliate against an individual for initiating an inquiry or complaint in good faith, nor against other individuals who share information related to the complaint.

STUDENT RIGHTS AND RESPONSIBILITIES

In order to provide for the maximum safety, convenience and well-being of the total College community, certain standards of behavior have been established at COCC. Upon admission to the College, all students accept an unqualified commitment to adhere to such standards and to conduct themselves in a manner appropriate to an educational environment, one which reflects respect for themselves and the College. Such actions as academic dishonesty, abuse of property, harassment, any violation of federal or state law, possession of alcoholic beverages, and possession of illegal drugs are in violation of the College's standards and are cause for disciplinary action. The disciplinary action taken by the College covers a range of possibilities up to and including dismissal from college. A comprehensive Student Rights and Responsibilities guide is available online at www.cocc.edu/Student-Life/Student-Policies/.

ALCOHOL AND DRUG POLICY

In compliance with the Drug-Free Workplace Act of 1988 (Public Law 100-690, Title V, Subtitle D) and the Drug-Free Schools and Communities Act Amendment of 1989 (Public Law 101-226), it shall be the policy of Central Oregon Community College to maintain a drug-free campus for all employees and students. It is the responsibility of the College to notify students and staff of college policy. In accordance with this intent, the following policy is in effect:

Drug-free campus

The unlawful possession, use or distribution of illicit drugs and alcohol is prohibited on the College campus, in all College facilities or as part of any College-sponsored activity. Violators of this policy will be prosecuted to the full extent of state and federal law and, in addition, there are specific consequences for employees and for students which are stated in the College Drug-Free Campus Procedures.

Employees and students can find assistance, abuse prevention resources, and health risks information associated with the use of illicit drugs and the abuse of alcohol, and warning signals, online at www.cocc.edu/Student-Life/Student-Resources/Abuse-Prevention-Information/.

NONDISCRIMINATION POLICY

There will be no discrimination or harassment on the basis of age, disability, sex, marital status, national origin, ethnicity, color, race, religion, sexual orientation, genetic information, veteran status or any other classes protected under Federal and State statutes in any educational programs, activities or employment. Persons having questions about equal opportunity and non-discrimination should contact the Equal Employment Officer c/o COCC's Human Resources office, 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 ADA Coordinator, Joe Viola at 541-383-7775. Further inquiries may be directed to the Affirmative Action Officer, c/o COCC's Human Resources office, 541-383-7216.

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.



BASIC SKILLS

For those who find their academic skills need sharpening, the College maintains transitional courses designed to equip students with the basic writing, mathematics and reading skills needed to succeed at the college level. Using placement test results provided through the CAP Center, advisors will recommend courses that will provide the most help. These classes are pre-college level and non-transferable; however, they help build a solid foundation for success in future courses. They are extremely valuable for those who need preparation for success in retraining or re-entry into academic studies.

Two categories of instructional support are available:

1. Adult Basic Skills (ABS) courses which are non-credit
2. Pre-college level Basic Skills classes, which are credit courses numbered below 100. There are also 100-level courses addressing college success and study strategies available that will count toward degree completion and transfer to other institutions.

NON-CREDIT ADULT BASIC SKILLS

Non-credit Options

The Adult Basic Skills (ABS) program provides an effective and affordable means for a successful transition to the college setting. Support is offered for English language learners as well as GED and college prep students. Contact the Adult Basic Skills office, 541-504-2950, for details.

English Language Learning (ELL)

ELL classes are for students who need to learn to speak, read or write in English. Classes are offered at convenient times and locations throughout Central Oregon.

Basic Reading/Writing/Math for GED and College Preparation

The General Education Development (GED) certificate is accepted by colleges, training schools and employers nationwide as a high school equivalency. At COCC, students are prepared for and gain the necessary basic skills in reading, writing and math to pass the GED test and to enter college. Students also learn secondary skills to achieve success in college credit classes. Program fees are affordable and books are available to help with studies.

PRE-COLLEGE LEVEL CREDIT CLASSES

Credit Options

Several academic departments offer courses that prepare students for college-level courses that will count toward degree completion and are transferable to other institutions. These classes are frequently available online or in classrooms on the Bend, Madras, Prineville and Redmond campuses.

Check the current credit class schedule, www.cocc.edu/Degrees-Classes/Schedule-of-Classes, for convenient times and location.

Credit Classes by Subject

CIS 10	Keyboarding
CIS 70	Introduction to Computers: Windows
MTH 10	Developmental Mathematics
MTH 20	Pre-Algebra
MTH 29	Fraction Review Workshop
MTH 60	Algebra I
MTH 65	Algebra II
MTH 95	Intermediate Algebra
WR 60	Rhetoric and Critical Thinking I
WR 65	Rhetoric and Critical Thinking II
WR 95	Basic Writing II
HD 100CS	College Success
HD 100NT	Note Taking
HD 100OL	Exploring Online Learning
HD 100PM	Procrastination & Motivation
HD 100TM	Time Management
HD 100TT	Test Taking
HD 100VC	Values Clarification
HD 101	Study Strategies

PATHS TO SUCCESS: OVERVIEW OF COCC DEGREE OPTIONS

Central Oregon Community College offers a variety of transfer and Career and Technical Education (CTE) certificate and degree options, which allows students to choose their program based on their educational goals.

TRANSFER / BACHELOR DEGREE PREPARATION

Students wishing to attend COCC and use credits earned toward a bachelor's degree have several options that range from completing individual courses to completing an associate degree designed for transfer. COCC offers transfer students the following primary options for credentials in addition to the option of transferring individual credit: Oregon Transfer Module (OTM), Associate of Arts Oregon Transfer (AAOT), Associate of Science (AS), Associate of Science Oregon Transfer – Business (ASOT), and various articulation agreements with our two- and four-year partners.

CAREER AND TECHNICAL EDUCATION

COCC's Career and Technical Education 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, automotive technology and health information technology.)

CTE Certificates of completion

Depending on available options, students may pursue an Associate of Applied Science degree, which typically spans two years, or certificate options. Many certificates of completion allow students to stop at a variety of points, gain employment in the field and return at a later date for more advanced training.

Certificates range from one to six terms, noting that many of the allied health technical courses start fall term only (General education coursework may be done prior to, during or after completing technical courses. See program details for more information).

Certificates require a minimum of 18 certificate-applicable COCC credits.

Some certificate requirements include limited general education coursework (including coursework in computation, human relations and communication). General Education courses must be completed at a "C" grade or higher. See individual program pages for a list of courses and requirements.

EXPLORATORY

Students may also elect to be an exploratory student at the beginning of their academic career at COCC. This provides students the opportunity to explore different programs and majors before deciding on a program or degree. Students may choose the Associate of Arts Oregon Transfer (AAOT) exploratory option, which allows room to explore different subjects while completing general education classes. Or, students may choose the Associate of General Studies (AGS) option, which allows students to self-design a program to meet their needs.

ARTICULATION AGREEMENTS

Students may select individual courses at COCC and transfer them to a college or university. Students who will not complete a degree at COCC are encouraged to research degree requirements for the college at which they will earn their bachelor's degree and select courses accordingly. The Oregon public universities have equivalency guides to aid in selecting equivalent courses. Every college will have a policy on transfer credit that can usually be located on the destination college's website, often under the admissions information for transfer students. A COCC advisor or a CAP Center advisor can assist students with locating this information.

COCC partners with several colleges and universities to offer a seamless transfer among institutions for certain majors. Refer to degree requirements for articulation possibilities.

CERTIFICATE/DEGREE COMPLETION

Unless otherwise specified, the degrees listed in this catalog are intended to be offered for completion within the next two years. Unusual budget constraints or other changes in resources might necessitate discontinuing particular courses, programs or degrees. As far as resources allow, the College makes every effort to enable students to complete their degree programs in a timely manner. Students should work closely with advisors to obtain accurate information about their progress toward degrees and certificates. Students planning to transfer to another college are responsible for receiving and evaluating information from the destination institution.

ASSOCIATE OF ARTS OREGON TRANSFER OUTCOMES

COCC outcomes are drawn from work accomplished by the Joint Boards Articulation Committee (JBAC). This is intended to ensure that courses used as general education courses meet equivalency requirements throughout public colleges and universities in Oregon.

Writing

As a result of completing the General Education Writing sequence, a student should be able to:

- Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
- Locate, evaluate, and ethically utilize information to communicate effectively; and
- Demonstrate appropriate reasoning in response to complex issues.

Information Literacy

As a result of taking General Education Writing courses infused with Information Literacy, a student who successfully completes should be able to:

- Formulate a problem statement;
- Determine the nature and extent of the information needed to address the problem;
- Access relevant information effectively and efficiently;
- Evaluate information and its source critically; and
- Understand many of the economic, legal, and social issues surrounding the use of information.

Speech/Oral Communication

As a result of taking General Education Speech/Oral Communication courses, a student should be able to:

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

Mathematics

As a result of taking General Education Mathematics courses, a student should be able to:

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

Health

As a result of taking General Education Health courses, a student should be able to:

- Understand chronic health risks and how to implement holistic, lifestyle behavior change to enhance personal and community-wide safety, health and fitness.

Cultural Literacy

As a result of taking a designated Cultural Literacy course, learners would be able to:

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

Arts and Letters

As a result of taking General Education Arts and Letters* courses, a student should be able to:

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

Social Science

As a result of taking General Education Social Science courses, a student should be able to:

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

Science/Math/Computer Science

As a result of taking General Education Science/Math/Computer Science courses, a student should be able to:

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

**"Arts and Letters" refers to works of art, whether written, crafted, or performed and documents of historical or cultural significance.*

COLLEGE TRANSFER AND CAREER & TECHNICAL EDUCATION (CTE) PROGRAMS

Here is a quick-reference listing of the college transfer and Career and Technical Education (CTE) programs (certificates and Associate of Applied Science degrees) and courses available at Central Oregon Community College. Additional information on these programs and their requirements can be found on pages 46-173. A section listing Special Curriculum can be found on pages 174-186.

	short-term certificate	one-year certificate	two-year certificate	AAS	Transfer	OSU-Cascades		short-term certificate	one-year certificate	two-year certificate	AAS	Transfer	OSU-Cascades
Addictions Studies	46		47				Fire Science – Wildland Fire/Fuels Mgmt				173		
Anthropology				48			Firefighter Type II Certificate	171					
Art				49	49		Wildland Fire Suppression		172				
Automotive Management			50				Foreign Languages						107
Automotive Technology							Forest Resources Technology	108		109			
Auto Drive Train Technician	53						Advanced Forest Concepts	108					
Auto Electrical Technician (Basic)	53						Conservation of Natural Resources	108					
Auto Electrical Technician (Advanced)	53						Forest Ecology	108					
Auto Engine Performance Technician	53						Forest Measurements	108					
Auto Engine Technician	53						Forest Protection	108					
Auto Heating and Air Conditioning Technician	54						Mapping Forestry Cartography	108					
Master Auto Technician		56					Forestry						111
Under-car Technician	54						General Science						113 113
Aviation							Geographic Information Systems (GIS)	114	115				
Professional Pilot - Airplane			59				Geography						116
Professional Pilot - Helicopter				60			Geology						117
UAS Operations				61			Health Information Technology				119		
Biological Sciences				63	63		Coding Competency			118			
Botany (see Biological Sciences)							Insurance	118					
Business Administration				67	69	69	Medical Office Specialist			118			
Accounting	64		67				Medical Billing Specialist			118			
Entrepreneurship	64		67				Medical Transcription			118			
Ground Transportation	65						Health Promotion						120
Hotel, Tourism and Recreation Management				68			History						121
Information Systems Management				67			Human Services						122 122
Management				67			Humanities						123
Marketing	65						Law – Pre						162
Office Assistant	66						Manufacturing Technology	127	130	132			
Retail Management	66		68				CNC Machining	124					
Cascade Culinary Institute							Industrial Maintenance	125					
Baking and Pastry Arts	70	71	72				Manual Machining	126					
Culinary Arts	74	75	76				Quality Assurance	128					
Nutrition & Dietary Management			78				Welding	129					
Restaurant Management & Systems			80				Massage Therapy	135	135	136			
Sustainable Food Systems			82				Mathematics						137
Center for Entrepreneurial Excellence & Develop.							Medical Assistant	138					
New Venture Creation		84					Medical Imaging						141
Entrepreneurial Management				85			Medicine – Pre						163
Chemistry						86	Microbiology (see Biological Sciences)						
Computer and Information Systems	89		87	87	87		Music						142
Computer Aided Drafting (CAD)	89		88				Natural Resources						143 143
Desktop Support			88				Non Destructive Testing & Inspection				144		
Networking			88				Eddy Current Testing	146					
Web Development/Database			88				Magnetic Particle-Dye Penetrant Testing	147					
Criminal Justice	90		92	93			Radiography Testing	148					
Juvenile Corrections	91						Ultrasonic Testing	149					
Dental Assisting	94						Nursing	152		152	153		
Dental Hygiene – Pre						161	Outdoor Leadership						156 154
Dentistry – Pre						163	Pharmacy Technician	157					
Early Childhood Education				96	97	97	Physical Therapy – Pre						164
Child, Family & Community Studies	97						Physician Assistant – Pre						164
Economics						98	Physics						159
Education						99	Political Science						160
Emergency Medical Services						100	Psychology						165 165
Engineering						102	Sociology						166
English/Literature						103	Speech Communication						167
Exercise Science						104	Veterinary – Pre						163
Fire Science – Structural						168	Veterinary Technician						170

ASSOCIATE OF ARTS OREGON TRANSFER DEGREE WORKSHEET

(All courses must be completed with a "C" or better.)

Students must have a minimum cumulative GPA of 2.0 and must complete a total of 90 credits at the time the AAOT is awarded. Individual courses may only be used to fulfill one requirement.

Note: Both foundational requirements and discipline studies courses listed below must be a minimum of three (3) credits except for HHP which may be any number of credits. All elective courses may be any number of credits.

GENERAL EDUCATION Foundational Requirements (Courses numbered 199 or 299 will not fulfill Foundational Requirements.)

Writing - minimum of 8 credits

WR 121 _____ cr

WR 122 or WR 227 _____ cr

Oral Communication

SP 111, 114, 115, 218 or 219 _____ cr

Mathematics

MTH 105 or higher _____ cr

Health - 3 credits with HHP prefix

Identical HHP activity courses (1 credit) can only be counted once in this section.

_____ cr

_____ cr

_____ cr

GENERAL EDUCATION Discipline Studies

Discipline studies courses are listed on pages 44 and 45. Courses numbered 199 or 299 will not fulfill discipline studies requirements.

One of the courses must be a cultural literacy course, designated with an asterisk (*). **Please check the box of the course that meets the cultural literacy (CL) requirement.**

Arts and Letters

At least three (3) courses chosen from at least two (2) prefixes.

_____ CL _____ cr

_____ CL _____ cr

_____ CL _____ cr

Social Science

At least four (4) courses chosen from at least two (2) prefixes.

_____ CL _____ cr

_____ CL _____ cr

_____ CL _____ cr

_____ CL _____ cr

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

_____ w/lab _____ cr

_____ w/lab _____ cr

_____ w/lab _____ cr

_____ _____ cr

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 (see page 45 of the catalog).

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

<p>TOTAL CREDITS FOR AAOT DEGREE</p> <p>(90 credits) _____</p>

(continued on next page)

ASSOCIATE OF ARTS OREGON TRANSFER DEGREE WORKSHEET

About this degree option

Most students who intend to transfer will find that the Associate of Arts Oregon Transfer (AAOT) degree suits their needs as it is intended to meet the lower-division general education requirements for all Oregon public universities and some private colleges. The AAOT allows students to transfer with junior standing for registration purposes. Course, class standing or GPA requirements for specific majors, departments or schools are not necessarily satisfied by an AAOT degree.

Students who know their desired major should refer to the program description listed on pages 46-186 of this catalog. These descriptions list any courses recommended for specific majors. All courses should be aligned with the student's intended program of study and the degree requirements of the baccalaureate institution to which the student plans to transfer. Students are encouraged to work closely with an advisor in the selection of courses.

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.

The degree is awarded as "Associate of Arts/Oregon Transfer." The degree is not associated with a major.

Advantages

The AAOT is easily transferrable and is well suited for many "undecided" students. The principal advantage of the AAOT is that it fulfills the lower-division (freshman/sophomore) general education requirements for the baccalaureate degrees at all Oregon University System institutions. It guarantees that all general education credits that a student earned will be accepted as the general education requirements at the transfer institution.

Colleges which accept the COCC AAOT degree besides Oregon's public universities include Evergreen State College (WA), Pacific Lutheran University (WA), Washington State University (WA), Concordia College (OR), George Fox College (OR), Linfield College (OR), Pacific University (OR), Marylhurst College (OR), University of Portland (OR), Warner Pacific College (OR) and Willamette University (OR).

Considerations

No formal agreements exist for this degree to meet basic skills and 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 foreign language and specialty course requirements of the transfer institution.

Entry requirements

Students are required to take COCC's placement test prior to registration. As part of this degree, students should begin with the appropriate level of courses based on their placement test results. Students with credits from other institutions should send official transcripts to COCC's Admissions and Records office prior to registering for classes; depending on courses taken, the placement test may be waived, prerequisites may be satisfied, and credits may apply toward this degree.

Graduation requirements

Complete all requirements listed below:

- Complete all AAOT degree requirements, as listed on the previous page;
- Earn a minimum 2.0 cumulative COCC grade-point average;
- Complete at least 24 COCC degree-applicable credits;
- Submit online Application for Degree
- Owe no debt to the College;
- Fulfill catalog year requirement as outlined on page 26.

NOTES

- In some cases, students may also be able to use AAOT General Education courses to meet certain lower-division requirements in their intended majors. Caution is required, however, since the AAOT degree was not intended for this purpose. Students who have a major in mind, and also want to maximize the amount of AAOT coursework that will count toward it, should work closely with an academic advisor. General transfer information is available at: www.ous.edu/stucoun/transfer/.
- Because the amount of coursework required for an AAOT degree corresponds to two academic years, degree recipients are considered juniors for purposes of registration at an Oregon University System institution. Keep in mind, however, that the AAOT does not guarantee that two additional years will suffice to earn a baccalaureate degree. This is because the AAOT does not give students junior-standing in their majors. Neither does it guarantee entrance into a competitive major. Students may need to take additional introductory work to prepare for certain majors and should check with

an advisor regarding availability at their local community colleges. In addition, it is common for students to change their majors and find that they must take introductory work in the new area.

- Students and academic advisors should recognize that although the AAOT provides an excellent structure for many students—particularly those who are unsure of their primary academic focus—it is not ideal for everyone. In particular, it does not articulate well with certain majors such as engineering, biological and physical sciences, and the fine and performing arts. Students contemplating these majors cannot easily accommodate their highly specific prerequisite coursework into the AAOT framework. In general, an AAOT recipient who is pursuing any course of study that is credit-heavy at the major lower-division level may have to take additional lower-division coursework, specific to the major after transfer.
- Students should review any foreign language and specialty course requirements of the transfer institution.

ASSOCIATE OF SCIENCE DEGREE WORKSHEET

GENERAL EDUCATION Foundational Requirements (19-24 credits) All courses must be completed with a "C" grade or better.

Writing - minimum of 8 credits

WR 121 _____ cr

WR 122 or 227 _____ cr

Oral Communication (if required by destination college)

_____ cr

Mathematics

MTH 20 or higher except MTH 188, 198, and 199

_____ cr

Health (if required by destination college)

_____ cr

Digital Literacy (if required by destination college)

_____ cr

GENERAL EDUCATION Discipline Studies

Discipline studies courses are listed on pages 44 and 45.

The following courses should be chosen with the assistance of an advisor and in consideration of transfer institution general education and major requirements.

Arts and Letters

Choose two (2) courses from the discipline studies list.

_____ cr

_____ cr

Social Science

Choose two (2) courses from the discipline studies list.

_____ cr

_____ cr

Science/Math/Computer Science

Choose two (2) courses from the discipline studies list.

_____ cr

_____ cr

AS PROGRAM REQUIREMENTS

Courses must be 100-level and above, and should be chosen with the assistance of an advisor and in consideration of transfer institution major requirements.

_____ cr

_____ cr

_____ cr

_____ cr

_____ cr

_____ cr

ELECTIVES

Choose enough elective credits to reach a minimum total of 90 overall degree credits. Elective classes must be numbered 100 or above and can be any combination of general electives, Career and Technical Education (CTE) courses (12 credits maximum, see page 45 for list) or CWE/HHP/performance classes (15 credits maximum). Students transferring to an Oregon public university should review any foreign language and specialty course requirements of the transfer institution.

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

TOTAL CREDITS FOR AS DEGREE

(90 credits) _____

ASSOCIATE OF SCIENCE DEGREE WORKSHEET

About this degree option

The Associate of Science (AS) degree is designed as a transfer degree for students who want to transfer to a specific four-year college or university in a specific major. The student and advisor work closely together to tailor the courses to meet the transfer institution's lower-division general education and major requirements.

The degree is awarded as "Associate of Science" on the transcript and diploma. The degree is not associated with a major. COCC offers Associate of Science degrees with an focus in the following areas:

Aviation (see page 62)
 Business (see page 69)
 Engineering (see page 102)
 Exercise Science (see page 105)
 Forestry (see page 112)
 Medical Imaging (see page 141)
 Natural Resources (see page 143)
 Outdoor Leadership (see page 154)

Advantages

Students can meet all or most general education and/or major requirements for a specific transfer college or university if appropriate courses are chosen. The AS degree works well for students in more technical majors (e.g., science, business, pre-engineering), but can also be designed for other majors.

Considerations

Based on the courses chosen between the student and advisor, the AS degree is narrowly focused toward a specific transfer college or university's lower-division requirements. Therefore, the degree can limit a student's flexibility in choosing both the major and the transfer college. Additionally, students should check with each school to ensure that the latest transfer information is used when designing their program.

The AS degree does not assure junior standing at Oregon transfer universities and does not guarantee that a student will meet all lower-division general education and major requirements. However, with careful academic advising and consideration of transfer institution requirements, the AS degree can be designed to do so.

Students transferring to an Oregon public university should review any foreign language and specialty course requirements of the transfer institution.

Entry requirements

Students are required to take COCC's placement test prior to registration. As part of this degree, students should begin with the appropriate level of courses based on their placement test results. Students with credits from other institutions should send official transcripts to COCC's Admissions and Records office prior to registering for classes; depending on courses taken, the placement test may be waived, prerequisites may be satisfied, and credits may apply toward this degree.

Graduation requirements

Complete requirements listed below:

- Complete all AS degree requirements, as listed on the previous page;
- Earn a minimum 2.0 cumulative COCC grade-point average;
- Complete at least 24 COCC degree-applicable credits;
- Submit online application for degree
- Owe no debt to the College; and
- Fulfill catalog year requirement as outlined on page 26.

Associate of Science - for students transferring to Oregon State University-Cascades

(See individual program descriptions for course requirements.)

- Designed for students who plan to transfer to and receive a degree from Oregon State University-Cascades.
- Provides assurance that students meet all lower-division general education and major-specific requirements for all OSU-Cascades programs.
- Guarantees that students will transfer with junior standing for registration purposes.
- Degree is noted as "Associate of Science" on the transcript and diploma.

Associate of Science - Oregon Transfer, Business Degree

(See page 69 for checklist of courses and requirements.)

- Designed for students with a high level of certainty about their decision to earn a bachelor's degree with a major in business from an Oregon public university.
- Includes the courses required for entrance not only into an Oregon public university but to the university's business college as well.

ASSOCIATE OF APPLIED SCIENCE DEGREE WORKSHEET

About this degree option

The Associate of Applied Science degree trains students in specific technical areas to prepare for immediate employment upon graduation. The checklist provides an outline of the degree; however, specific requirements for each of the Career and Technical Education (CTE) programs are provided on pages 46-186.

Advantages

The AAS degree provides students with the hands-on technical skills needed for employment or certification/licensure in a variety of career areas. Students should note that while the AAS degree is generally a two-year degree option for full-time students, COCC provides certificates of completion in many other Career and Technical Education (CTE) areas which require only one to six terms to complete. See individual program descriptions for options.

Considerations

The degree is not intended to transfer, though most general education and some Career and Technical Education (CTE) courses are eligible for transfer.

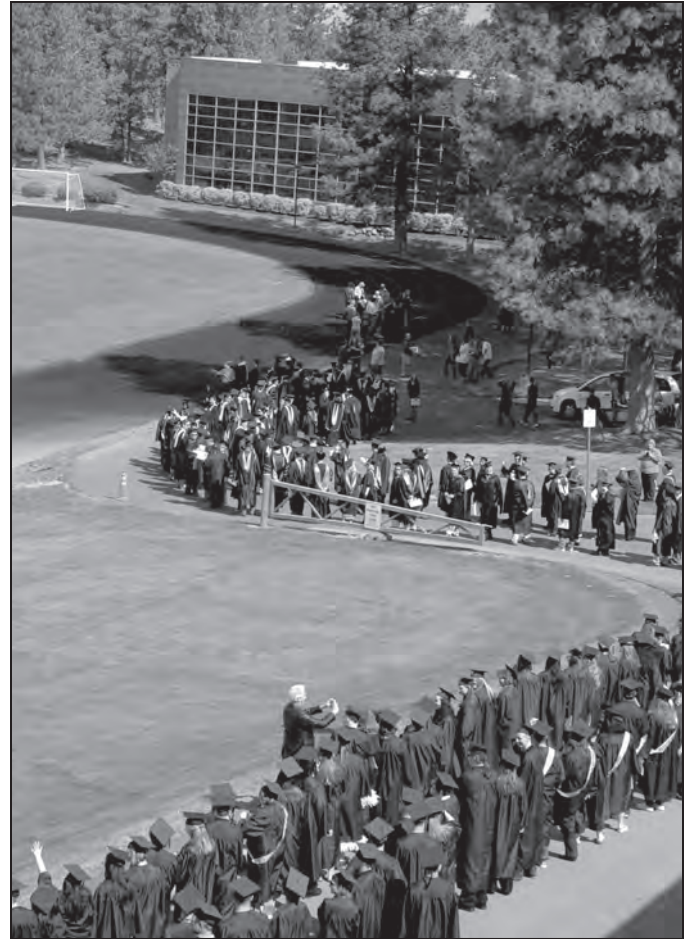
Entry requirements

Students are required to take COCC's placement test prior to registration. As part of this degree, students should begin with the appropriate level of courses based on their placement test results. Students with credits from other institutions should send official transcripts to COCC's Admissions and Records office prior to registering for classes. Depending on courses taken, the placement test may be waived, prerequisites may be satisfied, and credits may apply toward this degree.

Graduation requirements

Complete all requirements listed below:

- Complete all AAS degree requirements, as listed on pages 46-186;
- Earn a minimum 2.0 cumulative COCC grade-point average;
- Complete at least 24 COCC degree-applicable credits;
- Submit online application for degree
- Owe no debt to the College; and
- Fulfill catalog year requirement as outlined on page 26.



ASSOCIATE OF GENERAL STUDIES DEGREE WORKSHEET

GENERAL EDUCATION Foundational Requirements

(Courses numbered 199 or 299 will not fulfill Foundational Requirements.) Courses must be completed with a "C" grade or better.

Writing - minimum of 8 credits

WR 121 _____ cr

WR 122 or WR 227 _____ cr

Oral Communication (choose one of the following)

SP 111, 114, 115, 218 or 219 _____ cr

Mathematics (minimum three credits)

MTH 20 or higher except MTH 188, MTH 198, and MTH 199

_____ cr

Health - 4 credits of HHP prefix with a maximum of one (1) activity course (HHP 185XX).

_____ cr

_____ cr

Digital Literacy

CIS 120 or pass competency exam

_____ cr

GENERAL EDUCATION Discipline Studies

Discipline studies courses are listed on pages 44 and 45. Courses numbered 199 or 299 will not fulfill discipline studies requirements.

One of the courses must be a cultural literacy course, designated with an asterisk (*).

Arts and Letters

Choose one (1) course from the Arts and Letters discipline studies list, page 44.

_____ cr

Physical/Biological Lab science

Choose one (1) course from the Sciences discipline studies list, page 44. Course must be a lab science as denoted with a double asterisk (**).

_____ w/lab _____ cr

Social Science

Choose one (1) course from the discipline studies list, page 45.

_____ cr

Cultural Literacy

Choose one (1) Cultural Literacy course as denoted with an asterisk (*) from the discipline studies list, pages 44 and 45.

_____ cr

ELECTIVES

Choose enough elective credits to reach a minimum total of 90 overall degree credits. Cannot include reading, writing or math classes below the 100-level.

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

_____ cr _____ cr

TOTAL CREDITS FOR AGS DEGREE

(90 credits) _____

(continued on next page)

ASSOCIATE OF GENERAL STUDIES DEGREE WORKSHEET

About this degree option

For students who are not pursuing specific transfer or Career and Technical Education (CTE) programs, the Associate of General Studies (AGS) degree provides an alternative to pursue a broad general education background 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.

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 degree is not transferable as a whole and does not meet certification requirements for any Career and Technical Education (CTE) area.

It is important to note that the AGS degree does not guarantee that a student will meet all lower-division general education and major requirements; however, with careful academic advising and in consideration of transfer institution requirements, the AGS degree may be designed to do so.

Entry requirements

Students are required to take COCC's placement test prior to registration. As part of this degree, students should begin with the appropriate level of courses based on their placement test results. Students with credits from other institutions should send official transcripts to COCC's Admissions and Records office prior to registering for classes; depending on courses taken, the placement test may be waived, prerequisites may be satisfied, and credits may apply toward this degree.

Graduation requirements

Complete all requirements listed below:

- Complete all AGS degree requirements, as listed on the previous page;
- Earn a minimum 2.0 cumulative COCC grade-point average;
- Complete at least 24 COCC degree-applicable credits;
- Submit online application for degree
- Owe no debt to the College; and
- Fulfill catalog year requirement as outlined on page 26.

OREGON TRANSFER MODULE *(All courses must be completed with a "C" or better.)*

GENERAL EDUCATION Foundational Requirements

Writing

Two college-level English Composition courses

_____ cr

_____ cr

Oral Communication

SP 111

_____ cr

Mathematics

MTH 105 or higher

_____ cr

GENERAL EDUCATION Discipline Studies

Arts and Letters

Three courses from the COCC arts and letters discipline studies list (page 44).

_____ cr

_____ cr

_____ cr

Science/Math/Computer Science

Three courses from the COCC science/math/computer science discipline studies list (page 44), including at least one biological science with a lab.

_____ cr

_____ cr

_____ cr

Social Science

Three courses from the COCC social science discipline studies list (page 45).

_____ cr

_____ cr

_____ cr

ELECTIVES

As required to bring overall credits to 45 credits. Courses must be from COCC's discipline studies list, pages 44 and 45.

_____ cr

_____ cr

_____ cr

About this degree option

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

Advantages

Completion of the OTM guarantees that another Oregon community college or public university will accept all credits toward the institution's general education requirements and depending on courses chosen, may meet some lower-division major requirements. Additionally, the Oregon Transfer Module provides students with documentation of completion of a standard set of commonly accepted courses.

Considerations

Depending on the institution, students may be required to take additional general education courses. Students transferring to an Oregon public university should review any foreign language and specialty course requirements of the transfer institution.

Entry requirements

Students are required to take COCC's placement test prior to registration. As part of this degree, students should begin with the appropriate level of courses based on their placement test results. Students with credits from other institutions should send official transcripts to COCC's Admissions and Records office prior to registering for classes. Depending on courses taken, the placement test may be waived and credits may apply toward this degree.

Completion requirements

Complete all requirements listed below:

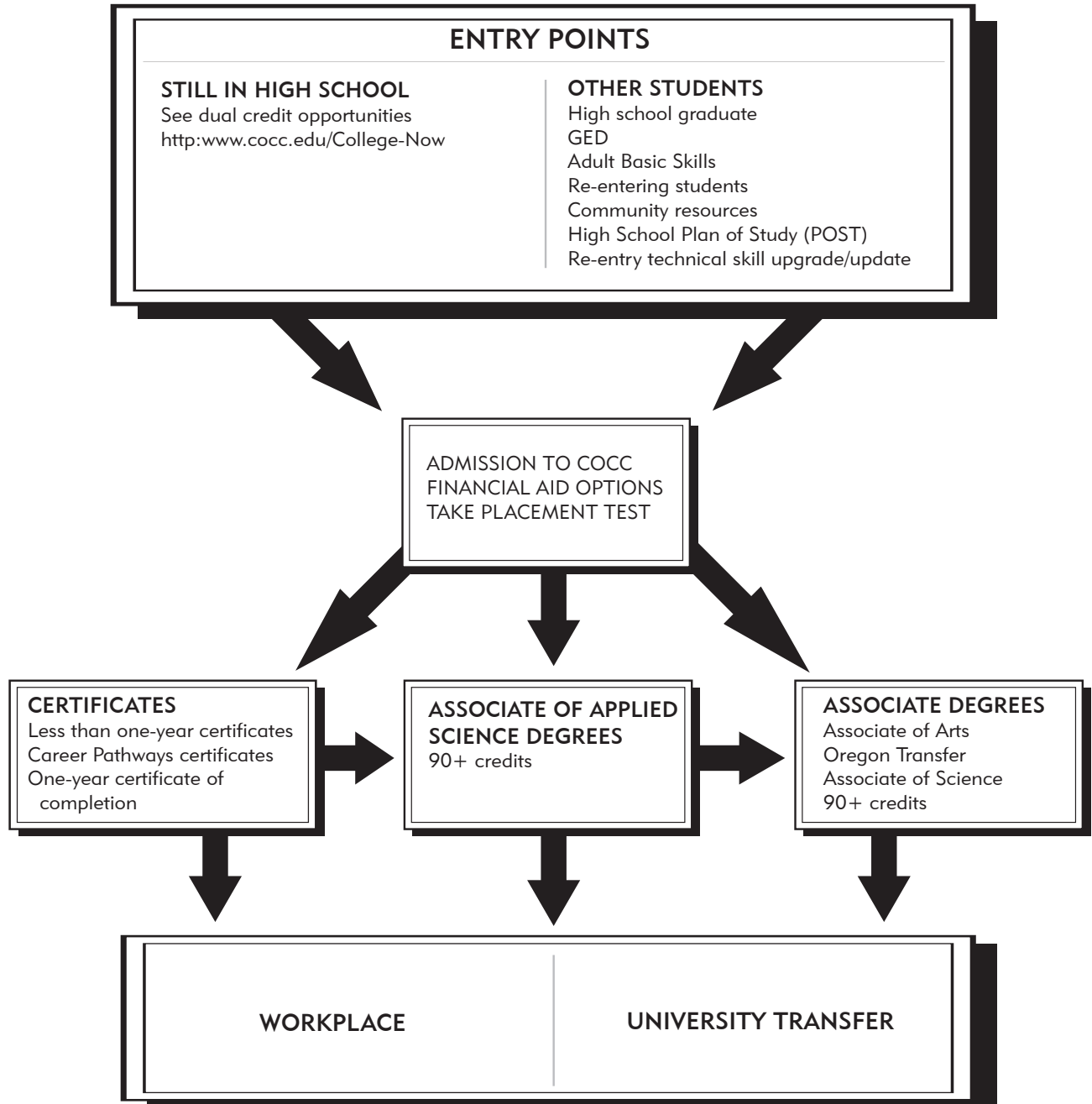
- Complete all OTM requirements as listed;
- Earn a minimum 2.0 cumulative COCC grade-point average;
- Complete at least three OTM-applicable credits at COCC;
- Submit a degree application to the Admissions and Records office;
- Owe no debt to the College; and
- Fulfill catalog year requirement as outlined on page 26.

Advisor notes

TOTAL CREDITS FOR OREGON TRANSFER MODULE

(45 credits) _____

CAREER PATHWAYS



Paths to Success: Degree Options

DISCIPLINE STUDIES COURSES

The following COCC courses have been approved by the College's Curriculum Committee for use as General Education Discipline Studies courses for the AAOT, AS, AAS and AGS degrees.

Arts and Letters discipline studies course options

AH 205 Medical Ethics (3 credits)
 *ARH 201, 202, 203 Intro to Art History I, II, III (4 credits each)
 *ARH 206 Modern Art History (4 credits)
 *ARH 207 Native American Art History (4 credits)
 ART 101 Intro to the Visual Arts (4 credits)
 ART 115 Basic Design: 2-D (3 credits)
 ART 116 Basic Design: Color (3 credits)
 ART 117 Basic Design: 3-D (3 credits)
 ART 131, 132, 133 Drawing I, II, III (3 credits each)
 CHN 201, 202, 203 Second Year Mandarin Chinese I, II, III (4 credits each)
 ED 112 Children's Literature Across the Curriculum (3 credits)
 ENG 104 Intro to Literature: Fiction (4 credits)
 ENG 105 Intro to Literature: Drama (4 credits)
 ENG 106 Intro to Literature: Poetry (4 credits)
 *ENG 107 Western World Literature: Ancient (4 credits)
 *ENG 108 Western World Literature: Middle Ages (4 credits)
 *ENG 109 Western World Literature: Modern (4 credits)
 ENG 140 Shakespeare Review in Ashland (3 credits)
 ENG 201, 202 Shakespeare (4 credits each)
 *ENG 204, 205 Survey of British Literature I, II (4 credits each)
 ENG 212 Autobiography (4 credits)
 *ENG 221 Intro to Children's Literature (4 credits)
 ENG 232C Topics in American Literature: Contemporary Fiction (4 credits)
 ENG 232 Topics in American Literature: Literature and Medicine (4 credits)
 *ENG 250 Intro to Folklore and Mythology (4 credits)
 *ENG 253, 254 Survey of American Literature I, II (4 credits each)
 ENG 256 Folklore and U.S. Popular Culture (4 credits)
 *ENG 260 Intro to Women Writers (4 credits)
 FA 101 Introduction to Film (3 credits)
 FA 125 World Cinema (4 credits)
 FA 257 Literature into Film (4 credits)
 *FR 201, 202, 203 Second Year French I, II, III (4 credits each)
 *FR 211, 212, 213 French Conversation & Culture I, II, III (3 credits each)
 *GER 201, 202, 203 Second Year German I, II, III (4 credits each)
 *GER 211, 212, 213 German Conversation & Culture I, II, III (3 credits each)
 HUM 106 British Life & Culture (3 credits)
 *HUM 210 Culture and Literature of Asia (4 credits)
 *HUM 211 Culture and Literature of Africa (4 credits)
 *HUM 212 Culture and Literature of the Americas (4 credits)
 *HUM 213 Culture and Literature of the Middle East (4 credits)
 HUM 230 Immigrant Experience in American Literature (4 credits)
 *HUM 240 Native American Literature & Culture (4 credits)
 *HUM 255 Cultural Diversity in Contemporary American Literature (4 credits)
 *HUM 256 Introduction to African-American Literature (4 credits)
 HUM 261 Popular Culture: Science Fiction (4 credits)
 *HUM 262 Popular Culture: The American Western (4 credits)
 HUM 263 Popular Culture: Detective Stories (4 credits)
 HUM 264 Popular Culture: Spy Thriller (4 credits)
 HUM 265 Popular Culture: Noir Film and Fiction (4 credits)
 HUM 266 Popular Culture: Travel Literature (4 credits)
 HUM 267 Popular Culture: Counterculture (4 credits)
 HUM 268 Digital Games Culture (4 credits)
 *IT 201, 202, 203 Second Year Italian I, II, III (4 credits)
 MUS 101 Music Fundamentals (3 credits)
 MUS 111, 112, 113 Music Theory IA, IB, IC (3 credits each)
 MUS 211, 212, 213 Music Theory IIA, IIB, IIC (3 credits each)
 MUS 201, 202, 203 Understanding Music (3 credits each)
 *MUS 205 Introduction to Jazz History (3 credits)
 MUS 207 History of Rock Music (3 credits)
 PHL 170 Philosophy of Love and Sex (3 credits)
 PHL 200 Fundamentals of Philosophy (4 credits)
 PHL 201 Problems of Philosophy - Epistemology (3 credits)
 PHL 202 Problems of Philosophy - Ethics (3 credits)
 PHL 203 Problems of Philosophy - Logic (3 credits)
 *SPAN 201, 202, 203 Second Year Spanish I, II, III (4 credits each)
 *SPAN 211, 212, 213 Spanish Conversation and Culture I, II, III (3 credits each)
 *SP 115 Into Intercultural Communication (3 credits)
 SP 230 Introduction to the Rhetoric of Film (3 credits)
 SP 234 Introduction to Visual Rhetoric
 SP 241 Media, Communication, Society (4 credits)
 TA 141, 142, 143 Acting I, II, III (3 credits each)
 TA 200 Intro to Theater (3 credits)

TA 207 Readings in Theater (3 credits)
 WR 240 Introduction to Creative Writing: Nonfiction (4 credits)
 WR 241 Introduction to Creative Writing: Fiction (4 credits)
 WR 242 Introduction to Creative Writing: Poetry (4 credits)
 WR 243 Introduction to Creative Writing: Scriptwriting (4 credits)
 *WS 101 Intro to Women's and Gender Studies (4 credits)

Science/Math/Computer Science discipline studies course options

**ANTH 234 Biological Anthropology (4 credits)
 ANTH 235 Evolution of Human Sexuality (4 credits)
 ANTH 237 Forensic Anthropology (4 credits)
 **BI 101 General Biology: Cells & Genes (4 credits)
 **BI 102 General Biology: Evolution (4 credits)
 **BI 103 General Biology: Ecology (4 credits)
 *BI 200 Tropical Field Ecology (4 credits)
 **BI 211 Principles of Biology I (5 credits)
 **BI 212 Biology of Plants II (5 credits)
 **BI 213 Biology of Animals III (5 credits)
 **BI 231, 232, 233 Human Anatomy and Physiology I, II, III (4 credits each)
 **BI 234 Microbiology (4 credits)
 **BOT 203 General Botany (4 credits)
 **CH 104, 105, 106 Intro to Chemistry I, II, III (5 credits each)
 **CH 221, 222, 223 General Chemistry I, II, III (5 credits each)
 CS 160 Computer Science Orientation (4 credits)
 CS 161, 162 Computer Science I, II (4 credits each)
 ENGR 201 Electrical Fundamentals (3 credits)
 FN 225 Human Nutrition (4 credits)
 FOR 230A Map, Compass and GPS (3 credits)
 FOR 240A Forest Ecology (3 credits)
 FOR 240B Wildlife Ecology (3 credits)
 FOR 241A Field Dendrology (3 credits)
 FOR 251 Recreational Resource Management (3 credits)
 FOR 260 Conservation of Natural Resources (3 credits)
 FW 251 Wildlife Conservation (3 credits)
 **G 148 Volcanoes and Earthquakes (4 credits)
 **G 162CO Geology of Central Oregon (3 credits)
 **G 162CV Geology of Cascade Volcanoes (3 credits)
 **G 162OR Geology of Oregon (3 credits)
 **G 201, 202, 203 Geology I, II, III (4 credits each)
 **G 207 Geology of the Pacific Northwest (4 credits)
 **G 232 Coastal Oceanography (5 credits)
 G 240 Limnology (4 credits)
 **G 291 Rocks & Minerals (3 credits)
 **GS 104 Physical Science: Physics (4 credits)
 **GS 105 Physical Science: Chemistry (4 credits)
 **GS 106 Physical Science: Geology (4 credits)
 **GS 107 Physical Science: Astronomy (4 credits)
 **GS 108 Physical Science: Oceanography (4 credits)
 GEOG 265 Geographic Information Systems (4 credits)
 **GEOG 278 Physical Geography-Landforms and Water (4 credits)
 **GEOG 279 Physical Geography: Weather and Climate (4 credits)
 HHP 220 Introduction to Epidemiology (3 credits)
 HHP 259 Care and Prevention of Athletic Injury (3 credits)
 HHP 260 Anatomical Kinesiology (4 credits)
 HHP 261 Exercise Physiology (4 credits)
 HHP 262 Training Theory & Application (3 credits)
 MTH 105 Introduction to Contemporary Math (4 credits)
 MTH 111 College Algebra (4 credits)
 MTH 112 Trigonometry (4 credits)
 MTH 113 Topics in Precalculus (4 credits)
 MTH 211, 212, 213 Fundamentals Elementary Math I, II, III (4 credits each)
 MTH 231 Discrete Mathematics I (4 credits)
 MTH 241 Calculus for Management/Social Science (4 credits)
 MTH 243 Introduction to Methods of Probability and Statistics I (4 credits)
 MTH 244 Introduction to Methods of Probability and Statistics II (4 credits)
 MTH 245 Math for Mgmt/Social Science (4 credits)
 MTH 251, 252, 253 Calculus I, II, III (4 credits)
 MTH 254, 255 Vector Calculus I, II (4 credits)
 MTH 256 Applied Differential Equations (4 credits)
 **PH 201, 202, 203 General Physics I, II, III (5 credits each)
 **PH 211, 212, 213 General Physics I, II, III (5 credits each)
 **PSY 213 Introduction to Physiological Psychology (4 credits)
 **PSY 227 Animal Behavior (4 credits)

DISCIPLINE STUDIES COURSES *(continued)***Social Sciences discipline studies course options**

ANTH 102 Archaeology (4 credits)
 *ANTH 103 Cultural Anthropology (4 credits)
 *ANTH 240 Language and Culture (4 credits)
 *ANTH 254 Magic, Witchcraft and Religion (4 credits)
 *ANTH 250 Food and Culture (4 credits)
 *ANTH 283 Introduction to Medical Anthropology (4 credits)
 *ANTH 295 Gender & Sexuality in an Anthropological Perspective (4 credits)
 CJ 100 Survey of the Criminal Justice System (3 credits)
 CJ 101 Introduction to Criminology (4 credits)
 CJ 110 Law Enforcement (3 credits)
 CJ 120 Judicial Process (3 credits)
 CJ 153 Ethical Issues in Criminal Justice (3 credits)
 CJ 201 Introduction to Juvenile Justice (3 credits)
 CJ 210, 211 Criminal Investigation I, II (3 credits each)
 CJ 220 Introduction to Substantive Law (3 credits)
 CJ 222 Search and Seizure (3 credits)
 CJ 230 Juvenile Corrections (3 credits)
 CJ 243 Drugs and Crime in Society (3 credits)
 CJ 253 Corrections (4 credits)
 EC 101 Contemporary Economic Issues (4 credits)
 EC 201 Microeconomics (4 credits)
 EC 202 Macroeconomics (4 credits)
 ED 152 Family, School and Community Relationships in ECE (3 credits)
 *ED 219 Multicultural Issues in Education Settings (3 credits)
 *ES 213 Introduction to Chicano/Latino Studies (4 credits)
 GEOG 106 Economic Geography (4 credits)
 *GEOG 107 Cultural Geography (4 credits)
 GEOG 190 Environmental Geography (4 credits)
 GEOG 198 Field Geography of Central Oregon (3 credits)
 *GEOG 201, 202 World Regional Geography I, II (4 credits each)
 GEOG 207 Geography of Oregon (3 credits)
 GEOG 240 Geography of Central Oregon (3 credits)
 GEOG 290 Environmental Problems (3 credits)
 GEOG 295 Wilderness and Society (4 credits)
 *HHP 248 Health Psychology (4 credits)
 HHP 267 Wellness Coaching Fundamentals (3 credits)
 HHP 268 Sustainable Food and Nutrition (4 credits)
 HS 206 Group Counseling Skills for Human Services (4 credits)
 *HS 208 Multicultural Issues in Human Services (4 credits)
 *HST 101, 102, 103 History of Western Civilization (4 credits each)
 *HST 104, 105, 106 World History (4 credits each)

(*Counts as a cultural literacy course **Counts as a lab science course)

*HST 201, 202, 203 United States History (4 credits each)
 *HST 204 History of the Civil War (4 credits)
 *HST 207 History of the American West (4 credits)
 *HST 218 Native American History (4 credits)
 *HST 225 US Women's History (4 credits)
 *HST 236 Women in 20th Century European History (4 credits)
 *HST 242 History of the Pacific Northwest (4 credits)
 *HST 258 Colonial Latin American History (4 credits)
 *HST 259 Modern Latin American History (4 credits)
 *HST 260 History of the Middle East (4 credits)
 *HST 270 20th Century European History (4 credits)
 *HST 290, 291, 292 East Asian History (4 credits each)
 OL 244 Psychology of Risk and Adventure (3 credits)
 PS 201 Introduction to US Government and Politics (4 credits)
 PS 203 State/Local Government (3 credits)
 PS 204 Introduction to Comparative Politics (4 credits)
 PS 205 Introduction to International Relations (4 credits)
 PS 206 Introduction to Political Thought (4 credits)
 PS 207 Politics of the Middle East (4 credits)
 PS 250 Terrorism and the American Public (4 credits)
 *PSY 101 Applied Psychology (3 credits)
 PSY 201 Mind and Brain (4 credits)
 *PSY 202 Mind and Society (4 credits)
 *PSY 215 Developmental Psychology (4 credits)
 *PSY 215N Developmental Psychology for Nurses (4 credits)
 *PSY 216 Social Psychology (4 credits)
 *PSY 219 Abnormal Psychology (4 credits)
 *PSY 228 Positive Psychology (4 credits)
 *PSY 233 Psychology of Violence and Aggression (4 credits)
 *PSY 235 Human Development: Child (3 credits)
 *PSY 236 Human Development: Adult (3 credits)
 *SOC 201 Introduction to Sociology (4 credits)
 *SOC 206 Social Psychology (4 credits)
 SOC 208 Sport & Society (4 credits)
 SOC 211 Social Deviance (4 credits)
 *SOC 212 Race, Class and Ethnicity (4 credits)
 SOC 215 Social Issues and Social Movements (4 credits)
 *SOC 216 Sociology of Gender (4 credits)
 *SOC 219 Sociology of Religion (4 credits)
 SOC 222 Sociology of Family (4 credits)
 *SOC 250 Sociology of Popular Cultures (4 credits)

CAREER AND TECHNICAL COURSES (as applied to AAOT electives)

Students may use up to 12 credits of Career and Technical Education (CTE) courses to meet elective credit requirements for the Associate of Arts Oregon Transfer (AAOT) and Associate of Science (AS) degree. Career and Technical Education (CTE) courses are numbered 100 and higher from the list below. Note that they are generally not accepted by baccalaureate institutions unless used within the AAOT degree.

AH 100 Intro to Health Occupations
 AH 111 Medical Terminology I
 AH 112 Medical Terminology II
 AUT All courses
 AV All courses
 BAK All courses
 CIS All courses except CIS 275 and CIS 276
 CUL All courses
 DA All courses
 DM All courses
 EMT All courses
 FOR 130 Chainsaw Use and Maintenance
 GEOG 211 Computer Cartography
 GEOG 265 Geographic Information Systems
 GEOG 266 Arc GIS
 GEOG 267 Geodatabase Design
 GEOG 273 Spatial Data Collection

GEOG 280 Co-op Work Experience GIS
 GEOG 284 GIS Customization
 GEOG 285 Data Conversion/Documentation
 GEOG 286 Remote Sensing
 GEOG 287 Analysis of Spatial Data
 GTL All courses
 HIT All courses
 LMT All courses
 MFG All courses
 MA All courses
 NDT All courses
 NUTR All courses
 NUR All courses
 OA All courses
 RMGT All courses
 SUST All courses
 VT All courses

HUMAN RELATIONS LIST

ANTH 103 Cultural Anthropology (4 credits)
 BA 285 Business Human Relations (3 credits)
 FOR 211 Supervision and Leadership (3 Credits)
 GEOG 107 Cultural Geography (4 credits)
 HS 162 Effective Helping Skills I (4 credits)
 HS 208 Multicultural Issues Human Services (4 credits)
 PSY 101 Applied Psychology (3 credits)
 PSY 216 Social Psychology (4 credits)
 PSY 228 Positive Psychology (4 credits)
 RMGT 130 Hospitality Industry Supervision and Principles of Leadership (3 Credits)
 SOC 201 Introduction to Sociology (4 credits)
 SOC 206 Social Psychology (4 credits)
 SP 218 Interpersonal Communication (3 credits)

ADDICTIONS STUDIES AND COUNSELING

Certificate of Completion

78-79 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Addictions Studies and Counseling

PROGRAM DESCRIPTION

The Addictions Studies and Counseling Certificate program trains individuals in the knowledge, attitudes and skills needed for employment in the drug- and alcohol-treatment field as entry-level counselors working under supervision in treatment centers. It is designed to prepare the student to take the Oregon Certified Alcohol and Drug Counselor (CADC) I exam upon completion of the coursework and 1,000 hours of supervised experience. The program also provides coursework in the addictions field to other human service and criminal justice workers who help addicted persons and their families.

All COCC students enrolled in Addictions Studies (which includes requirements for practical experience) may have to pass a Criminal Background Check (CBC) as a condition of their acceptance into a practicum for training. Students who do not pass the CBC may not be eligible to complete training at affiliated practicum sites, to sit for certification exams, or to be hired for some professional positions. Students whose past history may interfere with the 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.

ASSOCIATE OF APPLIED SCIENCE

After obtaining the CADC I credential, students looking for more advanced opportunities in the field should complete the Associate of Applied Science degrees and acquire further work experience. The student could then sit for the CADC II exam.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Travel costs for practicum, three terms, costs based on location
- State Board exams (ACCBO): \$50 application fee; \$195 exam fee
- Videotaping fees for two terms: approximately \$50
- Background check for practicum placement: approximately \$50

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (HS) courses

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement OR completion of WR 65/95 ("C" or better)
- Students should have basic computer competency skills

REGISTRATION INFORMATION

Students may take non-program support courses, particularly writing, if they need to build skills related to the prerequisites.

HS 161, HS 162, and HS 208 require completion of WR 121, WR 122 or WR 227, MTH 31 or higher, and HS 100 prior to enrollment.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program (HS) courses; students who do not meet this standard will not be awarded a certificate.

Other requirements may be found in the Addictions Studies Student Handbook available at www.cocc.edu/Addictions-Studies/.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

The Addictions Studies program is a preparation for the state certification for becoming an Oregon Certified Alcohol and Drug Counselor (CADC) Level I. This certification requires that students complete 1,000 hours of practicum (internship). Some practicum sites require that students successfully complete a criminal background check.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often most credits are considered as elective credits, transferrable to public or private baccalaureate institutions.

MINIMUM GPA OR GRADE REQUIREMENTS

All courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

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).
- The student has two chances to pass a Human Services/Addictions Studies course.

PROGRAM COURSE REQUIREMENTS

General education/foundational requirements

WR 121	English Composition	4
MTH 031	Health Care Math (or higher)	3-4
WR 122	English Composition	4
or WR 227	Technical Writing	
HS 100	Orientation to Addictions Studies/Human Services	1
HS 161	Ethics for Human Services	4
HS 162	Effective Helping Skills I	4
HS 180	HIV/AIDS and Addictions	2
HS 200	Addictive Behavior	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 210	Dual Diagnosis	4
HS 223	Drugs and Addictions	4
HS 250	Process Addictions	4
HS 260	Counseling Theories	3
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 Services III	4

TOTAL CREDITS: 78-79

ADDICTIONS STUDIES AND COUNSELING

Associate of Applied Science (AAS) Degree
93-95 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Addictions Studies and Counseling

PROGRAM DESCRIPTION

The AAS degree prepares students academically for the CADAC II certification. Individuals will need an additional 3,000 hours supervised experience (for a total of 4,000) to sit for this exam. For more information: www.accbo.com/certifications.php/.

All COCC students enrolled in Addictions Studies (which includes requirements for practical experience) may have to pass a Criminal Background Check (CBC) as a condition of their acceptance into a practicum for training. Students who do not pass the CBC may not be eligible to complete training at affiliated practicum sites, to sit for licensure or certification exams, or to be hired for some professional positions. Students whose past history may interfere with the 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.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Travel costs for practicum, three terms, costs based on location
- State Board exams (ACCBO): \$50 application fee; \$195 exam fee
- Videotaping fees for two terms: approximately \$50
- Background check for practicum placement: approximately \$50

MINIMUM GPA OR GRADE REQUIREMENTS

All HS courses must be completed with a "C" grade or better and graduates must have an overall 2.0 GPA or higher. 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).
- The student has two chances to pass a Human Services/Addictions Studies course.

REGISTRATION INFORMATION

Students may take non-program support courses, particularly writing, if they need to build skills related to the prerequisites.

HS 161, HS 162, and HS 208 require completion of WR 121, WR 122 or WR 227, MTH 31 or higher, and HS 100 prior to enrollment.

PROGRAM COURSE REQUIREMENTS

General education/foundational requirements

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	
SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	
MTH 31	Health Care Math	3-4
or higher		

Health (3 credits with HHP prefix) 3

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

HS 100	Orientation to Addictions Studies/Human Services	1
HS 161	Ethics for Human Services	4
HS 162	Effective Helping Skills I	4
HS 180	HIV/AIDS and Addictions	2
HS 200	Addictive Behavior	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 210	Dual Diagnosis	4
HS 223	Drugs and Addictions	4
HS 250	Process Addictions	4
HS 260	Counseling Theories	3
HS 262	Effective Helping Skills II	4
HS 263	Counseling the Chemically Dependent Client	3
HS 266	Case Management	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 Services III	4
PSY 219	Abnormal Psychology	4

GENERAL EDUCATION/DISCIPLINE STUDIES

Complete one or more courses from the discipline studies list p. 44-45, in order to reach a 93 credit minimum. The courses may not use an HS prefix, and must have different prefixes from each other.

TOTAL CREDITS: 93-95

ANTHROPOLOGY

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

The Associate of Arts Oregon Transfer (AAOT) degree meets the State of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in anthropology.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 111	College Algebra	4
(or higher for which Intermediate Algebra is a prerequisite)		

Health (3 credits with HHP prefix)		3
HHP activity courses (1 credit each) are not to be duplicated		

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses chosen from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

ANTH 102	Archaeology	4
ANTH 103	Cultural Anthropology	4

Science/Math/Computer Science¹

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ANTH 234	Biological Anthropology (lab science)	4
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ELECTIVES

ANTH 240	Language and Culture	4
General Electives ²		24-30

ADVISING NOTES

¹ In general, very few bachelor's degrees in Anthropology have specific science requirements. However, if the interest is primarily archaeological, then Geology would fulfill the lab requirements. If the interest is primarily in physical anthropology, then select a Biology sequence or the Human Anatomy and Physiology sequence.

² In choosing electives, consider two years of a foreign language since many BA degrees (including many anthropology programs) require two years or equivalent of a foreign language. Some Anthropology degrees may also require an upper-division statistics course. Taking MTH 243 and MTH 244 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.

ART

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

COCC's Art program includes courses in art history, drawing, 2D basic design, 3D design, painting, sculpture, ceramics, jewelry and metalwork, digital and darkroom photography, and watercolor. COCC's main art facility, Pence Hall, houses art studios equipped with drawing and design tables, easels and canvas preparation areas, potter's wheels, hand building, glazing and kiln firing areas, and metalwork equipment for student use.

The Associate of Arts Oregon Transfer (AAOT) degree meets the State of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in art.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher.)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite)		

Health (3 credits with HHP prefix)	3
HHP activity courses (1 credit each) are not to be duplicated	

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses chosen from at least two (2) prefixes.

Select two art history courses from the following:

ARH 201	Art History I	4
ARH 202	Art History II	4
ARH 203	Art History III	4

plus one additional course from COCC's discipline studies list, with other than an ARH prefix, preferably with an ART prefix.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

ART 115	Basic Design: 2-D	3
ART 116	Basic Design II: Color	3
ART 117	Basic Design III: 3-D	3
ART 131	Drawing I	3

plus enough additional electives to reach the minimum of 90 credits for the AAOT. Art majors should take additional studio art classes in consultation with their advisor.

Two years of a foreign language is also recommended.

TRANSFER INFORMATION

Successful transfer to an upper-division arts school or program is usually based not only on transcripts but 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.

The University of Oregon offers a Bachelor of Fine Arts degree in several art media areas.



AUTOMOTIVE TECHNOLOGY – AUTOMOTIVE MANAGEMENT

Associate of Applied Science (AAS) Degree

97-101 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Automotive Management or Associate of Applied Sciences in Automotive Technology in Electronics and Diagnostics (TED)

PROGRAM DESCRIPTION

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

Both the AAS degree and option enable students to enter the transportation industry as an automotive technician and/or middle management. Entry into the program at the beginning of each term is possible by meeting course prerequisites or receiving the instructor's permission. The Automotive Technology program is certified by the National Automotive Technicians Education Foundation (NATEF). The program is approved for veterans' training.

The following courses are required for COCC's AAS in Automotive Technology degree. Students should work closely with an advisor if they wish to attend part time. Note that several of the courses qualify students to also earn short-term certificates in various automotive technology areas. See the Automotive Technology certificates on the following pages. Students are expected to supply their own hand tools. A list is available from program instructors. Approximate cost of required tools and working clothes is \$1,700 to \$2,700. The College provides any needed specialized tools and equipment for use in courses.

It is recommended that the ASE (Automotive Service Excellence) certification test be taken as the student completes the program. Pre-testing for ASE Certification and ASE Test Prep courses will be made available.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fee of \$15 per required automotive course or course fee of \$200 per automotive advanced course – AUT 260 and above
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts): \$200
- ASE (Automotive Service Excellence) Certification – up to \$450 total for all eight areas of testing
- Cost of tools: \$1,500 to \$2,500 depending on the source

Program preparation and prerequisites

In preparation for taking advanced program (AUT) courses:

- High school diploma or GED (recommended)
- Students must take the following automotive basic skills classes (10 credits):

AUT 101	Basic Electricity for Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3

- All COCC students completing the Automotive Technology program may have to pass Criminal History Checks (CHC) and/or drug test as a condition of their employment.
- An Oregon driver's license is also required.

PROGRAM STANDARDS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher. Students who do not meet this standard may be dismissed from the program.

REGISTRATION INFORMATION

Program (AUT) courses begin every term, including summer. Expect to start with 10 credits of basic skills courses in addition to a required math or writing course. Some AUT courses offered each term must be taken together and sequentially. Full-time students are discouraged from working more than 15 hours each week due to a heavy course load.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

The Automotive Technology program is certified by the National Automotive Technicians Education Foundation (NATEF). This certification requires that students complete 1,080 hours of training, which applies toward the two-year minimum experience requirement for ASE Certification. A minimum of 288 hours of Cooperative Work Experience (CWE) is included in the training.

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

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

General education/foundational requirements

Communication

WR 121	English Composition	4
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Computation

MTH 60	Algebra I	4
or MTH 85	Technical Math I	

Human Relations

Human Relations course, from list, page 45	3
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AUTOMOTIVE – MANAGEMENT PROGRAM REQUIREMENTS – (OPTION)

Year one

Fall term

AUT 101	Basic Electricity for Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
Human Relations course, from list, page 45	3	
WR 121	English Composition	4

Winter term

AUT 102	Automotive Electric I	4
AUT 103	Automotive Electric II	2
AUT 105	Diesel Performance I	2
AUT 205	Engine Performance I	2
MTH 60	Algebra I	4
or MTH 85	Technical Mathematics I	

Spring term

AUT 104	Automotive Electric III	2
AUT 111	Computerized Engine Controls	5
AUT 206	Engine Performance II	2
BA 101	Intro to Business	4
Computer competency ¹		0-4

Summer term

AUT 253	Automotive Air Conditioning	3
AUT 204	Steering and Suspension	3
AUT 216A**	Co-op Work Experience-Automotive	4
or AUT 216B**		

AUTOMOTIVE TECHNOLOGY – AUTOMOTIVE MANAGEMENT *(continued)*

Associate of Applied Science (AAS) Degree
97-101 credits

Year two

Fall term

BA 111	Applied Accounting I	3
BA 206	Management Fundamentals I	4
General education discipline studies courses ²		3
HHP 252A	Fitness/First Aid	3
AUT 208	Automotive Brakes	3

Winter term

BA 178	Customer Service	3
WR 214	Business Communication	3
General education discipline studies courses ²		6

Spring term

BA 207	Management Fundamentals II	4
BA 223	Marketing Principles I	4
BA 280	Co-op Work Experience Business	3
BA 286	Managing Business Processes	4
or BA 250	Entrepreneurship	

ELECTIVES

AUT 112	Basic Engine Performance I	1
AUT 113	Basic Engine Performance II	1
AUT 114	Welding for the Automotive Trade	3
AUT 211	ASE Test Prep I	1
AUT 212	ASE Test Prep II	1

FOOTNOTES

¹ Pass computer basic skills competency test (see page 25 for details), or take CIS 120, Computer Concepts.

² Choose nine credits from COCC's discipline studies list (pages 44 and 45); each course must have a different prefix.

AUTOMOTIVE TECHNOLOGY – ELECTRONICS AND DIAGNOSTICS - REQUIREMENTS – (OPTION)

Heavy emphasis will be placed on the following three areas: (HEV) Hybrid Electric Vehicles/(EV) Electric Vehicles, Clean Diesel, and On-board Vehicle Networking. The title places emphasis on the ever-advancing electronics that are contained on all current vehicles, clearly stating the intent of the degree. This degree is an addition to our current Master Automotive Technician Certificate and Automotive Engine Performance Certificate with emphasis on the electrical / electronic portions of the automotive industry.

PROGRAM REQUIREMENTS

Year One

Fall term

*MTH 60 or MTH 85 Algebra or Technical Math		4
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
AUT 101	Basic Electricity for Automotive	2

Total Credits: 14

Winter term

AUT 102	Auto Electric I	4
AUT 103	Auto Electric II	2
AUT 104	Automotive Electric III	2
AUT 205	Engine Performance I	2
CIS120*	Computer Competency requirement ¹	0-4

Total Credits: 10-14

Spring term

AUT 111	Computerized Engine Controls	5
AUT 206	Engine Performance II	2

CIS 179	Networking Essentials	4
WR 121	English Composition	4

Total Credits: 15

Summer term

AUT 216A**	Co-op Work Experience or AUT 216B**	4
AUT 253	Automotive Air Conditioning	3
AUT 105	Diesel Performance I	2

TOTAL CREDITS 48-52

Second year: A student application for the second year of this program will be required. Those students who complete the first year must maintain a GPA of 3.0 or above. Students must have a 3.0 or above on all Automotive courses.

Year Two

Fall term

First year program prerequisites met		
AUT 260	Diesel Performance II	4
MFG 100	MATC Orientation (MATC – Redmond)	1
MFG 118	Fluid Power Systems I (MATC – Redmond)	2
GS 104	Physical Science: Physics	4
General education discipline studies ²		3

Total Credits: 14

Winter term

AUT 280	Hybrid Electric Vehicle I (HEV)	4
AUT 270	Automotive Controller Systems I	4
General education discipline studies ²		3
Human Relations Class (see catalog pages 44 and 45)		3

Total Credits: 14

Spring term

AUT 281	Hybrid Electric Vehicle II (HEV)	4
AUT 271	Automotive Controller Systems II	4
BA 178	Customer Service	3
General education discipline studies ²		3
*Health Class: HHP 243 or HHP 252A recommended		3

Total Credits: 17

Summer term

AUT 216A**	Dealership CWE / clean diesel / hybrid or AUT 216B**	4
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Total Credits: 49

TOTAL CREDITS 97-101

* Options for this requirement

**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.

In addition to this degree, 9 certificates will be awarded as well.

ELECTIVES

AUT 112	Basic Engine Performance I	1
AUT 113	Basic Engine Performance II	1
AUT 114	Welding for the Automotive Trade	3
AUT 211	ASE Test Prep I	1
AUT 212	ASE Test Prep II	1

FOOTNOTES

¹ Pass computer basic skills competency test (see page 25 for details), or take CIS 120, Computer Concepts.

² Choose nine credits from COCC's discipline studies list (pages 44 and 45); each course must have a different prefix.

AUTOMOTIVE TECHNOLOGY

Short-Term Certificates

12-37 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Short-term Certificate of Completion in:

- Automotive Drive-Train Technician
- Automotive Electrical Technician-Basic
- Automotive Electrical Technician-Advanced
- Automotive Engine Technician
- Automotive Heating & AC Technician
- Automotive Electrical Technician-Advanced
- Automotive Engine Performance Technician
- Automotive Hybrid Electric Vehicles (HEV) Technician – Level 1
- Automotive Hybrid Electric Vehicles (HEV) Technician – Level 2
- Automotive Controller Systems Technician – Level 1
- Automotive Controller Systems Technician – Level 2
- Automotive Basic Skills with Welding
- Automotive Basic Skills with Basic Engine Performance
- Clean Energy Diesel Technician
- Under-Car Technician

PROGRAM DESCRIPTION

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

The program is planned so that students will be able to complete the Master Automotive Technician Certificate in approximately 12 to 15 months as well as earn up to seven short-term certificates of completion. The certificate enables students to enter the transportation industry as an automotive technician. Men and women who are changing jobs or careers, students who want to explore the possibility of a technician career, or those who simply want to know more about vehicles may enter the program each term. Entry into the program at the beginning of each term is possible by meeting course prerequisites or receiving the instructor's permission.

The Automotive Technology program is certified by the National Automotive Technicians Education Foundation (NATEF). The program is approved for veterans' training. Occupational supplementary courses with college credit may be offered in the evening. These classes are designed to meet community needs and will vary from one term to the next. Students are expected to supply their own hand tools. A list is available from program instructors. Approximate cost of required tools and working clothes is \$1,700 to \$2,700. The College provides any needed specialized tools and equipment for use in courses.

It is recommended that the ASE (Automotive Service Excellence) certification test be taken as the student completes the program. Pre-testing for ASE Certification and ASE Test Prep courses will be made available.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fee of \$15 per required automotive course
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts), \$200
- ASE (Automotive Service Excellence) Certification - up to \$450 total for all eight areas of testing
- Cost of tools \$1,500 to \$2,500 depending on the source

PROGRAM PREPARATION AND PREREQUISITES

In preparation for taking advanced program (AUT) courses:

- High school diploma or GED (recommended)
- Students must take the following automotive basic skills classes first (10 credits):

AUT 101	Basic Electricity for Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3

- All COCC students completing the Automotive Technology program may have to pass a Criminal History Check (CHC) and/or a drug test as a condition of their employment.
- An Oregon driver's license is also required.

PROGRAM STANDARDS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher. Students who do not meet this standard may be dismissed from the program.

REGISTRATION INFORMATION

Program (AUT) courses begin every term, including summer. Expect to start with ten credits of basic skills courses. Some AUT courses offered each term must be taken together and sequentially. Full-time students are discouraged from working more than 15 hours each week due to a heavy course load.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

The Automotive Technology program is certified by the National Automotive Technicians Education Foundation (NATEF). This certification requires that students complete 1,080 hours of training, which applies toward the two-year minimum experience requirement for ASE Certification. A minimum of 288 hours of Cooperative Work Experience (CWE) is included in the training.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

AUTOMOTIVE BASIC SKILLS WITH WELDING CERTIFICATE (13 CREDITS)

Prior to taking automotive advanced courses, students must take the basic skills courses:

AUT 101	Basic Electricity for Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
*AUT 114	Welding for the Automotive Trade	3

* course added to the basic skills to complete a certificate.

These courses capture a range of skills that are required for the automotive industry, including basic internal combustion engines and theory, basic DC electrical and schematic understanding, and vehicle inspection. The largest portion addresses shop and vehicle safety. Adding this two credit elective course will provide a good understanding of the fundamental principles of automotive welding and offer a certificate.

AUTOMOTIVE TECHNOLOGY *(continued)*

Short-Term Certificates

12-37 credits

AUTOMOTIVE BASIC SKILLS WITH BASIC ENGINE PERFORMANCE (12 CREDITS)

Prior to taking automotive advanced courses, students must take the basic skills courses:

AUT 101	Basic Electricity for Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
*AUT 112	Basic Engine Performance I	1
*AUT 113	Basic Engine Performance II	1

* course added to the basic skills to complete a certificate.

These courses capture a range of skills that are required for the automotive industry, including basic internal combustion engines and theory, basic DC electrical and schematic understanding, and vehicle inspection. The largest portion addresses shop and vehicle safety.

These additional elective courses introduce the operation, diagnoses, and repair of the carburetion system and the points ignition system. Green statement: As with all engine performance related subjects, fuel delivery in carburetors affects air quality. This class introduces the student to the skill of reducing hydrocarbon and carbon dioxide emissions.

AUTOMOTIVE DRIVE TRAIN TECHNICIAN

Short-term Certificate - 21 credits

From drivelines to transaxles, clutches to differentials, COCC's Transmission Technology program trains students on all elements of manual and automatic transmissions, as well as basic hydraulic and electrical principles. The automotive drive-train courses apply toward ASE certification in (A2) Automotive Automatic Transmission and (A3) Automotive Manual Drive Trains and Axles.

CERTIFICATE REQUIREMENTS

AUT 101	Basic Electricity for Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
AUT 202	Manual Drive Trains I	3
AUT 203	Manual Drive Trains II	3
AUT 251	Automatic Transmissions I	3
AUT 256	Automatic Transmissions II	2

AUTOMOTIVE ELECTRICAL TECHNICIAN (BASIC)

Short-term Certificate - 14 credits

Preparation in the electrical technician coursework establishes skill in charging systems, starting systems, voltage drops, electrical troubleshooting, lighting, gauges, accessories, battery load testing and repairs. This coursework prepares students for the National Institute for Automotive Service Excellence (ASE) certification in (A6) Electrical/Electronic Systems.

CERTIFICATE REQUIREMENTS

AUT 101	Basic Electricity for Automotive	2
AUT 102	Automotive Electric I	4
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3

AUTOMOTIVE ELECTRICAL TECHNICIAN (ADVANCED)

Short-term Certificate - 18 credits

Preparation in the electrical technician coursework establishes skill in charging systems, starting systems, voltage drops, electrical troubleshooting, lighting, gauges, accessories, battery load testing and repairs. This coursework prepares students for ASE certification in (A6) Electrical/Electronic Systems and (A8) Engine Performance.

CERTIFICATE REQUIREMENTS

AUT 101	Basic Electricity for Automotive	2
AUT 102	Automotive Electric I	4
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 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3

AUTOMOTIVE ENGINE TECHNICIAN

Short-term Certificate - 16 credits

This program trains students to rebuild an engine or start building one from scratch. Coursework applies toward ASE certification in (A1) Automotive Engine Repair.

CERTIFICATE REQUIREMENTS

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 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
AUT 201	Automotive Engines	4

AUTOMOTIVE ENGINE PERFORMANCE TECHNICIAN

Short-term Certificate - 27 credits

This program trains students to be the key troubleshooter in figuring out a vehicle's driveability problems. Students learn to identify everything from powertrain malfunctions to ignition failures and other engine-related problems using state-of-the-art computer diagnostic equipment, as well as the best way to fix the problem for the client. COCC's Engine Performance Technician program applies toward ASE certification in (A6) Automotive Electrical/Electronic Systems and (A8) Automotive Engine Performance.

CERTIFICATE REQUIREMENTS

AUT 101	Basic Electricity for Automotive	2
AUT 102	Automotive Electric I	4
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 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2

AUTOMOTIVE TECHNOLOGY *(continued)*

Short-Term Certificates

12-37 credits

**AUTOMOTIVE HEATING & AIR CONDITIONING
TECHNICIAN****Short-term Certificate - 17 credits**

COCC's Automotive Heating and Air Conditioning classes give students a hands-on opportunity to learn about automotive air conditioning and heating systems, EPA Recovery Requirements for R-12, R-134a systems, and general diagnosis and service. Courses in this option apply toward ASE certification in (A7) Automotive Heating and Air Conditioning and (A6) Electrical/Electronic Systems.

CERTIFICATE REQUIREMENTS

AUT 101	Basic Electricity for Automotive	2
AUT 102	Automotive Electric I	4
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
AUT 253	Automotive Air Conditioning	3

UNDER-CAR TECHNICIAN**Short-term Certificate - 16 credits**

This hands-on, short-term training gives students an in-depth understanding of under-vehicle systems: brakes, suspension, driveline and electrical, and prepares students for a job in suspension and brakes, either as a technician or manager. The under-car technician courses apply toward ASE certification in (A5) Automotive Brakes and (A4) Automotive Steering and Suspension.

CERTIFICATE REQUIREMENTS

AUT 101	Basic Electricity for Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
AUT 204	Steering and Suspension	3
AUT 208	Automotive Brakes	3

**AUTOMOTIVE HYBRID ELECTRIC VEHICLES (HEV)
TECHNICIAN – LEVEL 1****Short-term Certificate - 33 credits**

This program trains students to be the key troubleshooter in figuring out a vehicle's driveability problems. Students learn to identify everything from powertrain malfunctions to ignition failures and other engine-related problems using state-of-the-art computer diagnostic equipment, as well as the best way to fix the problem for the client. COCC's Engine Performance Technician program applies toward ASE certification in (A6) Automotive Electrical/Electronic Systems and (A8) Automotive Engine Performance. The student will be introduced to hybrid (HEV) and electric (EV) vehicles to study and apply skills on diagnosing systems on an array of vehicles with electric drive systems.

CERTIFICATE REQUIREMENTS

AUT 101	Basic Electricity for Automotive	2
AUT 102	Automotive Electric I	4
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 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 280	Hybrid Electric Vehicle I (HEV)	4

**AUTOMOTIVE HYBRID ELECTRIC VEHICLES (HEV)
TECHNICIAN – LEVEL 2****Short-term Certificate - 37 credits**

This program trains students to be the key troubleshooter in figuring out a vehicle's driveability problems. Students learn to identify everything from powertrain malfunctions to ignition failures and other engine-related problems using state-of-the-art computer diagnostic equipment, as well as the best way to fix the problem for the client. COCC's Engine Performance Technician program applies toward ASE certification in (A6) Automotive Electrical/Electronic Systems and (A8) Automotive Engine Performance. The student will become well grounded into the hybrid (HEV) and electric (EV) vehicles as it applies to the state of health of an array of vehicles with electric drive systems. The student will be able to experience extensive time with analysis of vehicles with electric drive systems.

CERTIFICATE REQUIREMENTS

AUT 101	Basic Electricity for Automotive	2
AUT 102	Automotive Electric I	4
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 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 280	Hybrid Electric Vehicle I (HEV)	4
AUT 281	Hybrid Electric Vehicle II (HEV)	4

CLEAN ENERGY DIESEL TECHNICIAN (ADVANCED)**Short-term Certificate - 33 credits**

This program trains students to be the key troubleshooter in figuring out a vehicle's driveability problems. Students learn to identify everything from powertrain malfunctions to ignition failures and other engine-related problems using state-of-the-art computer diagnostic equipment, as well as the best way to fix the problem for the client. COCC's Engine Performance Technician program applies toward ASE certification in (A6) Automotive Electrical/Electronic Systems and (A8) Automotive Engine Performance.

This program also trains students on the operational principles and theory of: Hydraulically actuated Electronically controlled Unit Injection (HEUI) systems, the Electronic Unit Injection (EUI) systems, and the Common Rail (CR) systems, as they are applied to Diesel Engine Performance (A9).

CERTIFICATE REQUIREMENTS

AUT 101	Basic Electricity for Automotive	2
AUT 102	Automotive Electric I	4
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 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 260	Diesel Performance II	4

AUTOMOTIVE TECHNOLOGY *(continued)*

Short-Term Certificates

12-37 credits

AUTOMOTIVE CONTROLLER SYSTEMS TECHNICIAN – LEVEL 1

Short-term Certificate - 33 credits

This program trains students to be the key troubleshooter in figuring out a vehicle’s driveability problems. Students learn to identify everything from powertrain malfunctions to ignition failures and other engine-related problems using state-of-the-art computer diagnostic equipment, as well as the best way to fix the problem for the client. COCC’s Engine Performance Technician program applies toward ASE certification in (A6) Automotive Electrical/Electronic Systems and (A8) Automotive Engine Performance.

This program also trains students on vehicle performance methods. The student will become confident with various methods of performance enhancements of automotive drive systems with major emphasis on electronic programming, manufacturer scan tools and vehicle testing.

CERTIFICATE REQUIREMENTS

AUT 101	Basic Electricity for Automotive	2
AUT 102	Automotive Electric I	4
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 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 270	Automotive Controller Systems I	4

AUTOMOTIVE CONTROLLER SYSTEMS TECHNICIAN – LEVEL 2

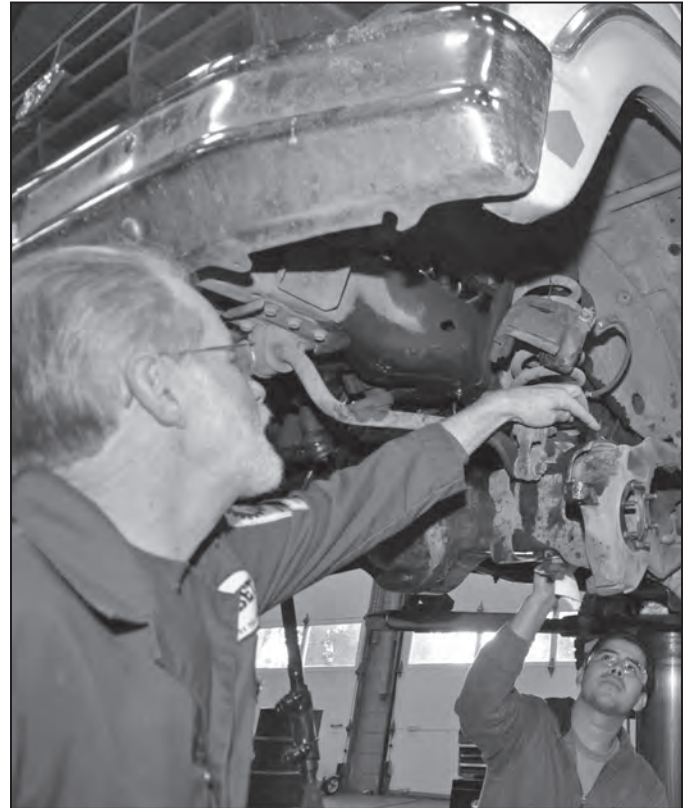
Short-term Certificate - 37 credits

This program trains students to be the key troubleshooter in figuring out a vehicle’s driveability problems. Students learn to identify everything from powertrain malfunctions to ignition failures and other engine-related problems using state-of-the-art computer diagnostic equipment, as well as the best way to fix the problem for the client. COCC’s Engine Performance Technician program applies toward ASE certification in (A6) Automotive Electrical/Electronic Systems and (A8) Automotive Engine Performance.

This program also trains students in testing volumetric efficiency, performance as it relates to program modification, dynamometer operation and safety, and reprogramming for performance.

CERTIFICATE REQUIREMENTS

AUT 101	Basic Electricity for Automotive	2
AUT 102	Automotive Electric I	4
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 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3
AUT 111	Computerized Engine Controls	5
AUT 205	Engine Performance I	2
AUT 206	Engine Performance II	2
AUT 270	Automotive Controller Systems I	4
AUT 271	Automotive Controller Systems II	4



AUTOMOTIVE TECHNOLOGY – MASTER AUTOMOTIVE TECHNICIAN

Certificate of Completion

73-75 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Master Automotive Technology

PROGRAM DESCRIPTION

The Master Automotive Technology program emphasizes educating students as multi-skilled workers with the ability to complete a wide variety of tasks within the automotive technology service and repair setting.

Coursework includes technical skills in computer applications, electrical, electronic, mechanical, hydraulic, and network systems, both in theory as well as hands-on training. A self-paced method of instruction is offered for the entry-level classes. Communication skills are also highly emphasized throughout each program.

The program is planned so that students will be able to complete the Master Automotive Technician Certificate in approximately 12 to 15 months as well as earn up to seven short-term certificates of completion. The certificate enables students to enter the transportation industry as an automotive technician. Men and women who are changing jobs or careers, students who want to explore the possibility of a technician career, or those who simply want to know more about vehicles may enter the program each term. Entry into the program at the beginning of each term is possible by meeting course prerequisites or receiving the instructor's permission.

The Automotive Technology program is certified by the National Automotive Technicians Education Foundation (NATEF). The program is approved for veterans' training. Occupational supplementary courses with college credit may be offered in the evening. These classes are designed to meet community needs and will vary from one term to the next. Students are expected to supply their own hand tools. A list is available from program instructors. Approximate cost of required tools and working clothes is \$1,700 to \$2,700. The College provides any needed specialized tools and equipment for use in courses.

It is recommended that the ASE (Automotive Service Excellence) certification test be taken as the student completes the program. Pre-testing for ASE Certification and ASE Test Prep courses will be made available.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fee of \$15 per required automotive course
- Materials (coveralls, safety glasses, work jacket, safety shoes, t-shirts), \$200
- ASE (Automotive Service Excellence) Certification—up to \$450 total for all eight areas of testing
- Cost of tools \$1,500 to \$2,500 depending on the source

Program preparation and prerequisites

In preparation for taking advanced program (AUT) courses:

- High school diploma or GED (recommended)
- Students must take the following automotive basic skills classes first (10 credits):

AUT 101	Basic Electricity for Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 109	Mechanical Systems II	1
AUT 110	Small Gas Engines	3

- All COCC students completing the Automotive Technology program may have to pass Criminal History Checks (CHC) and/or drug test as a condition of their employment.
- An Oregon driver's license is also required.

REGISTRATION INFORMATION

Program (AUT) courses begin every term, including summer. Expect to start with ten credits of basic skills courses in addition to a required math or writing course. Some AUT courses offered each term must be taken together and sequentially. Full-time students are discouraged from working more than 15 hours each week due to a heavy course load.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program (AUT). Students who do not meet this standard may be dismissed from the program.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

The Automotive Technology program is certified by the National Automotive Technicians Education Foundation (NATEF). This certification requires that students complete 1,080 hours of training, which applies toward the two-year minimum experience requirement for ASE Certification. A minimum of 288 hours of Cooperative Work Experience (CWE) is included in the training.

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

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS**General education/foundational requirements****Communication**

WR 60	Rhetoric and Critical Thinking I (or higher)	4
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Computation

MTH 60	Algebra I	4
or MTH 85	Technical Math I (or higher)	

Human Relations

Human Relations course, see list page 45	3
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PROGRAM REQUIREMENTS

Automotive basic skills (required prior to any other AUT classes)	10	
AUT 102	Automotive Electric I	4
AUT 103	Automotive Electric II	2
AUT 104	Automotive Electric III	2
AUT 105	Diesel Performance I	2
AUT 111	Computerized Engine Controls	5
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

and AUT 216B Co-op Work Experience-Automotive	8	
AUT 251	Automatic Transmissions I	3
AUT 256	Automatic Transmissions II	2
AUT 253	Automotive Air Conditioning	3

ELECTIVES (MUST TAKE TWO COURSES)

AUT 112	Basic Engine Performance I	1
AUT 113	Basic Engine Performance II	1
AUT 114	Welding for the Automotive Trade	3
AUT 211	ASE Test Prep I	1
AUT 212	ASE Test Prep II	1

AVIATION PROGRAM

PREREQUISITES, STANDARDS AND REQUIREMENTS

PROGRAM DESCRIPTION

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

Students in the AAS Aviation degree program must earn FAA pilot certificates and ratings which require flight and simulator training as outlined below. Students in the airplane track will earn FAA Private Pilot and Commercial Pilot certificates (single and multiengine), the Instrument rating, and the Multiengine rating. The final step in the training is to earn the FAA Certified Flight Instructor certificate/ratings (CFI, CFII, MEI).

Students in the helicopter track will earn the FAA Private Pilot and Commercial Pilot certificates, the Instrument rating, and Certified Flight Instructor certificate/rating (CFI, CFII).

Additionally, an Unmanned Aerial Systems degree is available within the Aviation Program. The Aviation Unmanned Aerial Systems Operations (UAS) track trains individuals to work as professional UAS operators in the national/international arena. Students will learn to operate UAS to include: conducting mission/preflight planning, mission briefings, and programming. They will learn how to obtain and evaluate weather forecasts, Notice to Airmen (NOTAMs), Special Instructions (SPINs) and airspace requirements. Students will be taught to perform limited UAS and ground support equipment testing, troubleshooting and maintenance.

The AAS degree will only be awarded when the required courses have been successfully completed and the following certificates and ratings are obtained: Commercial Pilot certificate, and Instrument and Multiengine (airplane) ratings.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following program costs:

- Current cost of approximately 285 airplane or 200 helicopter hours of flight training, 50 hours of training time in our FAA-approved flight simulator, and up to 80 hours in UAS simulator. See the Aviation program director, call 541-318-3702 or go online at www.cocc.edu, for the current estimated cost of training.
- Students who do not become proficient in the time covered by the flight fees charged may incur additional flight training fees.
- All fees for the term must be paid in full by 5 p.m. on Friday of the second week of the term. Students will be dropped from flight lab course(s) if fees are not paid on time.
- Unless under unusual, nonacademic and documented circumstances simulator fees are non-refundable.
- Used portions of flight fees are non-refundable.
- Pilot headset, approximately \$350.
- FAA airman knowledge exams, \$150 per flight certificate/rating (\$1,350).

Airplane

- FAA Designated Pilot Examiner fees, approximately \$400 per flight certificate/rating (\$3,200).

Helicopter

- FAA Designated Pilot Examiner fees, approximately \$750 per flight certificate/rating (\$3,750).

PROGRAM PREPARATION AND PREREQUISITES

Pilots are credentialed by the Federal Aviation Administration (FAA) based on Title 14 Code of Federal Regulations. Specific requirements for each pilot certificate/rating are listed in Part 61: Certification: Pilots and Instructors, and may be found in a current copy of the Federal Aviation Regulations/Aeronautical Information Manual (FAR/AIM), or online at www.faa.gov.

Pilots are required to meet specific medical requirements and must possess an appropriate class of medical certificate obtained from an FAA-approved Aviation Medical Examiner (AME) before exercising the privileges of a pilot in command for the level of pilot certificate required. Specific requirements for class and duration of medical certificates may be found in the FAR Part 61, Paragraph 61.23, or online at www.faa.gov.

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

MINIMUM GPA OR GRADE REQUIREMENTS

- All FAA airman knowledge exams must be passed with a minimum score of 70 percent.
- All aviation program courses must be completed with a "C" grade or higher.
- Graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

The Aviation program accepts new students every term. Applicants should contact the Aviation program director, 541-318-3702, or other aviation advisor before applying.

Applicants must arrange their finances to ensure they can pay for the flight training. Financial aid is available, but it will not cover the total cost of the program. The Aviation program is approved for veterans benefits and other federal financial aid.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program. Students who do not maintain this standard may be dismissed from the program. Reinstatement to the program is never automatic. A student must apply for re-determination of eligibility by completing a training plan with their COCC advisor.

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. Students who fall behind without justifiable reasons may be dismissed from the program and their flight training fees will be returned to whomever paid the fees, i.e., the financial aid office, the Department of Veterans Affairs or the individual (for private-pay students). Students using veterans benefits who fail to complete a flight lab may be required to repay the Department of Veterans Affairs for the entire cost of the course.

AVIATION PROGRAM *(continued)*

PREREQUISITES, STANDARDS AND REQUIREMENTS

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 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. Those exams are administered by a third-party company and a \$150 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.

PILOT CERTIFICATES/RATINGS AVAILABLE:

- Private Pilot (Airplane or Helicopter)
- Instrument (Airplane or Helicopter)
- Multiengine (Airplane) • Commercial (Airplane or Helicopter)
- Single engine (Airplane) • Multiengine (Airplane)
- Certified Flight Instructor • CFI (Airplane or Helicopter)
- CFII (Airplane or Helicopter) • MEI (Airplane)
- Air Transport Pilot (ATP) (Not currently offered at COCC)

TRANSFER INFORMATION

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

Those wishing to transfer to Oregon Institute of Technology, should use the Associate of Science (AS) degree program. For information about transfer requirements at other institutions, contact the Aviation program director, 541-318-3702.

AVIATION, PROFESSIONAL PILOT – AIRPLANE

Associate of Applied Science (AAS) Degree

90-94 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Aviation – Airplane

PROGRAM COURSE REQUIREMENTS

General education/foundational requirements

Communication

WR 121	English Composition	4
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Computation

MTH 85	Technical Mathematics I	4
or MTH 111	College Algebra (or higher)	

Human Relations

SP 111	Fundamentals of Public Speaking	3
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Computer skills

CIS 120	Computer Concepts	0-4
or Computer Competency Test, see page 25		

Business

BA 206	Management Fundamentals	4
or BA 101	Introduction to Business	
General Education Discipline Studies Courses		8

Program Requirements

All Aviation courses must be completed with a "C" grade or better.

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	1
AV 112A	Technically Advanced Aircraft Lab	1
AV 150	Aerodynamics ¹	4
AV 200	Aviation Law ¹	3
or AV 201	Airport Management ¹	
AV 204	Advanced Aircraft Systems ¹	4
AV 208	Meteorology II ¹	4
AV 210	Instrument-Airplane ⁴	5
AV 220	Commercial Pilot-Airplane ⁴	4
AV 230	Multiengine Pilot ⁴	2
AV 235	Human Factors ¹	4
AV 246	Aviation Safety ¹	3
AV 250	Certified Flight Instructor Ground ¹	5

AIRPLANE FLIGHT LABS

(Select 11 credits from the following list. See Aviation advisor for individual recommendations. Labs may be repeated for separate credit.)

AV 222A	Airplane Flight Lab ^{3,5}	1
AV 222B	Airplane Flight Lab ^{3,5}	1
AV 222C	Airplane Flight Lab ^{3,5}	1
AV 222D	Airplane Flight Lab ^{3,5}	1
AV 222E	Airplane Flight Lab ^{3,5}	1
AV 222F	Airplane Flight Lab ^{3,5}	1
AV 222G	Airplane Flight Lab ^{3,5}	1
AV 222H	Airplane Flight Lab ^{3,5}	1
AV 222I	Airplane Flight Lab ^{3,5}	1
AV 222J	Airplane Flight Lab ^{3,5}	1
AV 222K	Airplane Flight Lab ^{3,5}	1
AV 222L	Airplane Flight Lab ^{3,5}	1
AV 222M	Airplane Flight Lab ^{3,5}	1
AV 222N	Airplane Flight Lab ^{3,5}	1

FOOTNOTES

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. Students will be dropped at that time for nonpayment of fees. Used portions of flight fees are not refundable. The fee structure is available on the Aviation website, www.cocc.edu/Aviation/. Contact the Aviation program director, 541-318-3702, for more information.

⁴ Can be taken next in any sequence, together or separately, in any term. Earning the commercial pilot certificate is not dependent upon the instrument and multiengine ratings; however, pilots commonly include those ratings inside the total hours required for the commercial certificate in order to reduce the cost.

⁵ Airplane students will take 11 credits of AV 222, Airplane Flight Labs. The labs can be taken in any term. Labs are repeatable. See Aviation advisor for scheduling sequence.

AVIATION, PROFESSIONAL PILOT – HELICOPTER

Associate of Applied Science (AAS) Degree

90-94 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Aviation – Helicopter

PROGRAM COURSE REQUIREMENTS**General education/foundational requirements****Communication**

WR 121 English Composition 4

ComputationMTH 85 Technical Mathematics I 4
or MTH 111 College Algebra (or higher)**Human Relations**SP 111 Fundamentals of Public Speaking 3
or SP 218 Interpersonal Communication
or SP 219 Small Group Communication**Computer skills**CIS 120 Computer Concepts 0-4
or Computer Competency Test, see page 25**Business**BA 206 Management Fundamentals 4
or BA 101 Introduction to Business
General Education Discipline Studies Courses 8**PROGRAM REQUIREMENTS**

All Aviation courses must be completed with a "C" grade or better.

Helicopter AAS

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	1
AV 112A	Technically Advanced Aircraft Lab	1
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 ¹	
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 ¹	5

HELICOPTER FLIGHT LABS

(Select 10 credits from the following list. See Aviation advisor for individual recommendations. Labs may be repeated for separate credit.)

AV 227A	Helicopter Flight Lab ^{3,5}	1
AV 227B	Helicopter Flight Lab ^{3,5}	1
AV 227C	Helicopter Flight Lab ^{3,5}	1
AV 227D	Helicopter Flight Lab ^{3,5}	1
AV 227E	Helicopter Flight Lab ^{3,6}	1
AV 227F	Helicopter Flight Lab ^{3,5}	1
AV 227G	Helicopter Flight Lab ^{3,5}	1
AV 227H	Helicopter Flight Lab ^{3,5}	1
AV 227I	Helicopter Flight Lab ^{3,5}	1
AV 227J	Helicopter Flight Lab ^{3,5}	1
AV 227K	Helicopter Flight Lab ^{3,5}	1
AV 227L	Helicopter Flight Lab ^{3,5}	1
AV 227M	Helicopter Flight Lab ^{3,5}	1
AV 227N	Helicopter Flight Lab ^{3,5}	1

FOOTNOTES¹ 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. Students will be dropped at that time for nonpayment of fees. Used portions of flight and simulator fees are not refundable. The fee structure is available on the Aviation website at www.cocc.edu/Aviation/. Contact the Aviation program director at 541-318-3702 for more information.⁴ Can be taken next in any sequence, together or separately, in any term. Earning the commercial pilot certificate is not dependent upon the instrument and multiengine ratings; however, pilots commonly include those ratings inside the total hours required for the commercial certificate in order to reduce the cost.⁵ Helicopter students will take 10 credits of AV 227, Helicopter Flight Labs. The labs can be taken in any term. Labs are repeatable. See Aviation advisor for scheduling sequence.

AVIATION – UAS OPERATIONS

Associate of Applied Science (AAS) Degree

100-104 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Aviation – UAS

This degree is intended to prepare students for a fast growing industry with many civilian applications including agriculture, search and rescue, monitoring environment and wildlife, border security, fire mapping, surveying structures after natural disasters, real estate photography and police surveillance.

PROGRAM COURSE REQUIREMENTS

All courses must be completed with a "C" grade or better.

General Education/ foundational requirements

Communication

WR 121	English Composition	4
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Computation

MTH 085	Technical Mathematics	4
or MTH 111	College Algebra (or higher)	

Human Relations

SP 219	Small Group Communications	3
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PROGRAM REQUIREMENTS

All aviation courses must be completed with a "C" grade or better.

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
or AV 115	Private Pilot Helicopter ²	
AV 112	Technically Advanced Aircraft	1
AV 112A	Technically Advanced Aircraft Lab	1
AV 150	Aerodynamics ¹	4
AV 210	Instrument Airplane ²	5
or AV 215	Instrument Helicopter ²	
AV 220	Commercial Pilot Airplane ⁴	5
or AV 225	Commercial Pilot Helicopter ⁴	
AV 271	Introduction to UAS	3
AV 272	Unmanned Aerial Systems Operations	5
AV 273	Unmanned Aerial Systems Operations/ Maintenance	5
CIS 120	Computer Concepts	0-4
or Computer Competency Test, see page 25		
CIS 140	A+ Essentials I	4
CIS 145	A+ Essentials II	4
CIS 179	Networking Essentials	4
GEOG 265	Geographic Information Systems	4
GEOG 266	ARC GIS	5
GEOG 273	Spatial Data Collection	5
GEOG 286	Remote Sensing	5
GEOG 287	Analysis of Spatial Data	5

UAS FLIGHT LABS

AV 222A ³		1
or AV 227A ³		
AV 222B ³		1
or AV 227B ³		
AV 222C ³		1
or AV 227C ³		
AV 222D ³		1
or AV 227D ³		
AV 222E ³		1
or AV 227E ³		
AV 222G ³		1-2
or AV 227F and AV 227G ³		
AV 222N ³		1
or AV 227N ³		

FOOTNOTES

- 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. Students will be dropped at that time for nonpayment of fees. Used portions of flight and simulator fees are not refundable. The fee structure is available on the Aviation website www.cocc.edu/Aviation/. Contact the Aviation program director at 541-318-3702 for more information.
- ⁴ Can be taken next in any sequence, together or separately, in any term. Earning the commercial pilot certificate is not dependent upon the instrument and multiengine ratings; however, pilots commonly include those ratings inside the total hours required for the commercial certificate in order to reduce the cost.

AVIATION

Associate of Science (OIT/Technology and Management Emphasis)
90 credits

This degree is intended to prepare students who complete COCC's Associate of Applied Science (AAS) in Aviation degree, or other technical degree, to continue on to Oregon Institute of Technology's Bachelor of Applied Science (BAS) in Technology and Management degree in order to promote career advancement into management or the aviation field. The BAS degree allows students to transfer 60 credits of career and technical education courses, in addition to the listed business, management, information technology and general education courses. This Associate of Science (AS) degree worksheet reflects the required courses at the lower division level beyond the AAS aviation courses. Students are encouraged to work closely with their COCC advisor to complete both the AAS and the AS degree.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

All courses must be completed with a "C" grade or better

Writing

WR 121	English Composition	4
WR 122	English Composition	4
WR 227	Technical Writing	4

Oral Communication

SP 111	Fundamentals of Public Speaking	3
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Mathematics

MTH 111	College Algebra	4
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GENERAL EDUCATION/DISCIPLINE STUDIES

Arts and Letters

Choose two (2) courses from the Discipline Studies list on page 44 6-8

Social Science

EC 201	Microeconomics	4
EC 202	Macroeconomics	4

Science/Math/Computer Science

Choose one (1) lab science course from the Discipline Studies list on pages 44 and 45.

AVIATION PROGRAM REQUIREMENTS

AV 108	Meteorology I	4
AV 208	Meteorology II	4
BA 206	Management Fundamentals I	4
BA 223	Marketing Principals I	4
BA 211	Financial Accounting I	3
BA 213	Managerial Accounting ¹	3
BA 226	Business Law I	4
CIS 125A	Access	4
CIS 125E	Excel	4

Additional courses to reach 30 credits, must be 100-level and above and should be chosen with the assistance of an advisor.

ELECTIVES

Choose enough electives to reach a minimum total of 90 overall degree credits. Elective credits must be 100-level and above with a maximum of 12 CTE credits and 15 credits of CWE/HHP/performance courses. Oregon Institute of Technology's BAS degree assumes that the student has completed 60 CTE credits to apply toward the degree.

ADVISING NOTES

¹ COCC recommends students to take BA 212 prior to BA 213.



BIOLOGICAL SCIENCES

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

The Associate of Arts Oregon Transfer (AAOT) degree, with an emphasis in biology, is designed for students who wish to pursue bachelor's degree areas such as health professions, life sciences or natural sciences. Graduates with a Bachelor of Science degree from their transfer institution will be well-equipped for graduate school and other careers in biomedical fields, industry, governmental agencies and non-governmental organizations which require a broad-based education in science, mathematics and communication. Those graduates may enter such fields as conservation or environmental science, science writing, education, botany, forest or marine science, veterinary medicine, agricultural research, pharmaceuticals, human medicine or other life science careers such as research in microbiology, biotechnology, bio-informatics or genetics.

Students are expected to make and maintain communication with their choice of transfer institution while pursuing coursework at the community college level, as some have specific requirements.

The Associate of Arts Oregon Transfer (AAOT) degree meets the State of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements. The following is a suggested course of study for students interested in pursuing a bachelor's degree in biology.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 111	College Algebra	4
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(or higher for which Intermediate Algebra is a prerequisite.)

Health (3 credits with HHP prefix.)		3
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HHP activity courses (1 credit each) are not to be duplicated.

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses chosen from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

BI 211	Principles of Biology I	5
BI 212	Biology of Plants II	5
BI 213	Biology of Animals III	5

plus one additional course from the science/math/computer science discipline studies list with a different prefix.

ELECTIVES

Take enough elective courses to meet the minimum 90 credits required for the degree and lower-division major requirements.

CH 221	General Chemistry I ¹	5
CH 222	General Chemistry II ¹	5
CH 223	General Chemistry III ¹	5
FN 225	Human Nutrition	4
MTH 251	Calculus I	4
MTH 252	Calculus II	4
MTH 253	Calculus III	4
PH 201	General Physics I	5
PH 202	General Physics II	5
PH 203	General Physics III	5

The following courses are recommended for those entering health-related fields (these courses are not pre-requisites for admission into dental medicine, or veterinary programs, but may help a student preparing for any of those careers. They are prerequisite courses for admission to Physician Assistant and Physical Therapy programs in Oregon).

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

For a field identification course in the native flora		
BOT 203	General Botany	4
To enhance understanding of scientific terminology		
BI 205	Scientific Terminology	3

TRANSFER AND/OR ARTICULATION INFORMATION

Oregon universities with a biology major include: Eastern Oregon University, Oregon State University, Oregon Health Sciences University, Southern Oregon University, University of Oregon, Western Oregon University, Portland State University.

FOOTNOTES

¹ Recommended for students interested in medical, dental and veterinary schools.

BUSINESS ADMINISTRATION**ACCOUNTING CLERK**

Certificate of Completion – 44-48 credits

ENTREPRENEURSHIP

Certificate of Completion – 47-51 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Accounting Clerk

PROGRAM DESCRIPTION

COCC's Accounting Clerk certificate is designed to give students a foundation for careers in clerical accounting. All coursework may be applied to an Associate of Applied Science (AAS) Business degree.

COST OF PROGRAM

Standard tuition, student fees and textbooks.

PROGRAM PREPARATION AND PREREQUISITES**Recommended**

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 65 placement or completion of MTH 60 ("C" or better)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

The required courses for the certificate are listed below under Program Course Requirements. 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.

PROGRAM STANDARDS

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.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

The following is a suggested course of study for students interested in pursuing an Accounting Clerk certificate and will depend on course availability. A recommended sequence of the courses required for this certificate is listed below.

First term

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

Second term

BA 112	Applied Accounting II	3
BA 285	Business Human Relations	3
CIS 131	Software Applications	4
WR 121	English Composition	4

Third term

BA 113	Applied Accounting III	3
BA 177	Payroll Accounting	3
BA 220	Business Analysis and Budgeting	4
BA 229	QuickBooks	3
CIS 125E	Excel	4

Final term

BA 280	Co-op Work Experience	3
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CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Entrepreneurship

PROGRAM DESCRIPTION

COCC's Entrepreneurship certificate is designed to give students a foundation for starting their own business, or assist in the business startup for others. All coursework may be applied to an Associate of Applied Science (AAS) Business degree.

COST OF PROGRAM

Standard tuition, student fees and textbooks.

PROGRAM PREPARATION AND PREREQUISITES**Recommended**

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 65 placement or completion of MTH 60 ("C" or better)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

The required courses for the certificate are listed below under Program Course Requirements. 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.

PROGRAM STANDARDS

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.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

The following is a suggested course of study for students interested in pursuing an Entrepreneurship certificate and will depend on course availability. A recommended sequence of the courses required for this certificate is listed below.

First term

BA 101	Introduction to Business	4
BA 104	Business Math	3
CIS 120	Computer Concepts or Computer Competency Test	0-4
WR 121	English Composition	4

Second term

BA 217	Accounting Fundamentals	4
BA 223	Marketing Principles I	4
BA 250	Entrepreneurship	4
CIS 131	Software Applications	4

Third term

BA 206	Management Fundamentals I	4
BA 220	Business Analysis and Budgeting	4

Capstone Courses (Cohort CEED 201 - 206)

CEED 201	Business Modeling	2
CEED 202	Business Intelligence	2
CEED 203	Strategic Marketing	2
CEED 204	Strategic Management	2
CEED 205	Entrepreneurial Finance	2
CEED 206	Presenting To Win	2

BUSINESS ADMINISTRATION GROUND TRANSPORTATION

Certificate of Completion – 45-49 credits

MARKETING COMMUNICATIONS

Certificate of Completion – 43-47 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Ground Transportation Logistics

PROGRAM DESCRIPTION

The Ground Transportation Logistics certificate provides students with principles of logistics management and marketing, as well as technological advancements, trends, and current issues within the ground transportation and supply chain management industry. Students will learn how transportation logistics impact businesses, both on a domestic and global scale, as well as the practical application of processes and standards within the current business context of transportation and logistics management.

COST OF PROGRAM

Standard tuition, student fees and textbooks.

PROGRAM PREPARATION AND PREREQUISITES

Recommended

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 65 placement or completion of MTH 60 ("C" or better)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

The required courses for the certificate are listed below under Program Course Requirements. 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.

PROGRAM STANDARDS

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.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

The following is a suggested course of study for students interested in pursuing a Ground Transportation Logistics certificate and will depend on course availability. A recommended sequence of the courses required for this certificate is listed below.

First term

WR 121	English Composition	4
BA 101	Introduction to Business	4
BA 104	Business Math	3
CIS 120	Computer Concepts or Computer Competency Test	0-4

Second Term

CIS 131	Software Applications	4
BA 178	Customer Service	3
SCM 101	Introduction to Supply Chain Management	4
SCM 104	Introduction to Transportation Logistics	4

Third term

BA 206	Management Fundamentals I	4
BA 286	Managing Business Processes	4
SCM 105	Trucking Operations Management	4
SCM 102	Logistics Management I	4

Fourth term

WR 214	Business Writing	3
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CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Marketing Communications

PROGRAM DESCRIPTION

COCC's Marketing Communications Certificate is designed to give students the skills in developing content for various marketing materials used in promoting a business and its products or services. Emphasis is placed on electronic media as well as traditional advertising tools. All coursework may be applied to an AAS Business degree.

COST OF PROGRAM

Standard tuition, student fees and textbooks.

PROGRAM PREPARATION AND PREREQUISITES

Recommended

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 65 placement or completion of MTH 60 ("C" or better)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

The required courses for the certificate are listed below under Program Course Requirements. 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.

PROGRAM STANDARDS

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.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

The following is a suggested course of study for students interested in pursuing a Marketing Communications certificate and will depend on course availability. A recommended sequence of the courses required for this certificate is listed below.

First term

BA 223	Marketing Principles I	4
CIS 120	Computer Concepts or Computer Competency Test	0-4
WR 121	English Composition	4

Second term

BA 232	Branding	4
BA 261	Consumer Behavior	4
CIS 131	Software Applications	4
WR 214	Business Communications	3

Third term

BA 233	Internet Marketing	4
BA 239	Advertising	4
CIS 178	Internet in Depth	4
CIS 195	Web Development I	4

Fourth term

BA 289	Marketing Capstone Project	4
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BUSINESS ADMINISTRATION OFFICE ASSISTANT

Certificate of Completion – 47 credits

BUSINESS ADMINISTRATION RETAIL MANAGEMENT

Certificate of Completion – 46-50 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Office Assistant

PROGRAM DESCRIPTION

The Office Assistant certificate is designed for persons preparing for immediate entry-level employment in office occupations and those already in business who desire to update and enhance their skills.

COST OF PROGRAM

Standard tuition, student fees and textbooks.

PROGRAM PREPARATION AND PREREQUISITES

Recommended

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 65 placement or completion of MTH 60 ("C" or better)
- Keyboarding skills at 25 words per minute or better. (CIS 010 is recommended for basic keyboarding skills acquisition.)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Full-time suggested term-by-term coursework schedule assumes college-level placement in reading, writing and math. Part-time students and those with schedule conflicts, should see an advisor for proper course sequencing and prerequisite requirements.

PROGRAM STANDARDS

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.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

The following is a suggested course of study for students interested in pursuing an Office Assistant certificate and will depend on course availability. A recommended sequence of the courses required for this certificate is listed below.

First term

BA 101	Introduction to Business	4
BA 104	Business Math	3
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts	4
WR 121	English Composition	4

Second term

BA 178	Customer Service	3
BA 285	Business Human Relations	3
CIS 131	Software Applications	4
WR 214	Business Communications	3

Third term

CIS 125E	Excel	4
Plus select two from the following:		8
CIS 125A	Access	
CIS 125DW	Introduction to Dreamweaver	
CIS 125G	Photoshop	
CIS 140	A+ Essentials	
CIS 122	Introduction to Programming	
CIS 178	Internet in Depth	
CIS 195	Web Development I	

Fourth term

OA 280	Co-op Work Experience Office Administration	4
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CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Retail Management

PROGRAM DESCRIPTION

COCC's Retail Management certificate is designed to give students a foundation for careers in retail business management. All coursework may be applied to an AAS Business degree.

COST OF PROGRAM

Standard tuition, student fees and textbooks.

PROGRAM PREPARATION AND PREREQUISITES

Recommended

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 65 placement or completion of MTH 60 ("C" or better)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

The required courses for the certificate are listed below under Program Course Requirements. 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.

PROGRAM STANDARDS

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.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

The following is a suggested course of study for students interested in pursuing a Retail Management certificate and will depend on course availability. A recommended sequence of the courses required for this certificate is listed below.

First term

BA 101	Introduction to Business	4
or Business elective		
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts	0-4
or Computer Competency Test		
WR 121	English Composition	4

Second term

BA 178	Customer Service	3
or Business elective		
BA 104	Business Math	3
BA 206	Management Fundamentals I	4
BA 223	Marketing Principles I	4
BA 285	Business Human Relations	3

Third term

BA 224	Human Resources Management	4
BA 249	Retailing	4
CIS 131	Software Applications	4
SP 111	Fundamentals of Public Speaking	3
or SP 219 Small Group Communication		

Fourth term

WR 214	Business Communications	3
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BUSINESS ADMINISTRATION – BUSINESS

Associate of Applied Science (AAS) Degree with Specializations

101-106 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Business Administration with specialization

PROGRAM DESCRIPTION

The AAS coursework prepares students for immediate employment in business occupations. Business administration AAS degrees may be awarded indicating emphasis in the following areas of specialization: General Business; Accounting; Information Systems Management; Management; Retail Operations Management; Hotel, Tourism and Recreation Management; or Small Business/Entrepreneurship.

COST OF PROGRAM

Standard tuition, student fees and textbooks.

PROGRAM PREPARATION AND PREREQUISITES

Recommended

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 65 placement or completion of MTH 60 ("C" or better)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

The following is provided to assist students in planning their schedule. Students should take as many Level 1 courses as possible before attempting Level 2 courses, Level 2 courses before Level 3 courses, etc. This will enable students to approach each class with the background necessary to succeed and enjoy the course content.

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

Level 1 Foundation Courses

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. Students should take MTH 60 or have a placement score above MTH 60.

CIS 120	Computer Concepts	0-4
or Computer Competency Test		
CIS 131	Software Applications	4
WR 121	English Composition	4
BA 111	Applied Accounting I	3
BA 101	Introduction to Business	4
BA 104	Business Math	3
BA 178	Customer Service	3
SP 111	Fundamentals of Public Speaking	3
or SP 219	Small Group Communication	

Level 2 Core Courses

Core courses that will allow students to begin to understand concepts in their specialization courses taken in Level 3.

CIS 125E	Excel	4
WR 214	Business Communications	3
BA 112	Applied Accounting II	3
BA 113	Applied Accounting III	3
BA 206	Management Fundamentals I	4
BA 223	Marketing Principles I	4
BA 226	Business Law I	4
BA 285	Business Human Relations	3

Level 3 Specialization Courses

» GENERAL BUSINESS SPECIALIZATION

Students interested in a general business focus, can take an additional 20 credits of coursework with advisor approval. Coursework may include a BA or HTRM prefix from the Business electives list or CEED Cohort (CEED 201-206) and earn an AAS in General Business.

» ACCOUNTING SPECIALIZATION

This specialization is for those who desire to be accountants for a small- to medium-sized business. (21 credits)

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

» INFORMATION SYSTEMS MANAGEMENT SPECIALIZATION

This specialization is for those who desire to apply software and computer technology to business applications such as accounting, human resources and manufacturing. (28 credits)

CIS 235	IT in Business	4
CIS 125A	Access	4
CIS 135DB	Database Theory/SQL	4
CIS 140	A+ Essentials	4
Select two from the following:		8
CIS 178	Internet in Depth (4)	
CIS 179	Networking Essentials (4)	
CIS 195	Web Development I (4)	
CIS 295	Web Development II (4)	

» MANAGEMENT SPECIALIZATION

This specialization is designed for those students who aspire to be managers in a small/medium-sized organization. This degree can also help those who wish to be more effective managers in their current position. (20 credits)

BA 207	Management Fundamentals II	4
BA 224	Human Resource Management	4
Select from the following:		12
BA 199	Special Topics-Business (1-5)	
BA 203	Global Business (3)	
BA 211	Financial Accounting I (4)	
BA 212	Financial Accounting II (4)	
BA 213	Managerial Accounting (4)	
BA 229	QuickBooks (3)	
BA 233	Internet Marketing (4)	
BA 238	Selling and Negotiation (4)	
BA 250	Entrepreneurship (4)	
BA 261	Consumer Behavior (4)	
BA 286	Managing Business Processes (4)	

» SMALL BUSINESS/ENTREPRENEURSHIP SPECIALIZATION

This specialization is for those who plan to start up and run a successful business or grow an existing business. (20 credits)

BA 250	Entrepreneurship	4
CEED 201	Business Modeling	2
CEED 202	Business Intelligence	2
CEED 203	Strategic Marketing	2
CEED 204	Strategic Management	2
CEED 205	Entrepreneurial Finance	2
CEED 206	Presenting To Win	2
Select one from the following:		4
BA 207	Management Fundamentals II	
BA 233	Internet Marketing	
BA 239	Advertising	
BA 261	Consumer Behavior	
CEED 213	Marketing Research	

BUSINESS ADMINISTRATION – BUSINESS *(continued)*

Associate of Applied Science (AAS) Degree with Specializations
101-106 credits

» RETAIL OPERATIONS MANAGEMENT SPECIALIZATION

This specialization is for those who desire to be sales representatives, sales management marketing directors, project managers, human resources managers, customer service specialists and public relations specialists. (20 credits)

BA 224	Human Resources Management	4
BA 239	Advertising	4
BA 249	Retailing	4
BA 261	Consumer Behavior	4
Select one from the following:		4
BA 199	Special Topics-Business	
BA 207	Management Fundamentals II	
BA 238	Selling and Negotiation	

» HOTEL, TOURISM AND RECREATION MANAGEMENT SPECIALIZATION

This specialization is for those who desire to operate or manage hotels, restaurants or recreation businesses. (20 credits)

GEOG 212	Tourism and Recreation	3
HTRM 105	Food Service Management	4
HTRM 106	Lodging Management	3
HTRM 233	Event Planning	3
Business electives (BA prefixes or CIS 135DB)		7

Level 4 Advanced Core and Capstone Courses

These courses should be taken after completion of Level 1 and 2 and may be taken concurrently with specialization courses (Level 3). Instructor permission required.

BA 220	Business Analysis and Budgeting	4
BA 222	Business Finance	3
BA 280	Co-op Work Experience Business	3
BA 290	Business Seminar	3

REQUIRED DEGREE SUPPORT COURSES

These courses are required for AAS degrees and may be taken at any time.

General education requirements

See Discipline Studies list, pages 44-45		8
Recommended:		
GEOG 106	Economic Geography	4
HHP 295 or 242 or 266 or 258 or 231 or 252A		3-4
HHP activity course		1

BUSINESS ADMINISTRATION – BUSINESS TRANSFER

Associate of Science Oregon Transfer (ASOT) Business Degree

90 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Science Oregon Transfer-Business

PROGRAM DESCRIPTION

The Associate of Science Oregon Transfer Business degree (ASOT) is designed for students with a high level of certainty about their decision to earn a bachelor's degree with a major in business from an Oregon University system school.

PROGRAM PREPARATION AND PREREQUISITES

Recommended

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 20/31 placement or completion of MTH 10 ("C" or better)

MINIMUM GPA OR GRADE REQUIREMENTS

All courses must be completed at a "C" grade or better.

TRANSFER AND ADVISING INFORMATION

Any student having the Associate of Science Oregon Transfer – Business (ASOT – Business) degree recognized on an official college transcript will have met the lower division General Education requirements of baccalaureate degree programs of any institution in the Oregon University System.

Students transferring under this agreement will have junior status for registration purposes. Course, class standing, or GPA requirements for specific majors, departments, or schools are not necessarily satisfied by an ASOT – Business degree.

All courses should be aligned with the student's intended program of study and the degree requirements of the baccalaureate institution to which the student plans to transfer. Admission to an OUS institution is not guaranteed upon completion of the ASOT – Business degree. A student is encouraged to work with an advisor in the selection of courses within the ASOT – Business degree for alignment with the institution to which the student intends to transfer.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

Specific Oregon public universities have identified additional lower-division business requirements to accompany the ASOT/Business; see handbook.ccwdbforms.net/handbook/appendices/appendix-j--asot--business/.

Students planning to transfer to OSU-Cascades should make the following choices to meet OSU requirements: SP 111 (instead of other SP options listed), MTH 111, MTH 241, MTH 243 and MTH 244, and BA 250.

FOUNDATIONAL REQUIREMENTS

Minimum of eight credits of college transfer writing courses:

WR 121	English Composition	4
WR 122	English Composition	4
and/or WR 227 Technical Writing		

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

A minimum of three courses which include MTH 243, plus two (2) additional courses of MTH 105 or higher.

DISCIPLINE STUDIES REQUIREMENTS

Discipline studies courses are listed on pages 44 and 45. Courses numbered 199 or 299 will not fulfill discipline studies requirements. One of the Discipline Studies courses below must be a cultural literacy course, designated with an (*).

Arts and Letters

Three courses chosen from two or more disciplines.

Social Sciences

EC 201	Microeconomics	4
EC 202	Macroeconomics	4

Two (2) additional Social Science courses, one of which must have a different prefix than EC.

Science/Math/Computer Science

Four courses from at least two disciplines including at least three laboratory courses in biological and/or physical science.

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

Recommended courses to take as electives are BA 206 and BA 223. It is recommended that students planning to transfer to OSU take BA 250 and HHP 295. Sufficient number of transfer-level courses to meet total degree requirements of at least 90 credits may include a maximum of 12 Career and Technical Education (CTE) credits. See advisor for recommended electives as well as specific institution transfer requirements.

CASCADE CULINARY INSTITUTE – BAKING AND PASTRY ARTS

Career Pathway/Certificate of Completion

13 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate, Baking and Pastry Arts

PROGRAM DESCRIPTION

The Baking and Pastry Arts Career Pathways Certificate program is recognized as a Career Pathway Certificate of Completion (CPCC) by the Oregon Department of Community Colleges and Workforce Development (CCWD). Information about the Career Pathway Certificate of Completion and a flowchart can be found at www.cocc.edu/career-pathways/. This program is designed to expose students to foundation skill mastery of classical baking and pastry arts techniques and to serve as a competency-based learning experience that prepares students for a successful entry into the hospitality industry. Emphasis is given to technique and ratios over that of recipes. The curriculum delivers hands-on applied learning grounded in theory at an estimated ratio of 25 percent hands-on to 75 percent theory. Instructors conduct daily assessment of student learning in the areas of applied competency-based skill development, professionalism, food safety and sanitation, and organization; combined with standard homework assignments, projects, quizzes and exams. Field trips and guest speakers serve to enhance the student learning experience and to provide up-to-date information regarding current industry practices. Participation in social and community service learning activities also provide informal learning an industry networking opportunities for students outside of the classroom. Unique to Cascade Culinary Institute, this program also features integrated across-the-curriculum applied learning modules that serve to enhance the student learning experience and provide repetition of knowledge and skill that will support successful entry into the workforce. Based upon the Career Pathway educational model, program completers are encouraged to consider the pursuit of the next level of education at the one-year certificate or AAS degree level as their next career pathway progression.

COST OF PROGRAM

In addition to standard COCC tuition rates, students should anticipate the following estimated program costs:

- \$25 www.optimalresume.com membership
- \$135 per credit fee for lab and lecture/lab courses
- \$1,141 Supplies: Toolkit, uniforms and textbooks
- \$94 COCC Technology, Student Activity and Green Energy Fees

For an estimate of total tuition, supplies and fees please visit www.cascadeculinary.com/tuition-and-fees/. Housing Expense Estimate: Students who would like to research on-campus housing costs should visit www.cocc.edu/Residence-Life/.

PROGRAM ENTRANCE REQUIREMENTS

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 60 placement (equivalent to RMGT 90) or completion of MTH 20/31 ("C" or better)

MINIMUM GPA AND GRADE REQUIREMENTS

All courses required for the program must be completed at a "C" grade or better and graduates must have a cumulative 2.0 GPA or higher.

REGISTRATION INFORMATION

The Baking and Pastry Arts Career Pathways Certificate program is designed to be delivered in a cohort-based educational model; hence, coursework is experienced in sequence that benefits progressive skill development at an introductory level. Students are required to attend the coursework in sequence with the first-term cohort curriculum. Baking and Pastry Arts program cohorts are scheduled to begin during both winter and summer terms. Twenty-five seats are available in each cohort group. A maximum of 50 seats are available in the Baking and Pastry Arts program annually. Cascade Culinary Institute reserves the right to deviate from the below cohort admittance schedule.

Baking and Pastry Arts Program - Cohort Admittance Schedule

Winter	25 Students (1 cohort)
Summer	25 Students (1 cohort)

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program. Students who do not meet this standard may be dismissed from their assigned cohort and requested to retake any necessary courses before advancing to the following term, which is contingent upon available space in the course(s) the student needs to retake. Students may be re-admitted to the program with an approved academic performance plan that is developed with their advisor. Additional information regarding program standards and student conduct is outlined in the Cascade Culinary Institute Student Handbook, which is available at www.cascadeculinary.com.

TRANSFER INFORMATION

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.

BAKING AND PASTRY ARTS PROGRAM - COHORT COURSE SEQUENCING REQUIREMENTS

Term One

RMGT 90	Applied Math for Culinary Arts	4
BAK 110	Baking and Pastry Foundations I	4
RMGT 120	Student Academic Success and Restaurant Industry Career Preparation	1
WR 121	English Composition	4

CASCADE CULINARY INSTITUTE – BAKING AND PASTRY ARTS

Certificate of Completion

54 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate, Baking and Pastry Arts

PROGRAM DESCRIPTION

The Baking and Pastry Arts Certificate program is designed to expose students to the step-by-step process, from foundation to advanced skill mastery, of classical and contemporary baking and pastry arts techniques and to serve as a competency-based learning experience that prepares students for a successful career within the hospitality industry. Emphasis is given to technique and ratios over that of recipes. The curriculum delivers hands-on applied learning grounded in theory at an estimated ratio of 70 percent hands-on to 30 percent theory. Instructors conduct daily assessment of student learning in the areas of applied competency-based skill development, professionalism, food safety and sanitation, and organization; combined with standard homework assignments, projects, quizzes and exams. Field trips and guest speakers serve to enhance the student learning experience and to provide up-to-date information regarding current industry practices. Participation in social and community service learning activities also provide informal learning an industry networking opportunities for students outside of the classroom. Unique to Cascade Culinary Institute, this program also features integrated across-the-curriculum applied learning modules that serve to enhance the student learning experience and provide repetition of knowledge and skill that will support successful entry into the workforce.

COST OF PROGRAM

In addition to standard COCC tuition rates, students should anticipate the following estimated program costs:

- \$25 www.optimalresume.com membership
- \$115 American Culinary Federation Membership and alumni chef coat
- \$123 OLCC Liquor Control Card, American Red Cross First-Aid/CPR Certification
- \$135 per credit fee for lab and lecture/lab courses
- \$2,344 Supplies: Toolkit, uniforms and textbooks
- \$392 COCC Technology, Student Activity and Green Energy Fees

For an estimate of total tuition, supplies and fees please visit www.cascadeculinary.com/tuition-and-fees/. Housing Expense Estimate: Students who would like to research on-campus housing costs should visit www.cocc.edu/Residence-Life/.

PROGRAM ENTRANCE REQUIREMENTS

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 60 placement (equivalent to RMGT 90) or completion of MTH 20/31 ("C" or better)

MINIMUM GPA AND GRADE REQUIREMENTS

All required program courses must be completed at a "C" grade or better, and graduates must have a cumulative 2.0 GPA or higher.

REGISTRATION INFORMATION

The Baking and Pastry Arts Certificate program is designed to be delivered in a cohort-based educational model; hence, coursework is experienced in a sequencing that benefits progressive skill development from an introductory to advanced level. Students are required to attend the coursework in sequence. Baking and Pastry Arts program cohorts are scheduled to begin during both winter and summer terms. Twenty-five seats are available in each cohort group. A maximum of 50 seats are available in the Baking and Pastry Arts program annually. Cascade Culinary Institute reserves the right to deviate from the below cohort admittance schedule.

Baking and Pastry Arts Program - Cohort Admittance Schedule

Winter	25 Students (1 cohort)
Summer	25 Students (1 cohort)

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program. Students who do not meet this standard may be dismissed from their assigned cohort and requested to retake any necessary courses before advancing to the following term, which is contingent upon available space in the course(s) the student needs to retake. Students may be re-admitted to the program with an approved academic performance plan that is developed with their advisor. Additional information regarding program standards and student conduct is outlined in the Cascade Culinary Institute Student Handbook, which is available at www.cascadeculinary.com.

TRANSFER INFORMATION

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.

BAKING AND PASTRY ARTS PROGRAM - COHORT COURSE SEQUENCING REQUIREMENTS

Term One

RMGT 90	Applied Math for Culinary Arts	4
BAK 110	Baking and Pastry Foundations I	4
RMGT 120	Student Academic Success and Restaurant Industry Career Preparation	1
WR 121	English Composition	4

Term Two

RMGT 130	Hospitality Industry Supervision and Principles of Leadership	3
BAK 140	Baking and Pastry Foundations II	4
RMGT 150	Procurement, Ingredient Identification and Food Cost Control	3
BAK 160	Applied Basic Culinary Arts Principles	4

Term Three

BAK 170	Baking and Pastry Foundations III	4
BAK 180	Contemporary Custards, Frozen Desserts and Tarts	4
RMGT 190	Contemporary Dining Room Service Operations, Etiquette and Guest Relations	5
BAK 195	Baking and Pastry Arts Practical and Written Examination I	1

Term Four

RMGT 200	Comprehensive Kitchen Operations for the Restaurant Industry	4
BAK 210	Modern Sugar Art and Chocolate Décor	4
NUTR 230	Culinary Nutrition and Applied Techniques of Healthy Cooking	4
RMGT 260	Restaurant Industry Career Success and Internship Preparation	1

CASCADE CULINARY INSTITUTE – BAKING AND PASTRY ARTS

Associate of Applied Science (AAS) Degree
92 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Baking and Pastry Arts

PROGRAM DESCRIPTION

The Baking and Pastry Arts AAS Degree program is designed to expose students to the step-by-step process, from foundation to advanced skill mastery, of classical and contemporary baking and pastry arts techniques and to serve as a competency-based learning experience that prepares students for a successful career within the hospitality industry. Emphasis is given to technique and ratios over that of recipes. The curriculum delivers hands-on applied learning that is grounded in theory at an estimated ratio of 80 percent hands-on to 20 percent theory. Instructors conduct daily assessment of student learning in the areas of applied competency-based skill development, professionalism, food safety and sanitation, and organization; combined with standard homework assignments, projects, quizzes and exams. Field trips and guest speakers serve to enhance the student learning experience and to provide up-to-date information regarding current industry practices. Participation in social and community service learning activities also provide informal learning an industry networking opportunities for students outside of the classroom. Unique to Cascade Culinary Institute, this program also features integrated across-the-curriculum applied learning modules that serve to enhance the student learning experience and provide repetition of knowledge and skill that will support successful entry into the workforce.

COST OF PROGRAM

In addition to standard COCC tuition rates, students should anticipate the following estimated program costs:

- \$25 www.optimalresume.com membership
- \$115 American Culinary Federation Membership and alumni chef coat
- \$123 OLCC Liquor Control Card, American Red Cross First-Aid/CPR Certification
- \$135 per credit fee for lab and lecture/lab courses
- \$2,837 Supplies: Toolkit, uniforms and textbooks
- \$392 COCC Technology, Student Activity and Green Energy Fees

For an estimate of total tuition, supplies and fees please visit www.cascadeculinary.com/tuition-and-fees/. Housing Expense Estimate: Students who would like to research on-campus housing costs should visit www.cocc.edu/Residence-Life/.

PROGRAM ENTRANCE REQUIREMENTS

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 60 placement (equivalent to RMGT 90) or completion of MTH 20/31 ("C" or better)

MINIMUM GPA AND GRADE REQUIREMENTS

All required program courses must be completed at a "C" grade or better, and graduates must have a cumulative 2.0 GPA or higher.

REGISTRATION INFORMATION

The Baking and Pastry Arts AAS Degree program is designed to be delivered in a cohort-based educational model; hence, coursework is experienced in a sequence that benefits progressive skill development from an introductory to advanced level. Students are required to attend the coursework in sequence. Baking and Pastry Arts program cohorts are scheduled to begin during both winter and summer terms. Twenty-five seats are available in each cohort group. A maximum of 50 seats are available in the Baking and Pastry Arts program annually. Cascade Culinary Institute reserves the right to deviate from the below cohort admittance schedule.

Baking and Pastry Arts Program - Cohort Admittance Schedule

Winter	25 Students (1 cohort)
Summer	25 Students (1 cohort)

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program. Students who do not meet this standard may be dismissed from their assigned cohort and requested to retake any necessary courses before advancing to the following term, which is contingent upon available space in the course(s) the student needs to retake. Students may be re-admitted to the program with an approved academic performance plan that is developed with their advisor. Additional information regarding program standards and student conduct is outlined in the Cascade Culinary Institute Student Handbook, which is available at www.cascadeculinary.com.

TRANSFER INFORMATION

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.

BAKING AND PASTRY ARTS PROGRAM - COHORT COURSE SEQUENCING REQUIREMENTS

Term One

RMGT 90	Applied Math for Culinary Arts	4
BAK 110	Baking and Pastry Foundations I	4
RMGT 120	Student Academic Success and Restaurant Industry Career Preparation	1
WR 121	English Composition	4

Term Two

RMGT 130	Hospitality Industry Supervision and Principles of Leadership	3
BAK 140	Baking and Pastry Foundations II	4
RMGT 150	Procurement, Ingredient Identification and Food Cost Control	3
BAK 160	Applied Basic Culinary Arts Principles	4

Term Three

BAK 170	Baking and Pastry Foundations III	4
BAK 180	Contemporary Custards, Frozen Desserts and Tarts	4
RMGT 190	Contemporary Dining Room Service Operations, Etiquette and Guest Relations	5
BAK 195	Baking and Pastry Arts Practical Examination I	1

Term Four

RMGT 200	Comprehensive Kitchen Operations for the Restaurant Industry	4
BAK 210	Modern Sugar Art and Chocolate Décor	4
BAK 220	Wedding, Celebration and Specialty Cakes	4
NUTR 230	Culinary Nutrition and Applied Techniques of Healthy Cooking	4

Term Five

BAK 240	The Craft of Artisan Breads	4
BAK 250	Petit Fours, Candies and Specialty Cakes	4
RMGT 260	Restaurant Industry Career Success and Internship Preparation	1
SPEC (s/p)	Specialization Course (see list, right)	4

Term Six

CUL 270	Culinary Arts Capstone Internship	6
BAK 275	Baking and Pastry Arts Practical Examination II	1
SPEC (s/p)	Specialization Course (see list, right)	4
SPEC (s/p)	Specialization Course (see list, right)	4

Term Seven

BAK 280	Baking and Pastry Industry Internship	6
RMGT 290	Service Learning and E-Folio Presentation	1

CASCADE CULINARY INSTITUTE – BAKING AND PASTRY ARTS *(continued)*Associate of Applied Science (AAS) Degree
92 credits**SPECIALIZATION (S) AND PROFESSIONAL (P) COURSE OFFERINGS**

BAK 235s	Classical French Pastries	4
BAK 245s	Advanced Sugar Décor and Chocolate Sculpting	4
CUL 245s	Modernist Cuisine and the Evolution of Cooking	4
CUL 255s	Event Planning and Execution with Modern Banquet Cookery	4
CUL 265s	Advanced Skill Development and Culinary Competition Mastery	4
NUTR 100s	Nutrition Therapy and Clinical Management Practices	3
NUTR 130s	Modern Vegetarian and Special Dietary Culinary Techniques	4
RMGT 275s	Hospitality Industry Marketing: The Blogosphere, Food Photography, and Social Media	3
RMGT 295s	Restaurant Industry Entrepreneurship and Concept Development	3
SUST 100s	Sustainable Food Production Systems Overview and Operational Assessment	3
SUST 150s	Applied Growing and Raising of Farm Plants and Animals	4
SUST 180s	Applied Harvesting and Food Preservation Principles	4
SUST 190s	Farm-to-Table and Sustainable Cuisine Practices	4
SUST 255s	Advanced Artisan Breads and Showpieces	4
BAK 268p	Research and Development of Modern Petit Fours and Candies	1
BAK 269p	Advanced Dessert Plating, Airbrush and Silicone Mold Casting	1
CUL 270p	Advanced Menu Research and Development	1
CUL 271p	Advanced Food Styling and Presentation, Photography and Blogging	1
CUL 272p	Artisan Pasta Techniques and Modern Sauce / Soup Preparation	1
CUL 273p	Knowledge Bowl Competition Mastery	1
CUL 274p	Advanced Artisan Cheese Making, Specialty Charcuterie and Fermentation	1

SPECIALIZATION COURSE OFFERINGS INFORMATION

This program provides an opportunity to take 12 credits of specialization courses with the intent to provide a customized option for students to select content that is oriented toward their individual interests and career goals. Students are required to take the specialization courses in alignment with the cohort program sequencing. Exceptions should be requested in writing to the director of Cascade Culinary Institute. These courses are denoted with an "s" (specialization) or "p" (professional) following the course number in the catalog. Every specialization course is not available every term and specialization courses are offered on a rotating schedule based upon forecasted student demand. Students will often experience an afternoon or evening schedule during the specialization courses and should plan their schedule for this requirement in advance to the fifth and sixth term of the cohort curricular sequencing. Specialization courses are listed above.

CCI CAPSTONE INTERNSHIP

The Baking and Pastry Arts program boasts of curriculum that concludes with an internal 200-hour internship at the student-operated restaurant, Elevation (www.elevationbend.com). This capstone course enables students to experience a blending of food preparation and service skills at a repetitive level to ensure the growth of student confidence and experience that will enable them to be better prepared as they transition from their academic career to the industry internship and final placement within the hospitality industry. Students will experience an evening schedule during CUL 270 and should plan their schedule for this requirement in advance to the sixth term of the cohort curricular sequencing. This is a pass/no pass course.

BAKING AND PASTRY ARTS INDUSTRY INTERNSHIP

This 200-hour internship serves as a work experience supervised by a culinary professional at the executive pastry chef or restaurant manager/owner level in a foodservice setting that is designed to expand career knowledge and experiential confidence while interacting with the preparation of desserts/breads. Students will receive a diverse work experience that is designed on a systematic rotation of different stations and responsibilities within the organization. The internship is intended to serve as a formal opportunity for students to seek gainful employment prior to program completion. Students are required to complete three successful terms of progressive curriculum experience prior to the industry internship. If a student desires to complete the internship out of sequence, they are required to request approval from the Cascade Culinary Institute director. This is a pass/no pass course.



CASCADE CULINARY INSTITUTE – CULINARY ARTS

Career Pathway/Certificate of Completion
13 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate, Culinary Arts

PROGRAM DESCRIPTION

The Culinary Arts Career Pathways Certificate program is recognized as a Career Pathway Certificate of Completion (CPC) by the Oregon Department of Community Colleges and Workforce Development (CCWD). Information about the Career Pathway Certificate of Completion and a flowchart can be found at www.cocc.edu/career-pathways/. This program is designed to expose students to foundation skill mastery of classical culinary arts techniques and to serve as a competency-based learning experience that prepares students for a successful entry into the hospitality industry. Emphasis is given to technique and ratios over that of recipes. The curriculum delivers hands-on applied learning grounded in theory at an estimated ratio of 25 percent hands-on to 75 percent theory. Instructors conduct daily assessment of student learning in the areas of applied competency-based skill development, professionalism, food safety and sanitation, and organization; combined with standard homework assignments, projects, quizzes and exams. Field trips and guest speakers serve to enhance the student learning experience and to provide up-to-date information regarding current industry practices. Participation in social and community service learning activities also provide informal learning an industry networking opportunities for students outside of the classroom. Unique to Cascade Culinary Institute, this program also features integrated across-the-curriculum applied learning modules that serve to enhance the student learning experience and provide repetition of knowledge and skill that will support successful entry into the workforce. Based upon the Career Pathway educational model, program completers are encouraged to consider the pursuit of the next level of education at the one-year certificate or AAS degree level as their next career pathway progression.

COST OF PROGRAM

In addition to standard COCC tuition rates, students should anticipate the following estimated program costs:

- \$25 www.optimalresume.com membership
- \$135 per credit fee for lab and lecture/lab courses
- \$1,257 Supplies: Toolkit, uniforms and textbooks
- \$94 COCC Technology, Student Activity and Green Energy Fees

For an estimate of total tuition, supplies and fees please visit www.cascadeculinary.com/tuition-and-fees/. Housing Expense Estimate: Students who would like to research on-campus housing costs should visit www.cocc.edu/Residence-Life/.

PROGRAM ENTRANCE REQUIREMENTS

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 60 placement (equivalent to RMGT 90) or completion of MTH 20/31 ("C" or better)

MINIMUM GPA AND GRADE REQUIREMENTS

All courses required for the program must be completed at a "C" grade or better and graduates must have a cumulative 2.0 GPA or higher.

REGISTRATION INFORMATION

The Culinary Arts short-term certificate program is designed to be delivered in a cohort-based educational model; hence, coursework is experienced in a sequence that benefits progressive skill development at an introductory level. Students are required to attend the coursework in sequence with the first-term cohort curriculum. Culinary Arts program cohorts are scheduled to begin during fall, winter, spring and summer terms. Twenty-five seats are available in each cohort group. A maximum of 100 seats are available in the Culinary Arts program annually. Cascade Culinary Institute reserves the right to deviate from the below cohort admittance schedule.

Culinary Arts Program - Cohort Admittance Schedule

Fall	50 students (2 cohorts)
Winter	25 students (1 cohort)
Spring	25 students (1 cohort)
Summer	25 students (1 cohort)

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program. Students who do not meet this standard may be dismissed from their assigned cohort and requested to retake any necessary courses before advancing to the following term, which is contingent upon available space in the course(s) the student needs to retake. Students may be re-admitted to the program with an approved academic performance plan that is developed with their advisor. Additional information regarding program standards and student conduct is outlined in the Cascade Culinary Institute Student Handbook, which is available at www.cascadeculinary.com.

TRANSFER INFORMATION

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.

CULINARY ARTS PROGRAM - COHORT COURSE SEQUENCING REQUIREMENTS

Term One		
RMGT 90	Applied Math for Culinary Arts	4
CUL 110	Culinary Arts Foundations I	4
RMGT 120	Student Academic Success and Restaurant Industry Career Preparation	1
WR 121	English Composition	4

CASCADE CULINARY INSTITUTE – CULINARY ARTS

Certificate of Completion

50 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate, Culinary Arts

PROGRAM DESCRIPTION

The Culinary Arts Certificate program has been accredited by the American Culinary Federation Foundation Accrediting Commission since 2003. This program is designed to expose students to the step-by-step process, from foundation to advanced skill mastery, of classical and contemporary culinary arts techniques and to serve as a competency-based learning experience that prepares students for a successful career within the hospitality industry. Emphasis is given to technique and ratios over that of recipes. The curriculum delivers hands-on applied learning grounded in theory at an estimated ratio of 70 percent hands-on to 30 percent theory. Instructors conduct daily assessment of student learning in the areas of applied competency-based skill development, professionalism, food safety and sanitation, and organization; combined with standard homework assignments, projects, quizzes and exams. Field trips and guest speakers serve to enhance the student learning experience and to provide up-to-date information regarding current industry practices. Participation in social and community service learning activities also provide informal learning and industry networking opportunities for students outside of the classroom. Unique to Cascade Culinary Institute, this program also features integrated cross-the-curriculum applied learning modules that serve to enhance the student learning experience and provide repetition of knowledge and skill that will support successful entry into the workforce. Information about program accreditation can be found at: www.acfchefs.org.

COST OF PROGRAM

In addition to standard COCC tuition rates, students should anticipate the following estimated program costs:

- \$25 www.optimalresume.com membership
- \$115 American Culinary Federation Membership and alumni chef coat
- \$123 OLCC Liquor Control Card, American Red Cross First-Aid/CPR Certification
- \$135 per credit fee for lab and lecture/lab courses
- \$1,996 Supplies: Toolkit, uniforms and textbooks
- \$363 COCC Technology, Student Activity and Green Energy Fees

For an estimate of total tuition, supplies and fees please visit www.cascadeculinary.com/tuition-and-fees/. Housing Expense Estimate: Students who would like to research on-campus housing costs should visit www.cocc.edu/Residence-Life/.

PROGRAM ENTRANCE REQUIREMENTS

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 60 placement (equivalent to RMGT 90) or completion of MTH 20/31 ("C" or better)

MINIMUM GPA AND GRADE REQUIREMENTS

All courses required for the program must be completed at a "C" grade or better and graduates must have a cumulative 2.0 GPA or higher.

REGISTRATION INFORMATION

The Culinary Arts Certificate program is designed to be delivered in a cohort-based educational model; hence, coursework is experienced in a sequence that benefits progressive skill development at an introductory level. Students are required to attend the coursework in sequence. Culinary Arts program cohorts are scheduled to begin during fall, winter, spring and summer terms. Twenty-five seats are available in each cohort group. A maximum of 125 seats are available in the Culinary Arts program annually. Cascade Culinary Institute reserves the right to deviate from the below cohort admittance schedule.

Culinary Arts Program - Cohort Admittance Schedule

Fall	50 students (2 cohorts)
Winter	25 students (1 cohort)
Spring	25 students (1 cohort)
Summer	25 students (1 cohort)

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program. Students who do not meet this standard may be dismissed from their assigned cohort and requested to retake any necessary courses before advancing to the following term, which is contingent upon available space in the course(s) the student needs to retake. Students may be re-admitted to the program with an approved academic performance plan that is developed with their advisor. Additional information regarding program standards and student conduct is outlined in the Cascade Culinary Institute Student Handbook, which is available at www.cascadeculinary.com.

TRANSFER INFORMATION

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.

CULINARY ARTS PROGRAM - COHORT COURSE SEQUENCING REQUIREMENTS

Term One

RMGT 90	Applied Math for Culinary Arts	4
CUL 110	Culinary Arts Foundations I	4
RMGT 120	Student Academic Success and Restaurant Industry Career Preparation	1
WR 121	English Composition	4

Term Two

RMGT 130	Hospitality Industry Supervision and Principles of Leadership	3
CUL 140	Culinary Foundations II	4
RMGT 150	Procurement, Ingredient Identification and Food Cost Control	3

Term Three

CUL 170	Culinary Foundations III	4
CUL 180	Modern Garde Manger	4
RMGT 190	Contemporary Dining Room Service Operations, Etiquette and Guest Relations	5
CUL 195	Culinary Arts Practical and Written Examination I	1

Term Four

RMGT 200	Comprehensive Kitchen Operations for the Restaurant Industry	4
NUTR 230	Culinary Nutrition and Applied Techniques of Healthy Cooking	4
CUL 250	Applied Basic Baking and Pastry Principles	4
RMGT 260	Restaurant Industry Career Success and Internship Preparation	1

CASCADE CULINARY INSTITUTE – CULINARY ARTS

Associate of Applied Science (AAS) Degree

90 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Culinary Arts

PROGRAM DESCRIPTION

The Culinary Arts AAS degree has been accredited by the American Culinary Federation Foundation Accrediting Commission since 2003. This program is designed to expose students to the step-by-step process, from foundation to advanced skill mastery, of classical and contemporary culinary arts techniques and to serve as a competency-based learning experience that prepares students for a successful career within the hospitality industry. Emphasis is given to technique and ratios over that of recipes. The curriculum delivers hands-on applied learning that is grounded in theory at an estimated ratio of 80 percent hands-on to 20 percent theory. Instructors conduct daily assessment of student learning in the areas of applied competency-based skill development, professionalism, food safety and sanitation, and organization; combined with standard homework assignments, projects, quizzes and exams. Field trips and guest speakers serve to enhance the student learning experience and to provide up-to-date information regarding current industry practices. Participation in social and community service learning activities also provide informal learning and industry networking opportunities for students outside of the classroom. Unique to Cascade Culinary Institute, this program also features integrated across-the-curriculum applied learning modules that serve to enhance the student learning experience and provide repetition of knowledge and skill that will support successful entry into the workforce. Information about program accreditation can be found at: www.acfchefs.org.

COST OF PROGRAM

In addition to standard COCC tuition rates, students should anticipate the following estimated program costs:

- \$25 www.optimalresume.com membership
- \$115 American Culinary Federation Membership and alumni chef coat
- \$123 OLCC Liquor Control Card, American Red Cross First-Aid/CPR Certification
- \$135 per credit fee for lab and lecture/lab courses
- \$2,742 Supplies: Toolkit, uniforms and textbooks
- \$653 COCC Technology, Student Activity and Green Energy Fees

For an estimate of total tuition, supplies and fees please visit www.cascadeculinary.com/tuition-and-fees/. Housing Expense Estimate: Students who would like to research on-campus housing costs should visit www.cocc.edu/Residence-Life/.

PROGRAM ENTRANCE REQUIREMENTS

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 60 placement (equivalent to RMGT 90) or completion of MTH 20/31 ("C" or better)

MINIMUM GPA AND GRADE REQUIREMENTS

All courses required for the program must be completed at a "C" grade or better and graduates must have a cumulative 2.0 GPA or higher.

REGISTRATION INFORMATION

The Culinary Arts AAS program is designed to be delivered in a cohort-based educational model; hence, coursework is experienced in a sequence that benefits progressive skill development from an introductory to advanced level. Students are required to attend the coursework in sequence. Culinary Arts program cohorts are scheduled to have a quarterly start, which includes fall, winter, spring and summer term. Twenty-five seats are available in each cohort group. A maximum of 125 seats are available in the Culinary Arts program annually, as two cohorts start during fall term. Cascade Culinary Institute reserves the right to deviate from the below cohort admittance schedule.

Culinary Arts Program - Cohort Admittance Schedule

Fall	50 students (2 cohorts)
Winter	25 students (1 cohort)
Spring	25 students (1 cohort)
Summer	25 students (1 cohort)

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program. Students who do not meet this standard may be dismissed from their assigned cohort and requested to retake any necessary courses before advancing to the following term, which is contingent upon available space in the course(s) the student needs to retake. Students may be re-admitted to the program with an approved academic performance plan that is developed with their advisor. Additional information regarding program standards and student conduct is outlined in the Cascade Culinary Institute Student Handbook, which is available at www.cascadeculinary.com.

TRANSFER INFORMATION

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.

CULINARY ARTS PROGRAM - COHORT COURSE SEQUENCING REQUIREMENTS

Term One

RMGT 90	Applied Math for Culinary Arts	4
CUL 110	Culinary Arts Foundations I	4
RMGT 120	Student Academic Success and Restaurant Industry Career Preparation	1
WR 121	English Composition	4

Term Two

RMGT 130	Hospitality Industry Supervision and Principles of Leadership	3
CUL 140	Culinary Foundations II	4
RMGT 150	Procurement, Ingredient Identification and Food Cost Control	3
RMGT 160	Wine and Specialty Beverage Management and Service	3

Term Three

CUL 170	Culinary Foundations III	4
CUL 180	Modern Garde Manger	4
RMGT 190	Contemporary Dining Room Service Operations, Etiquette and Guest Relations	5
CUL 195	Culinary Arts Practical Examination I	1

Term Four

RMGT 200	Comprehensive Kitchen Operations for the Restaurant Industry	4
RMGT 210	Menu Composition and Analysis	3
CUL 220	International Cuisine and Global Flavor Profiling	4
NUTR 230	Culinary Nutrition and Applied Techniques of Healthy Cooking	4

Term Five

CUL 240	The Art of Butchery and Charcuterie	4
CUL 250	Applied Basic Baking and Pastry Principles	4
RMGT 260	Restaurant Industry Career Success and Internship Preparation	1
SPEC (s/p)	Specialization Course (see list, right)	4

Term Six

CUL 270	Culinary Arts Capstone Internship	6
CUL 275	Culinary Arts Practical Examination II	1
SPEC (s/p)	Specialization Course (see list, right)	4
SPEC (s/p)	Specialization Course (see list, right)	4

CASCADE CULINARY INSTITUTE – CULINARY ARTS *(continued)*

Associate of Applied Science (AAS) Degree
90 credits

Term Seven

CUL 280	Culinary Arts Industry Internship	6
RMGT 290	Service Learning and E-Folio Presentation	1

SPECIALIZATION (S) AND PROFESSIONAL (P) COURSE OFFERINGS

BAK 235s	Classical French Pastries	4
BAK 245s	Advanced Sugar Décor and Chocolate Sculpting	4
CUL 245s	Modernist Cuisine and the Evolution of Cooking	4
CUL 255s	Event Planning and Execution with Modern Banquet Cookery	4
CUL 265s	Advanced Skill Development and Culinary Competition Mastery	4
NUTR 100s	Nutrition Therapy and Clinical Management Practices	3
NUTR 130s	Modern Vegetarian and Special Dietary Culinary Techniques	4
RMGT 275s	Hospitality Industry Marketing: The Blogosphere, Food Photography, and Social Media	3
RMGT 295s	Restaurant Industry Entrepreneurship and Concept Development	3
SUST 100s	Sustainable Food Production Systems Overview and Operational Assessment	3
SUST 150s	Applied Growing and Raising of Farm Plants and Animals	4
SUST 180s	Applied Harvesting and Food Preservation Principles	4
SUST 190s	Farm-to-Table and Sustainable Cuisine Practices	4
SUST 255s	Advanced Artisan Breads and Showpieces	4
BAK 268p	Research and Development of Modern Petit Fours and Candies	1
BAK 269p	Advanced Dessert Plating, Airbrush and Silicone Mold Casting	1
CUL 270p	Advanced Menu Research and Development	1
CUL 271p	Advanced Food Styling and Presentation, Photography and Blogging	1
CUL 272p	Artisan Pasta Techniques and Modern Sauce / Soup Preparation	1
CUL 273p	Knowledge Bowl Competition Mastery	1
CUL 274p	Advanced Artisan Cheese Making, Specialty Charcuterie and Fermentation	1
SUST 275p	Modern Techniques of Canning and Food Preservation	1

SPECIALIZATION COURSE OFFERINGS INFORMATION

This program provides an opportunity to take 12 credits of specialization courses with the intent to provide a customized option for students to select content that is oriented toward their individual interests and career goals. Students are required to take the specialization courses in alignment with the cohort program sequencing. Exceptions should be requested in writing to the director of Cascade Culinary Institute. These courses are denoted with an "s" (specialization) or "p" (professional) following the course number in the catalog. Every specialization course is not available every term and specialization courses are offered on a rotating schedule based upon forecasted student demand. Students will often experience an afternoon or evening schedule during the specialization courses and should plan their schedule for this requirement in advance to the fifth and sixth term of the cohort curricular sequencing. Specialization courses are listed above.

CULINARY ARTS PROGRAM - ACCELERATED OPTION

The Culinary Arts AAS degree also has a special accelerated program option that can be completed in five terms. The intent of this option is to accommodate incoming students who possess a minimum of five years of culinary industry work experience, as well as the motivation and past academic performance (secondary or post-secondary) that evidences previous academic success. Unofficial transcripts of secondary and/or post-secondary education will be requested for review, along with 2-3 professional industry references. The average term course load for the accelerated-paced program is 17 credits. Students who are interested in the accelerated option must meet with the CCI director no later than 30 days prior to their desired program start date.

CCI CAPSTONE INTERNSHIP

The Culinary Arts program boasts of curriculum that concludes with an internal 200-hour internship at the student-operated restaurant, Elevation (www.elevationbend.com). This capstone course enables students to experience a blending of food preparation and service skills at a repetitive level to ensure the growth of student confidence and experience that will enable them to be better prepared as they transition from their academic career to the industry internship and final placement within the hospitality industry. Students will experience an evening schedule during CUL 270 and should plan their schedule for this requirement in advance to the sixth term of the cohort curricular sequencing. This is a pass/no pass course.

CULINARY ARTS INDUSTRY INTERNSHIP

This 200-hour internship serves as a work experience supervised by a culinary professional at the executive chef or restaurant manager/owner level in a foodservice setting that is designed to expand career knowledge and experiential confidence while interacting with the preparation of food. Students will receive a diverse work experience that is designed on a systematic rotation of different stations and responsibilities within the organization. The internship is intended to serve as a formal opportunity for students to seek gainful employment prior to program completion. Students are required to complete three successful terms of progressive curriculum experience prior to the industry internship. If a student desires to complete the internship out of sequence, they are required to request approval from the Cascade Culinary Institute director. This is a pass/no pass course.

CASCADE CULINARY INSTITUTE NUTRITION AND DIETARY MANAGEMENT

Certificate of Completion – 43 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate, Nutrition and Dietary Management

PROGRAM DESCRIPTION

The Nutrition and Dietary Management Certificate program was accredited by the Association of Nutrition and Foodservice Professionals (ANFP) in 2003. The ANFP accreditation standards require a well-rounded curriculum that represents the disciplines of foodservice management, human resources management, nutrition and medical nutrition therapy, and food safety; combined with a 200-hour industry internship. The Culinary Arts portion of this curriculum is designed to expose students to the step-by-step process of classical and contemporary culinary arts techniques and to serve as a competency-based learning experience that prepares students for a successful career within the hospitality industry. Emphasis is given to technique and ratios over that of recipes. The curriculum delivers hands-on applied learning grounded in theory at an estimated ratio of 50 percent hands-on to 50 percent theory. Instructors conduct daily assessment of student learning in the areas of applied competency-based skill development, professionalism, food safety and sanitation, and organization; combined with standard homework assignments, projects, quizzes and exams. Field trips and guest speakers serve to enhance the student learning experience and to provide up-to-date information regarding current industry practices. Participation in social and community service learning activities also provide informal learning an industry networking opportunities for students outside of the classroom. Unique to Cascade Culinary Institute, this program also features integrated across-the-curriculum applied learning modules that serve to enhance the student learning experience and provide repetition of knowledge and skill that will support successful entry into the workforce. Students completing the program will be prepared to sit for the national examination to become a Certified Dietary Manager (CDM) approved by the ANFP. Information about program accreditation can be found at: www.anfponline.org.

COST OF PROGRAM

In addition to standard COCC tuition rates, students should anticipate the following estimated program costs:

- \$25 www.optimalresume.com membership
- \$115 American Culinary Federation Membership and alumni chef coat
- \$135 per credit fee for lab and lecture/lab courses
- \$1,920 Supplies: Toolkit, uniforms and textbooks
- \$313 COCC Technology, Student Activity and Green Energy Fees

For an estimate of total tuition, supplies and fees please visit www.cascadeculinary.com/tuition-and-fees/. Housing Expense Estimate: Students who would like to research on-campus housing costs should visit www.cocc.edu/Residence-Life/.

PROGRAM ENTRANCE REQUIREMENTS

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 60 placement (equivalent to RMGT 90) or completion of MTH 20/31 ("C" or better)

MINIMUM GPA AND GRADE REQUIREMENTS

All required program courses must be completed at a "C" grade or better, and graduates must have a cumulative 2.0 GPA or higher.

REGISTRATION INFORMATION

The Nutrition and Dietary Management Certificate program is designed to be delivered in a blended cohort-based and independent educational model; hence, coursework is experienced in a sequence that benefits progressive skill development from an introductory to advanced level. Students are required to attend the coursework in sequence. Students are expected to progress with a cohort through the culinary arts related courses, and take the additional nutrition and dietary management related courses when available. Culinary Arts program cohorts are

scheduled to have a quarterly start, which includes fall, winter, spring and summer term. Twenty-five seats are available in each cohort group. A maximum of 125 seats are available in the Culinary Arts program annually. Cascade Culinary Institute reserves the right to deviate from the below cohort admittance schedule.

Nutrition and Dietary Management - Program Admittance Schedule

Students who intend on pursuing the Nutrition and Dietary Management program as a standalone program will be admitted at any of the below listed terms in conjunction with students who are starting the Culinary Arts AAS program.

Fall	50 students (2 cohorts)
Winter	25 students (1 cohort)
Spring	25 students (1 cohort)
Summer	25 students (1 cohort)

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program. Students who do not meet this standard may be dismissed from their assigned cohort and requested to retake any necessary courses before advancing to the following term, which is contingent upon available space in the course(s) the student needs to retake. Students may be re-admitted to the program with an approved academic performance plan that is developed with their advisor. Additional information regarding program standards and student conduct is outlined in the Cascade Culinary Institute Student Handbook, which is available at www.cascadeculinary.com.

TRANSFER INFORMATION

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.

NUTRITION AND DIETARY MANAGEMENT CERTIFICATE PROGRAM - COURSE SEQUENCING REQUIREMENTS

Term One

RMGT 90	Applied Math for Culinary Arts	4
NUTR 100s	Nutrition Therapy and Clinical Management Practices	3
CUL 110	Culinary Foundations I	4
RMGT 120	Student Academic Success and Restaurant Industry Career Preparation	1

Term Two

WR 121	English Composition	4
RMGT 130	Hospitality Industry Supervision and Principles of Leadership	3
NUTR 130s	Modern Vegetarian and Special Dietary Culinary Techniques	4

Term Three

CUL 140	Culinary Foundations II	4
RMGT 150	Procurement, Ingredient Identification and Food Cost Control	3
NUTR 230	Culinary Nutrition and Applied Techniques of Healthy Cooking	4
RMGT 260	Restaurant Industry Career Success and Internship Preparation	1

Term Four

NUTR 270	Dietary Management Certification Examination Prep	1
NUTR 280	Nutrition and Dietary Management Industry Internship	6
RMGT 290	Service Learning and E-Folio Presentation	1

CASCADE CULINARY INSTITUTE NUTRITION AND DIETARY MANAGEMENT *(continued)*

Certificate of Completion – 43 credits

NUTRITION AND DIETARY MANAGEMENT INDUSTRY INTERNSHIP

This 200-hour internship serves as a work experience supervised by a registered dietician within a clinical setting that is designed to expand career knowledge and experiential confidence while interacting with food preparation and nutritional/dietary menu analysis and design. Students will receive a diverse work experience that is designed on a systematic rotation of different stations and responsibilities within the organization. The internship is intended to serve as a formal opportunity for students to seek gainful employment prior to program completion. Students are required to complete three successful terms of progressive curriculum experience prior to the industry internship. If a student desires to complete the internship out of sequence, they are required to request approval from the Cascade Culinary Institute director. This is a pass/no pass course.



CASCADE CULINARY INSTITUTE RESTAURANT MANAGEMENT AND SYSTEMS

Certificate of Completion – 51 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate, Restaurant Management and Systems

PROGRAM DESCRIPTION

The Restaurant Management and Systems Certificate program is grounded in restaurant management theory and systems application and analysis in a "real world" learning environment that prepares students for a successful career within the hospitality industry. Emphasis is given to competency-based skill mastery and the development of critical thinking and problem solving skills while leveraging a diversity of operational and communication oriented systems. This certificate focuses on developing relationships between the aspects of costing and procurement, operational sustainability practices, written and verbal communication, leadership and group dynamics, beverage management, concept development, and the financial aspects of the restaurant to include menu design and sales analysis. The Culinary Arts portion of this curriculum is designed to expose students to the step-by-step process of classical and contemporary culinary arts techniques and to serve as a competency-based learning experience that prepares students for a successful career within the hospitality industry. Emphasis is given to technique and ratios over that of recipes. The curriculum delivers hands-on applied learning grounded in theory at an estimated ratio of 40 percent hands-on to 60 percent theory. Instructors conduct daily assessment of student learning in the areas of applied competency-based skill development, professionalism, food safety and sanitation, and organization; combined with standard homework assignments, projects, quizzes and exams. Field trips and guest speakers serve to enhance the student learning experience and to provide up-to-date information regarding current industry practices. Participation in social and community service learning activities also provide informal learning and industry networking opportunities for students outside of the classroom. Unique to Cascade Culinary Institute, this program also features integrated across-the-curriculum applied learning modules that serve to enhance the student learning experience and provide repetition of knowledge and skill that will support successful entry into the workforce.

COST OF PROGRAM

In addition to standard COCC tuition rates, students should anticipate the following estimated program costs:

- \$25 www.optimalresume.com membership
- \$115 American Culinary Federation Membership and alumni chef coat
- \$123 OLCC Liquor Control Card, American Red Cross First-Aid/CPR Certification
- \$135 per credit fee for lab and lecture/lab courses
- \$120 Wine, Beverage and Food Cost Fee
- \$2,418 Supplies: Toolkit, uniforms and textbooks
- \$370 COCC Technology, Student Activity and Green Energy Fees

For an estimate of total tuition, supplies and fees please visit www.cascadeculinary.com/tuition-and-fees/. Housing Expense Estimate: Students who would like to research on-campus housing costs should visit www.cocc.edu/Residence-Life/.

PROGRAM ENTRANCE REQUIREMENTS

- High school diploma or GED
- Minimum placement scores resulting in MTH 60 placement (equivalent to RMGT 90) or completion of MTH 20/31 ("C" or better)

MINIMUM GPA AND GRADE REQUIREMENTS

All required program courses must be completed at a "C" grade or better, and graduates must have a cumulative 2.0 GPA or higher.

REGISTRATION INFORMATION

The Restaurant Management and Systems Certificate program is designed to be delivered in a blended cohort-based and independent educational model; hence, coursework is experienced in a sequence that benefits progressive skill development from an introductory to advanced level. Students are required to attend the coursework in sequence.

Students are expected to progress with a cohort through the culinary arts related courses, and take the additional restaurant management related courses when available. Culinary Arts program cohorts are scheduled to have a quarterly start, which includes fall, winter, spring and summer term. Twenty-five seats are available in each cohort group. A maximum of 125 seats are available in the Culinary Arts program annually. Cascade Culinary Institute reserves the right to deviate from the below cohort admittance schedule.

Restaurant Management and Systems - Program Admittance Schedule

Students who intend on pursuing the Restaurant Management and Systems as a standalone program will be admitted at any of the below listed terms in conjunction with students who are starting the Culinary Arts AAS program.

Fall	50 students (2 cohorts)
Winter	25 students (1 cohort)
Spring	25 students (1 cohort)
Summer	25 students (1 cohort)

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program. Students who do not meet this standard may be dismissed from their assigned cohort and requested to retake any necessary courses before advancing to the following term, which is contingent upon available space in the course(s) the student needs to retake. Students may be re-admitted to the program with an approved academic performance plan that is developed with their advisor. Additional information regarding program standards and student conduct is outlined in the Cascade Culinary Institute Student Handbook, which is available at www.cascadeculinary.com.

TRANSFER INFORMATION

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.

RESTAURANT MANAGEMENT AND SYSTEMS CERTIFICATE PROGRAM - COURSE SEQUENCING REQUIREMENTS

Term One

RMGT 90	Applied Math for Culinary Arts	4
SUST 100s	Sustainable Food Productions Systems Overview and Operational Assessment	3
CUL 110	Culinary Foundations I	4
RMGT 120	Student Academic Success and Restaurant Industry Career Preparation	1

Term Two

WR 121	English Composition	4
RMGT 130	Hospitality Industry Supervision and Principles of Leadership	3
RMGT 150	Procurement, Ingredient Identification and Food Cost Control	3
RMGT 200	Comprehensive Kitchen Operations for the Restaurant Industry	4

Term Three

RMGT 160	Wine and Specialty Beverage Management and Service	3
RMGT 190	Contemporary Dining Room Service Operations, Etiquette and Guest Relations	5
RMGT 210	Menu Composition and Analysis	3
RMGT 260	Restaurant Industry Career Success and Internship Preparation	1

CASCADE CULINARY INSTITUTE RESTAURANT MANAGEMENT AND SYSTEMS *(continued)*

Certificate of Completion – 51 credits

Term Four

RMGT 275s	Hospitality Industry Marketing: The Blogosphere, Photography and Social Media	3
RMGT 280	Restaurant Management Industry Internship	6
RMGT 290	Service Learning and E-Folio Presentation	1
RMGT 295s	Restaurant Industry Entrepreneurship and Concept Development	3

**RESTAURANT MANAGEMENT AND SYSTEMS INDUSTRY
INTERNSHIP**

This 200-hour internship serves as a work experience supervised by a manager within a restaurant/hospitality industry setting that is designed to expand career knowledge and experiential confidence while interacting with food preparation, systems usage and problem solving to increase overall organizational performance. Students will receive a diverse work experience that is designed on a systematic rotation of different stations and responsibilities within the organization. The internship is intended to serve as a formal opportunity for students to seek gainful employment prior to program completion. Students are required to complete three successful terms of progressive curriculum experience prior to the industry internship. If a student desires to complete the internship out of sequence, they are required to request approval from the Cascade Culinary Institute director. This is a pass/no pass course.

CASCADE CULINARY INSTITUTE – SUSTAINABLE FOOD SYSTEMS

Certificate of Completion

55 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate, Sustainable Food Systems

PROGRAM DESCRIPTION

The Sustainable Food Systems Certificate program is designed to expose students to a blending of Culinary Arts skill development and that of sustainable operations and food sourcing practices. Within this program, students will experience courses that emphasize an in-depth knowledge of hospitality industry sustainability "best practices." Students will be exposed to knowledge and operational practices throughout the program curriculum that emphasize recycling (plastics, paper/cardboard, metals, grease, food by-products, etc.), composting and energy conservation. Students will learn to conduct an operational assessment and present a long-term cost-to-benefit analysis of implementing sustainable systems into a restaurant or food service operation. They will also learn about the flow of food, distribution, carbon footprint and environmental impact of implementing sustainable systems. The Culinary Arts portion of this curriculum is designed to expose students to the step-by-step process of classical and contemporary culinary arts techniques and to serve as a competency-based learning experience that prepares students for a successful career within the hospitality industry. Emphasis is given to technique and ratios over that of recipes. The curriculum delivers hands-on applied learning grounded in theory at an estimated ratio of 70 percent hands-on to 30 percent theory. Instructors conduct daily assessment of student learning in the areas of applied competency-based skill development, professionalism, food safety and sanitation, and organization; combined with standard homework assignments, projects, quizzes and exams. Field trips and guest speakers serve to enhance the student learning experience and to provide up-to-date information regarding current industry practices. Participation in social and community service learning activities also provide informal learning an industry networking opportunities for students outside of the classroom. Unique to Cascade Culinary Institute, this program also features integrated across-the-curriculum applied learning modules that serve to enhance the student learning experience and provide repetition of knowledge and skill that will support successful entry into the workforce.

COST OF PROGRAM

In addition to standard COCC tuition rates, students should anticipate the following estimated program costs:

- \$25 www.optimalresume.com membership
- \$115 American Culinary Federation Membership and alumni chef coat
- \$135 per credit fee for lab and lecture/lab courses
- \$1,939 Supplies: Toolkit, uniforms and textbooks
- \$400 COCC Technology, Student Activity and Green Energy Fees

For an estimate of total tuition, supplies and fees please visit www.cascadeculinary.com/tuition-and-fees/. Housing Expense Estimate: Students who would like to research on-campus housing costs should visit www.cocc.edu/Residence-Life/.

PROGRAM ENTRANCE REQUIREMENTS

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 60 placement (equivalent to RMGT 90) or completion of MTH 20/31 ("C" or better)

MINIMUM GPA AND GRADE REQUIREMENTS

All required program courses must be completed at a "C" grade or better, and graduates must have a cumulative 2.0 GPA or higher.

REGISTRATION INFORMATION

The Sustainable Food Systems program is designed to be delivered in a blended cohort-based and independent educational model; hence, coursework is experienced in a sequence that benefits progressive skill development from an introductory to advanced level. Students are required to attend the coursework in sequence. Students in the Sustainable Food Systems Certificate program are expected to progress with a cohort through the culinary arts related courses, and take the additional sustainable food systems related courses when available. Culinary Arts program cohorts are scheduled to have a quarterly start, which includes fall, winter, spring and summer term. Twenty-five seats are available in each cohort group. A maximum of 125 seats are available in the Culinary Arts program annually, as two cohorts start during fall term. Cascade Culinary Institute reserves the right to deviate from the below cohort admittance schedule.

Sustainable Food Systems - Program Admittance Schedule

Students who intend on pursuing the Sustainable Food Systems Certificate as a standalone program will be admitted at any of the below listed terms in conjunction with students who are starting the Culinary Arts AAS program.

Fall	50 students (2 cohorts)
Winter	25 students (1 cohort)
Spring	25 students (1 cohort)
Summer	25 students (1 cohort)

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program. Students who do not meet this standard may be dismissed from their assigned cohort and requested to retake any necessary courses before advancing to the following term, which is contingent upon available space in the course(s) the student needs to retake. Students may be re-admitted to the program with an approved academic performance plan that is developed with their advisor. Additional information regarding program standards and student conduct is outlined in the Cascade Culinary Institute Student Handbook, which is available at www.cascadeculinary.com.

TRANSFER INFORMATION

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.

SUSTAINABLE FOOD SYSTEMS PROGRAM - COURSE SEQUENCING REQUIREMENTS

Term One

RMGT 90	Applied Math for Culinary Arts	4
SUST 100s	Sustainable Food Production Systems Overview and Operational Assessment	3
CUL 110	Culinary Arts Foundations I	4
RMGT 120	Student Academic Success and Restaurant Industry Career Preparation	1

Term Two

WR 121	English Composition	4
RMGT 130	Hospitality Industry Supervision and Principles of Leadership	3
CUL 140	Culinary Foundations II	4
SUST 150s	Applied Growing and Raising of Farm Plants and Animals	4

Term Three

SUST 180s	Applied Harvesting and Food Preservation Principles	4
SUST 190s	Farm-to-Table and Sustainable Cuisine Practices	4
RMGT 200	Comprehensive Kitchen Operations for the Restaurant Industry	4
RMGT 260	Restaurant Industry Career Success and Internship Preparation	1

CASCADE CULINARY INSTITUTE – SUSTAINABLE FOOD SYSTEMS

Certificate of Completion *(continued)*

55 credits

Term Four

CUL 240	The Art of Butchery and Charcuterie	4
SUST 255s	Advanced Artisan Breads with Heirloom Whole Grains	4
SUST 280	Farming and Regional Agriculture Internship	6
RMGT 290	Service Learning and E-Folio Presentation	1

FARMING AND REGIONAL AGRICULTURE INTERNSHIP

This 200-hour internship serves as a work experience supervised by a farmer/rancher in an agricultural setting that is designed to expand career knowledge and experiential confidence while interacting with food preparation and the raising, harvesting and processing of plant/animal life. Students will receive a diverse work experience that is designed on a systematic rotation of different stations and responsibilities within the organization. The internship is intended to serve as a formal opportunity for students to seek gainful employment prior to program completion. Students are required to complete three successful terms of progressive curriculum experience prior to the industry internship. If a student desires to complete the internship out of sequence, they are required to request approval from the Cascade Culinary Institute director. This is a pass/no pass course.



CENTER FOR ENTREPRENEURIAL EXCELLENCE & DEVELOPMENT NEW VENTURE CREATION

Certificate of Completion - 51 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, New Venture Creation

PROGRAM DESCRIPTION

New Venture Creation is the foundation of entrepreneurship and provides the core curriculum for the Center for Entrepreneurial Excellence and Development (CEED). Students will explore their own business ideas from concept to launch. Students will graduate with a comprehensive investment-ready business plan and the knowledge and communication skills necessary to critically defend and support the strategies and decisions therein. The CEED coursework contained in this certificate of completion may be taken sequentially as a member of a cohort (recommended) or individually.

The program is cross-disciplinary by design, self-contained and is open to all disciplines and all majors.

All coursework may also be applied to an Associate of Applied Science (AAS) Entrepreneurial Management.

COST OF PROGRAM

Standard tuition, student fees and textbooks.

PROGRAM PREPARATION AND PREREQUISITES

Recommended

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 111 placement or completion of MTH 95 ("C" or better)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

The required courses for the certificate are listed below under Program Course Requirements. 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.

PROGRAM STANDARDS

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.

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

The following is a suggested course of study for students interested in pursuing the New Venture Creation certificate and will depend on course availability. A recommended sequence of the courses required for this certificate is listed below.

Term 1

BA 101	Introduction to Business	4
BA 211	Financial Accounting I	4
WR 121	English Composition	4

Term 2

MTH 111	College Algebra	4
BA 212	Financial Accounting II	4
BA 223	Marketing Principles I	4
SP 111	Fundamentals of Public Speaking	3

Term 3

BA 206	Management Fundamentals I	4
BA 213	Managerial Accounting	4
CEED 213	Marketing Research	4

Term 4 (15 Week Cohort)

CEED 201	Business Modeling	2
CEED 202	Business Intelligence	2
CEED 203	Strategic Marketing	2
CEED 205	Entrepreneurial Finance	2

Term 5

CEED 204	Strategic Management	2
CEED 206	Presenting to Win	2

CENTER FOR ENTREPRENEURIAL EXCELLENCE & DEVELOPMENT ENTREPRENEURIAL MANAGEMENT

Associate of Applied Science (AAS) Degree - 94 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Entrepreneurial Management

PROGRAM DESCRIPTION

The Center for Entrepreneurial Excellence & Development (CEED) AAS Entrepreneurial Management is a rigorous preparatory program intended to equip potential entrepreneurs with the skill-set and knowledge necessary to successfully start and operate a new venture. The Entrepreneurial Management degree is structured to serve entrepreneurs, intrapreneurs, managers, leaders and business owners by providing a holistic and integrated immersion in all aspects and disciplines of business.

COST OF PROGRAM

Standard tuition, student fees and textbooks.

PROGRAM PREPARATION AND PREREQUISITES

Recommended

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 111 placement or completion of MTH 95 ("C" or better)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better, and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

The required courses for the Entrepreneurial Management AAS are listed below under Program Course Requirements. 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.

PROGRAM STANDARDS

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.

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

The following is a suggested course of study for students interested in pursuing the Entrepreneurial Management AAS and will depend on course availability. A recommended sequence of the courses required for this certificate is listed below.

Term 1

BA 101	Intro to Business	4
BA 211	Financial Accounting I	4
WR 121	English Composition	4

Term 2

MTH 111	College Algebra	4
BA 212	Financial Accounting II	4
BA 223	Marketing Principles I	4
SP 111	Fundamentals of Public Speaking	3

Term 3

BA 206	Management Fundamentals I	4
BA 213	Managerial Accounting	4
EC 201	Microeconomics	4
SOC 201	Introduction to Sociology	4

Term 4

BA 220	Business Analysis & Budgeting	4
MTH 243	Introduction to Probability and Statistics I	4
EC 202	Macroeconomics	4
PSY 216	Social Psychology	4

Term 5

BA 226	Business Law I	4
CEED 213	Marketing Research	4
MTH 244	Introduction to Probability and Statistics II	4
WR 227	Technical Writing	4

Term 6

BA 222	Business Finance	3
BA 232	Branding	4
CEED 201	Business Modeling	2
CEED 202	Business Intelligence	2

Term 7

CEED 203	Strategic Marketing	2
CEED 204	Strategic Management	2
CEED 205	Entrepreneurial Finance	2
CEED 206	Presenting to Win	2

TRANSFER INFORMATION

Successful completion of the Entrepreneurial Management AAS program fulfills most prerequisites for transfer to a four-year university.

CHEMISTRY

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

Chemists study the composition and transformations of matter. Chemists work in a wide variety of settings and find employment with government, academic and private institutions. Chemistry is frequently described as the “central science” because of the connections between it and all other scientific disciplines. Earning a degree in chemistry can be the first step toward careers with chemical, materials or pharmaceutical companies, biotech firms or forensic laboratories. It can also be a stepping stone on the route to a professional medical degree, for instance in medicine, physical therapy or pharmacy. Chemists are readily employable after completion of a bachelor’s degree. Earning an Associate of Arts Oregon Transfer (AAOT) degree with a chemistry emphasis is also excellent preparation for bachelor’s degrees in related disciplines such as toxicology, atmospheric science, environmental science or materials science.

The Associate of Arts Oregon Transfer (AAOT) degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The department maintains the ability to offer CH 241, 242 and 243–Organic Chemistry I, II and III—each with laboratory. Please see a chemistry faculty member or the department Chair if you have an interest in this subject.

The following is a suggested course of study for students interested in pursuing a bachelor’s degree in chemistry.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of “C” or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 111	College Algebra	4
(or higher for which Intermediate Algebra is a prerequisite)		

Health (3 credits with HHP prefix)		3
HHP activity courses (1 credit each) are not to be duplicated		

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

CH 221	General Chemistry I	5
CH 222	General Chemistry II	5
CH 223	General Chemistry III	5
PH 201 or 211	General Physics I	5

ELECTIVES

PH 202 or 212	General Physics II	5
PH 203 or 213	General Physics III	5
MTH 251	Calculus I	4
MTH 252	Calculus II	4
MTH 253	Calculus III	4

TRANSFER INFORMATION

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

COMPUTER AND INFORMATION SYSTEMS (CIS)

Associate of Applied Science (AAS) Degree
94-98 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Computer and Information Systems with Maj/Concentrations

PROGRAM DESCRIPTION

The Computer Information Systems (CIS) degree program is designed around a core curriculum and four 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. To gain practical work-related experience, students complete 99 hours of cooperative work experience in a related setting. Graduates work in information technology (IT) for a wide variety of commercial businesses, education, federal/state/local governments, e-commerce, publishing and real estate. CIS careers typically include positions such as PC technician, desktop support, network administrator, web developer, draftsman, database administrator, system administrator, and related managerial and administrative roles.

To earn an AAS in Computer Information Systems, a student must complete 67-71 core credits and an additional 28 credits of CIS electives. Students can choose to complete a general AAS in CIS by taking any 28 credits with a CIS prefix 100 or above, or a student may elect to complete an option in one or more of four emphasis areas: Networking, Computer Aided Drafting (CAD), Desktop Support, or Web Development/Database. If a student selects specific CIS electives to complete the requirements for one of the four options, the AAS degree awarded also specifies the emphasis area successfully completed. The general AAS provides the most flexibility in course selection and scheduling. To earn the CIS one-year certificate, the student completes 46-47 credits.

The **Computer Aided Drafting** option 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.

The **Desktop Support** option prepares students to provide technical assistance to computer system users, answer questions, or resolve computer problems for clients in person, via telephone or from a remote location. Other responsibilities may include providing support for computer hardware and software, including printing, installation, word processing, spreadsheets, database, electronic mail and operating systems.

The **Networking** option prepares students for entry-level positions in network administration. Network specialists have the ability to design, create, manage and maintain computer networks for small businesses. Courses cover both hardware and software and closely follow major industry certification requirements.

The **Web Development/Database** option prepares students for a career as a web developer or web/database administrator. These professionals are responsible for creating standards-based websites and web/database applications. In addition to programming skills in common markup, scripting and SQL languages, these types of professions require project management and communication skills.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs: Materials (4-16 GB usb/flash drive, basic office supplies - notebooks), \$100

Strongly recommended, but not required:

A home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$600. Contact program instructors for specifics.

PROGRAM PREPARATION AND RECOMMENDED PREREQUISITES

Recommended prior to entry in program (CIS) courses

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 85 placement or completion of MTH 20 and/or MTH 60 equivalent
- Basic computer competency (or CIS 10 and CIS 70)

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.

MINIMUM GPA OR GRADE REQUIREMENTS

All courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Core Computer and Information Systems program courses (CIS) are all offered two to three quarters each academic year. All CIS elective classes 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. Students receiving federal financial aid are encouraged to speak with their financial aid advisor.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled; students who do not meet this standard may be dismissed from the program.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

While there are none currently required, various professional organizations offer certification that may enhance placement opportunities.

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

Foundational Skills

Communication

WR 121	English Composition	4
WR 214 or WR 122 or WR 227 or SP 111	Business Communications English Composition Technical Writing Fundamentals of Public Speaking	3-4

Computation

MTH 85 or BA 104	Technical Math I or (higher) Business Math	3-4
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COMPUTER AND INFORMATION SYSTEMS (CIS) *(continued)*

Associate of Applied Science (AAS) Degree 94-98 credits

Human Relations

Human Relations course, see list, page 45.

BA 285	Business Human Relations (Recommended)	3
or SP 218	Interpersonal Communication	

Other**Health**

HHP 252A	Fitness/First Aid	3
or HHP 295	Health and Fitness	

General Education Requirements

8
Choose any 8 credits from the Discipline Studies list on pages 44 and 45 (except CIS prefix classes) and/or from the following:

BA 101	Introduction to Business (4)	
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)	
BA 203	Global Business (3)	
BA 206	Management Fundamentals I (4)	
BA 207	Management Fundamentals II (4)	
BA 211	Financial Accounting I (4)	
BA 212	Financial Accounting II (4)	
BA 213	Managerial Accounting (4)	
BA 217	Accounting Fundamentals (3)	
BA 218	Personal Finance (3)	
BA 220	Business Analysis and Budgeting (4)	
BA 222	Business Finance (3)	
BA 223	Marketing Principles I (4)	
BA 224	Human Resources Management (4)	
BA 226	Business Law I (4)	
BA 228	Computer Accounting Applications (3)	
BA 229	QuickBooks (3)	
BA 238	Selling and Negotiation (4)	
BA 239	Marketing Principles II (4)	
BA 249	Retailing (4)	
BA 250	Entrepreneurship (4)	
BA 286	Managing Business Processes (4)	
FR 101	First Year French I (4)	
FR 102	First Year French II (4)	
FR 103	First Year French III (4)	
SPAN 101	First Year Spanish I (4)	
SPAN 102	First Year Spanish II (4)	
SPAN 103	First Year Spanish III (4)	

Foundation Courses

CIS 120	Computer Concepts	4
CIS 122	Introduction to Programming	4
CIS 131	Software Applications	4
CIS 135DB	Database Theory/SQL	4
CIS 140	A+ Essentials	4
CIS 145	PC Technician	4
CIS 178	Internet in Depth	4
CIS 179	Networking Essentials	4
CIS 244	Information System Analysis	4
CIS XXX	CIS elective (in addition to one of the CIS options)	4

Other required courses

In addition to the CIS foundation courses listed above, a CIS student must complete 28 additional credits plus a 3 credit Co-op Work experience. (a 99 hour supervised internship in a CIS related field taken near degree completion.)

CIS 280	Co-op Work Experience (CWE)	3
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For a CIS AAS degree (with no option) select 28 credits with a CIS prefix numbered 100 or higher from the list in the course descriptions, pages 215-219. This choice provides the greatest flexibility in completing degree requirements.

For a CIS AAS degree with a specific option, select 28 credits from one of the following four CIS options.

Networking option (28 credits)

CIS 151C	Cisco Introduction to Networks	4
CIS 152C	Cisco Routing and Switching	4
CIS 154C	Cisco Scaling and Connecting Networks	4
CIS 279WC	Windows Client	4
CIS 279SS	Windows Server Services	4
CIS 279SM	Windows Server Management	4
CIS 279SC	Windows Server Configuration	4
CIS 279L	Linux+	4
CIS 279SE	Security+	4
CIS 284	CCNA Security	4
CIS 279SP	SharePoint Configuration	4

Desktop Support option (28 credits)

CIS 125E	Excel	4
CIS 125A	Access	4
CIS125WA	Web Animation	4
CIS 195	Web Development I	4
CIS 125G	Photoshop	4
CIS 295	Web Development II	4
CIS 279WC	Windows Client	4
CIS 125V	Visio	4
CIS 197	Content Management Systems	4

Web Development/Database option (28 credits)

CIS 125G	Photoshop	4
or CIS 125I	Adobe Illustrator	
CIS 125WA	Web Animation	4
CIS 195	Web Development I	4
CIS 295	Web Development II	4
CIS 133JS	Introduction to JavaScript	4
CIS 133P	Introduction to PHP	4
CIS 233P	Web Programming	4
CIS 276	Advanced SQL	4
CIS 197	Content Management Systems	4

CAD option (28 credits)

CIS 125A1	AutoCAD I	4
CIS 125A2	AutoCAD II	4
CIS 135S1	Solidworks I	4
CIS 135S2	Solidworks II	4
CIS 135A1	AutoDESK Revit I	4
CIS 135A2	AutoDESK Revit II	4
CIS 135C1	AutoCAD Civil 3D	4

Additional CS classes for transfer to Computer Science programs at Oregon universities

CS 160	Computer Science Orientation	4
CS 161	Computer Science I	4
CS 162	Computer Science II	4

COMPUTER AND INFORMATION SYSTEMS

Certificates of Completion

COMPUTER AND INFORMATION SYSTEMS

Certificate of Completion

46-47 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Computer and Information Systems

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

Materials (4-16 GB usb/flash drive, basic office supplies -notebooks), \$100

Strongly recommended, but not required:

A home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$600. Contact program instructors for specifics.

PROGRAM PREPARATION AND RECOMMENDED PREREQUISITES

Recommended prior to entry in program (CIS) courses

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65 and/or WR 95 ("C" or better)
- Minimum placement scores resulting in MTH 85 placement or completion of MTH 20 and/or MTH 60 equivalent
- Basic computer competency (or CIS 10 and CIS 70)

MINIMUM GPA OR GRADE REQUIREMENTS

All courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

There are none currently required.

CERTIFICATE REQUIREMENTS

Human Relations course, see list, page 45	3-4
CIS 120 Computer Concepts	4
CIS 122 Introduction to Programming	4
CIS 131 Software Applications	4
CIS 135DB Database Theory/SQL	4
CIS 140 A+ Essentials	4
CIS 145 PC Technician	4
CIS 178 Internet in Depth	4
CIS 179 Networking Essentials	4
CIS 195 Web Development I	4
MTH 85 Technical Math I (or higher) or BA 104 Business Math	3-4
WR 121 English Composition	4

COMPUTER AIDED DRAFTING (CAD)

Certificate of Completion

45-47 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Computer Aided Drafting (CAD)

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

Materials (4-16 GB usb/flash drive, basic office supplies -notebooks), \$100

Strongly recommended, but not required:

A home or laptop computer capable of running the latest version of the Windows operating system and the latest version of Microsoft Office, \$600. Contact program instructors for specifics.

PROGRAM PREPARATION AND RECOMMENDED PREREQUISITES

Recommended prior to entry in program (CIS) courses

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65 and/or WR 95 ("C" or better)
- Minimum placement scores resulting in MTH 85 placement or completion of MTH 20 and/or MTH 60 equivalent
- Basic computer competency (or CIS 10 and CIS 70)

MINIMUM GPA OR GRADE REQUIREMENTS

All courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

There are none currently required.

CERTIFICATE REQUIREMENTS

Human Relations course, see list, page 45	3-4
CIS 120 Computer Concepts	4
CIS 125A1 AutoCAD 1	4
CIS 125A2 AutoCAD 2	4
CIS 135S1 SolidWorks 1	4
CIS 135S2 SolidWorks 2	4
CIS 135A1 AutoDESK Revit 1	4
CIS 135A2 AutoDESK Revit 2	4
CIS 135C1 AutoCAD Civil 3D	4
CIS 125V Visio	4
MTH 85 Technical Math I (or higher) or BA 104 Business Math	3-4
WR 121 English Composition	4

CRIMINAL JUSTICE

PROFICIENCY AREAS

13-16 credits

Criminal Justice is a growing profession in Oregon and is expected to grow faster than the labor market on average into the foreseeable future. Job openings may call for a high school diploma, an associate degree, or a bachelor's degree. COCC's Associate of Applied Science in Criminal Justice program prepares students to begin a criminal justice career upon graduation.

COCC offers students four options within the Criminal Justice program.

PROFICIENCY AREAS

New to the Criminal Justice program, these five proficiency areas offer students a way to focus their electives. Upon completion of the electives in the different areas, the student will receive a signed training document from the department detailing the classes completed in each specific area.

CERTIFICATE OF COMPLETION

The statewide one-year certificate program with a concentration in juvenile corrections is specifically designed for individuals who want to work directly with juvenile offenders in various settings. These settings may include Oregon Youth Authority (OYA) as well as other public, private and nonprofit agencies/programs. A criminal background check is required to complete the one-year certificate or the two-year degree. The criminal background check is also a requirement for any job in the criminal justice field.

ASSOCIATE OF APPLIED SCIENCE

This degree is designed for those students who wish to pursue a career in law enforcement or corrections. Most city and state law enforcement and correctional facilities require a high school diploma or GED. In Oregon, the competition for these jobs is intense. A college education is almost always a minimum requirement for the application process.

THE ASSOCIATE OF ARTS OREGON TRANSFER

This degree meets the state of Oregon transfer degree requirements allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

Students are encouraged to work closely with their advisors to decide which option is most appropriate based on long-term career goals. A criminal history may affect employment opportunities.

PROFICIENCY AREAS (13-16 CREDITS)

Law Enforcement (16 credits)

CJ 110	Law Enforcement	3
CJ 220	Substantive Law	3
CJ 222	Search and Seizure	3
CJ 243	Drugs and Crime	3
PSY 219	Abnormal Psychology	4

Corrections (14 credits)

CJ 230	Juvenile Corrections	3
HS 200	Addictive Behavior	3
PSY 216	Social Psychology	4
SOC 211	Social Deviance	4

Juvenile Justice (14 credits)

CJ 230	Juvenile Corrections	3
PSY 215	Developmental Psychology	4
PSY 216	Social Psychology	4
HS 205	Youth and Addictions	3

Parole and Probation (15 credits)

PSY 233	Violence and Aggression	4
SOC 211	Social Deviance	4
PSY 219	Abnormal Psychology	4
HS 200	Addictive Behavior	3

Criminal Investigations (13 credits)

CJ 210	Investigation I	3
CJ 211	Investigation II	3
ART 161	Photography I	3
or ART 162	Photography II	
or ART 163	Photography III	
SP 218	Interpersonal Communication	3
SP 250	Listening	1

CRIMINAL JUSTICE – JUVENILE CORRECTIONS

Statewide Certificate
50-54 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Juvenile Corrections (Statewide Certificate)

PROGRAM DESCRIPTION

The statewide one-year certificate program with a concentration in juvenile corrections is specifically designed for individuals who want to work directly with juvenile offenders in various settings. These settings may include Oregon Youth Authority (OYA) as well as other public, private and nonprofit agencies/programs. A criminal background check is required to complete the one-year certificate or the two-year degree. The criminal background check is also a requirement for any job in the criminal justice field.

COST OF PROGRAM

Standard tuition, student fees and textbooks.

MINIMUM GPA OR GRADE REQUIREMENTS

All general education/foundational skills and any course with a CJ prefix must be completed with a grade of "C" or higher.

REGISTRATION INFORMATION

Students may begin the Criminal Justice program in any term.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

Most agencies in the criminal justice field will require a background check and most likely a physical abilities test. Each agency may have different requirements at local, state and federal levels.

TRANSFER INFORMATION

This certificate/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.

PROGRAM COURSE REQUIREMENTS

General education/foundational skills

CIS 120	Computer Concepts	0-4
or Computer Competency test		
MTH 65	Algebra II	4
WR 121	English Composition	4

Required support courses

HS 205	Youth and Addictions	3
PSY 201	Mind and Brain	4
PSY 202	Mind and Society	4
PSY 215	Developmental Psychology	4
PSY 219	Abnormal Psychology	4
PSY 233	Psychology of Violence and Aggression	4
SOC 201	Introduction to Sociology	4
CJ 100	Survey of the Criminal Justice System	3
CJ 101	Introduction to Criminology	4
CJ 201	Introduction to Juvenile Justice	3
CJ 230	Juvenile Corrections	3
CJ 280	Co-op Work Experience	2

CRIMINAL JUSTICE

Associate of Applied Science (AAS) Degree

93 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Criminal Justice

PROGRAM DESCRIPTION

Criminal Justice is a growing profession in Oregon and is expected to grow faster than the labor market on average into the foreseeable future. Job openings may call for a high school diploma, an associate degree or a bachelor's degree. COCC's AAS in Criminal Justice program prepares students to begin a criminal justice career upon graduation.

COCC offers students four options within the criminal justice program.

PROFICIENCY AREAS

New to the criminal justice program, these five proficiency areas offer students a way to focus their electives. Upon completion of the electives in the different areas, the student will receive a signed training document from the department detailing the classes completed in each specific area.

CERTIFICATE OF COMPLETION

The statewide one-year certificate program with a concentration in juvenile corrections is specifically designed for individuals who want to work directly with juvenile offenders in various settings. These settings may include Oregon Youth Authority (OYA) as well as other public, private and nonprofit agencies/programs. A criminal background check is required to complete the one-year certificate or the two-year degree. The criminal background check is also a requirement for any job in the criminal justice field.

ASSOCIATE OF APPLIED SCIENCE DEGREE

This degree is designed for those students who wish to pursue a career in law enforcement or corrections. Most city and state law enforcement and correctional facilities require a high school diploma or GED. In Oregon, the competition for these jobs is intense. A college education is almost always a minimum requirement for the application process.

ASSOCIATE OF ARTS OREGON TRANSFER DEGREE

The Associate of Arts Oregon Transfer degree meets the State of Oregon transfer degree requirements allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements. Students are encouraged to work closely with their advisors to decide which option is most appropriate based on long-term career goals. A criminal history may affect employment opportunities.

COST OF PROGRAM

Standard tuition, student fees and textbooks.

MINIMUM GPA OR GRADE REQUIREMENTS

All foundational skills (math, writing and SP 218), and program requirement courses must be completed with a "C" grade or better.

REGISTRATION INFORMATION

Students may begin the Criminal Justice program in any term.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

Most agencies in the criminal justice field will require a background check and most likely a physical abilities test. Each agency has different requirements at local, state and federal levels.

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

General education/foundational requirements¹

MTH 20	Pre Algebra (or higher)	4
SP 218	Interpersonal Communication	3
WR 121	English Composition	4

Program requirements¹

CJ 100	Survey of the Criminal Justice System	3
CJ 101	Introduction to Criminology	4
CJ 120	Judicial Process	3
CJ 253	Corrections	4
CJ 201	Introduction to Juvenile Justice	3
CJ 280	Co-op Work Experience Criminal Justice ²	2
CJ Electives ³		15-18

Other required courses

Health and Human Performance ⁴		3-4
SP 111	Fundamentals of Public Speaking	3
SP 219	Small Group Communication	3
PSY 233	Psychology of Violence and Aggression	4
Two additional (2) courses with a PSY prefix		8
SOC 201	Introduction to Sociology	4
Any social science course (no CJ Prefix)		4
ED 265	Children at Risk	3
Discipline studies course (see pages 44-45, no CJ prefix)		4

ELECTIVES

Students should take enough electives to reach the necessary 93 minimum credit requirement from the following:

Any class from the discipline studies list, see pages 44-45.

Any 100-level or higher class from the following subject areas, or with approval from the CJ Program Director:

- Addictions Studies (HS prefix)
- Computer and Information Systems
- Criminal Justice
- Emergency Medical Services (EMT)
- Foreign Languages
- Geographic Information Systems
- Health and Human Performance (no repeats of activity classes)
- Military Science
- Speech
- Study Skills (HD prefix)
- ART 161, ART 162, ART 163, ART 261, ART 265

FOOTNOTES

¹ Must be completed with "C" grade or higher.

² CJ 280 is a program requirement. CJ 281 and CJ 282 may be taken as electives after successful completion of CJ 280.

³ Select from CJ 110, CJ 123, CJ 188, CJ 199, CJ 204, CJ 207, CJ 210, CJ 211, CJ 220, CJ 222, CJ 230, CJ 243, CJ 280, CJ 153, CJ 281 and CJ 282 or EMT 195.

⁴ HHP: 3-4 credits of health are required. This can be any HHP prefix. HHP Health classes are recommended. (HHP 252A, HHP 231, HHP 242, HHP 258, HHP 266, HHP 295 or any three credits of activity classes—no repeats.)

CRIMINAL JUSTICE

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

The Associate of Arts Oregon Transfer (AAOT) degree meets the State of Oregon transfer degree requirements allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met.

Students should work closely with an advisor to select the best degree option based on long-term career goals and to review specific transfer requirements. Students are encouraged to work closely with their advisors to decide which option is most appropriate. A criminal history may affect employment opportunities.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher.)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite)		

Health (3 credits with HHP prefix.)		3
HHP activity courses (1 credit each) are not to be duplicated.		

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

Choose any college-level course 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.

CJ 100	Survey of the Criminal Justice System	3
CJ 101	Introduction to Criminology	4
CJ 120	Judicial Process	3
CJ 253	Corrections	4
CJ 201	Introduction to Juvenile Justice	3
CJ 280	Cooperative Work Experience	2

ADVISING NOTES

If transferring to Southern Oregon University: CJ 210 and CJ 211 are recommended.

If transferring to Portland State University: CJ 101, CJ 110 and CJ 253 are recommended.

If transferring to Western Oregon University: CJ 100 is recommended.

If transferring to Oregon State University: HHP 295 and WR 227 are recommended.



DENTAL ASSISTING

Certificate of Completion

65-73 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Dental Assisting

PROGRAM DESCRIPTION

The Dental Assisting program trains individuals in a broad range of clinical and administrative skills such as preparing patients for dental exams and treatments, performing radiographic procedures, scheduling and appointment procedures, maintenance of medical records, performing basic secretarial and receptionist services, and communication and public relations skills. The program is accredited by the Commission on Dental Accreditation of the American Dental Association. Graduates are prepared for the Dental Assisting National Board and the Oregon Certification in Expanded Functions.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fee of \$167 per term (or \$501 total for the year) while enrolled in the DA cohort
- Materials (scrubs with COCC Dental Assisting patch, goggles), \$50
- National Board exams, \$795 total
- Fees associated with immunizations, \$220, and CPR card, \$20-\$60
- Background Check, \$55
- Drug Screen, \$45-60

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry in program (DA) courses:

- 18 years old
- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 20/31 placement or completion of MTH 10 ("C" or better)

Required prior to start of (DA) courses:

- Documentation of a Criminal Background Check
- Documentation of completion of required immunizations
- Documentation of completion of current CPR card
- New policy effective fall term 2014: Prior to entry into a health profession program, students must complete a 10 panel urine drug screen with verified credentials. With the exception of certain prescribed medications, students with a positive drug screen, which prevents them from attending clinical, will be disqualified from entering the program. Please refer to the Dental Assisting website and/ or program handbook for more detailed information.

Students must follow the college process on obtaining this information as listed on the Dental Assisting website/handbook. Students are responsible for the cost of providing these documents. Detailed information about this documentation will be available on the Dental Assisting website/handbook. Contact your advisor for more information.

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a 75 percent grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Program (DA) courses begin once per year in fall term; students take non-program support courses if they begin in a term other than fall or if they need to build skills related to the prerequisites.

All DA courses offered each term must be taken together and sequentially. Students are discouraged from working during winter and spring terms of the program core due to a heavy course load.

The Dental Assisting program does not have a selective admissions process. However, students wishing to register in the fall DA cohort must meet the basic prerequisite competencies and may register according to seat availability on a first-come, first-served basis as determined by the priority registration schedule. Students may view the priority registration schedule at www.cocc.edu/Registration-Home.aspx/.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program (DA) courses; students who do not meet this standard may be dismissed from the program.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

- The Dental Assisting Program is accredited by the Commission on Dental Accreditation (CODA). This accreditation requires that students complete 300 hours of practicum (internship) in a minimum of two different dental offices. Some dental offices require that students successfully complete a criminal background check.
- In Oregon it is not necessary to be a Certified Dental Assistant (CDA) or an Expanded Functions Dental Assistant (EFDA) to work as a dental assistant. However, opportunities for advancement in the occupation are limited without these two certifications.
- Dental Assisting students can earn a CDA certificate with the successful completion of these three Dental Assisting National Board (DANB) exams: Infection Control Exam (ICE), Radiation Health and Safety Exam (RHS) and General Chairsides Exam (GC).
- Dental Assisting students can become an EFDA by: obtaining a certificate of completion from COCC, passing the written RHS exam, completing the proficiency exam in Dental Radiology, and submitting the required fee.
- In Oregon, a dental assistant must have a Radiology Certificate to take dental radiographs. This certificate is obtained by passing the RHS written exam and completing a proficiency exam, which includes submitting a diagnostic full set of radiographs.
- An EFDA in Oregon can also be certified to perform the following functions by taking courses approved by the Oregon Board of Dentistry: place dental sealants, place dental restorations (alloy and resin), relines dentures.
- Prior to taking any DANB exams, students must answer background information questions concerning felony convictions, regulatory board discipline, ethical violations at an educational institution, and mental competence. For more information, see www.danb.org.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

DENTAL ASSISTING *(continued)*

Certificate of Completion
65-73 credits

PROGRAM COURSE REQUIREMENTS

General education/foundational requirements

WR 121	English Composition	4
MTH 20	Pre-Algebra (or higher)	4
SP 218	Interpersonal Communication	3
Computer competency (test or CIS 120)		0-4
Human Relations list, see page 45		3-4

OTHER REQUIRED COURSES

HHP requirement

Students can choose from HHP 231, HHP 242, HHP 258, HHP 266, HHP 295, and one activity or health module or HHP 252A only 3-4

PROGRAM REQUIREMENTS

DA 110	Basic Dental Assisting	4
DA 115	Dental Science	4
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	Dental Office Management	3
DA 151	Dental Computing	1
DA 160	Oral Medicine	3
DA 181	Dental Seminar I	1
DA 182	Dental Seminar II	1
DA 190	Dental Assisting Practicum I	5
DA 191	Dental Assisting Practicum II	5



EARLY CHILDHOOD EDUCATION

Associate of Applied Science (AAS) Degree

90-96 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Early Childhood Education

PROGRAM DESCRIPTION

At COCC, the Early Childhood Education program provides students who have an interest in early childhood, including the early primary elementary years, with a foundation in the theoretical, social, historical and legal aspects of early childhood programming. The COCC associate degree programs in early childhood education provide the foundational knowledge, field experiences and common skills and strategies to prepare students for multiple roles within the field of early childhood education. While the program prepares students for direct work with young children in classroom and educational settings, many associate degree-seeking students have additional professional goals (many requiring further education) including but not limited to:

- Early childhood educator roles such as an infant/toddler, preschool/pre-kindergarten, or K-3 grade classroom teacher, family child care provider, Head Start teacher, or paraprofessional in public schools, early interventionist;
- Home-family support roles such as family advocate, child protective services worker, or parent educator; or
- Professional support roles such as early childhood administrator in a child care or Head Start program, staff trainer, peer/program mentor, or advocate at the community, state or national level.

The Associate of Applied Science (AAS) degree prepares students with a strong emphasis in the theories, curriculum goals and developmentally appropriate teaching and guidance strategies necessary to lead an early childhood classroom program or work as a paraprofessional in the public schools.

COST OF PROGRAM

In addition to standard tuition, student fees, and textbooks, students should anticipate the following program costs: Background check (\$3-\$70), as well as cost of mileage to and from field placement/practicum sites.

PROGRAM PREPARATION AND PREREQUISITES

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.

MINIMUM GPA OR GRADE REQUIREMENTS

- Courses listed under the Foundational Skills section must be completed at a "C" grade or better, and graduates must have an overall 2.0 GPA.
- Program requirements (see definition below) must be completed at a "C" grade or better.
- Other required courses must be completed at a "C" grade or better.

REGISTRATION INFORMATION

It is recommended (but not required) that students take ED 140 before other Early Childhood Education courses.

PROGRAM STANDARDS

In addition to COCC policies, including students' rights and responsibilities, described in this catalog and detailed in the ECE syllabi, students in COCC's ECE program are expected to follow the policies specific to courses:

- Complete and pass a criminal background check;
- Adhere to the field placement contract; and
- Adhere to confidentiality, health-related and no-smoking policies as they pertain to field placement settings

Refer to the COCC Early Childhood Student Handbook (www.cocc.edu/Early-Childhood-Education/) for an explanation of each of the above policies.

TRANSFER INFORMATION

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.

The AAS degree is fully articulated with Southern Oregon University's Early Childhood Development program and allows students to transfer directly as juniors and to become admitted into the Early Childhood Development program at Southern Oregon University with no loss of credits to pursue a bachelor's degree. The program offers an excellent balance of early childhood and general education courses that support advanced study in the field of early childhood development.

Students should contact the SOU School of Education early in the beginning of their AAS in Early Childhood Education program to be advised about additional requirements and procedures for admission to the school or program. Students should be aware that if they transfer before completing this degree, their courses will be evaluated individually toward the general education requirements in effect at SOU. For more information, visit www.sou.edu, search "COCC" to access the articulation agreement.

PROGRAM COURSE REQUIREMENTS

General education/foundational requirements

Communication

WR 121	English Composition	4
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Computation

MTH 60	Algebra I (or higher)	4
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Health

HHP 252A	Fit/First Aid	3-4
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or HHP activity courses (1 credit each) are not to be duplicated

Human Relations

Human Relations list, see page 45	3
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PROGRAM REQUIREMENTS

General education/foundational requirements

ED 140	Introduction to Early Childhood Education	4
ED 150	Environments and Curriculum in ECE	4
ED 151	Observation and Guidance in ECE 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	Multicultural Issues in Education Settings in Early Childhood Education	3
ED 250	Advanced Curriculum Development and Teaching Methods in ECE	4
ED 261/262	Practicum I and II	6
ED 265	Children at Risk	3
ED 269	Exceptional Children in Early Childhood Education	3

OTHER REQUIRED COURSES

Discipline Studies courses, see list pages 44-45	6	
Computer competency	0-4	
ENG 221	Children's Literature	3-4
or ED 112	Children's Literature & Curriculum	
FN 225	Human Nutrition	4
PSY 201	Mind and Brain	4
PSY 215	Developmental Psychology	4
SOC 201	Intro to Sociology	4
WR 122	English Composition	4
or WR 227	Technical Writing	
Choose one of the Following:	3	
ED 216	Purpose Structure & Function of Education in a Democracy	
or ED 253	Learning Across the Lifespan	
or ED 290	English Language Development in the Primary Classroom	
or GEOG 272	Geography for Teachers	

EARLY CHILDHOOD EDUCATION

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

CHILD, FAMILY & COMMUNITY STUDIES
Certificate of Completion - 37 credits

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite)		
or MTH 111	College Algebra	
or MTH 211-213	Fundamentals of Elementary Math I-III	

Health (3 credits with HHP prefix)		3
HHP activity courses (1 credit each) are not to be duplicated		

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

Note: For students intending to transfer to Oregon State University-Cascades program in Human Development and Family Sciences (HDFS), please meet with an advisor in Early Childhood Education early in your course of study.

RECOMMENDED PROGRAM ELECTIVES

To provide the best preparation for upper-division courses, particularly at OSU-Cascades, students should work with their advisor to select the most applicable electives from the following:

ED 140	Intro to Early Childhood Education	4
ED 150	Environments and Curriculum in ECE	4
ED 151	Observation and Guidance of Young Children's 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 216	Structure and Function of Education in a Democracy ¹	3
ED 219	Multicultural Issues in Education Settings ¹	3
ED 250	Advanced Curriculum Development and Teaching Methods in Early Childhood	4
ED 253	Learning Across the Life Span ¹	3
ED 265	Children at Risk	3
ED 290	English Language Learners	3
ENG 221	Introduction to Children's Literature	4
PSY 215	Developmental Psychology	4
HHP 100	Introduction to Public Health	4
LIB 127	Information Research Skills	3

¹ ED 216, 219, and 253 count toward the recommended courses for students pursuing the MAT at OSU-Cascades.

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Child, Family and Community Studies

CERTIFICATE DESCRIPTION

The CFC Studies certificate is designed to support students seeking careers in school and human service settings. The CFC Studies certificate is a step along the pathway to the AAS in Early Childhood Education. It invites students to apply theories and applications toward a broader perspective, including settings outside of school.

Students with intentions to seek higher degrees or career opportunities in settings serving children and families may use the CFC Studies Certificate to demonstrate coursework and field placement experience. Credits will apply toward the Head Start Reauthorization Act for highly qualified lead and assistant teachers and family advocates. Students considering the HDFS program through OSU may apply several courses (ED 140, PSY 202, SOC 201, FN 225) to HDFS program requirements.

CERTIFICATE REQUIREMENTS

ED 140	Introduction to Early Childhood Education	4
ED 151	Observation and Guidance in ECE Learning	4
ED 152	Family, School and Community Relationships in ECE	3
ED 219	Multicultural Issues in Education Settings in Early Childhood Education	3
ED 265	Children at Risk	3
FN 225	Human Nutrition	4
PSY 201	Mind and Brain	4
PSY 215	Developmental Psychology	4
SOC 201	Intro to Sociology	4
Additional Coursework from the Discipline Studies List		
See pages 44 and 45		



ECONOMICS

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

Economics is the study of how society allocates its scarce resources to satisfy its many needs and wants. The focus of lower-division economics courses at COCC is on how the U.S. economy works. The U.S. economy relies primarily on free markets to allocate resources and to provide final goods and services. To understand how markets work, students study the forces of supply and demand. They also look closely at both competitive markets and monopoly markets. Economics studies the role of government in the economy, both in promoting social objectives and in keeping the economy healthy through fiscal and monetary policies. Economics gives an understanding of how the U.S. produces and distributes the goods and services it needs and enjoys. This program is good preparation for careers in business, engineering, resource management or government, as well as solid training for graduate or law school.

The Associate of Arts Oregon Transfer (AAOT) degree meets the State of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in economics.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 111	College Algebra	4
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Health (3 credits with HHP prefix) 3

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

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

EC 201	Microeconomics	4
EC 202	Macroeconomics	4

And at least two (2) additional courses with at least one different prefix.

Science/Math/Computer Science

At least three (3) laboratory courses in biological and/or physical science. Additional math as potential department requires (depending on baccalaureate university).

MTH 241	Calculus for Management/Social Science	4
MTH 243	Intro to Methods of Probability and Statistics I	4
MTH 244	Intro to Methods of Probability and Statistics II	4

ELECTIVES

Students must take enough elective courses to meet the minimum 90 credits required for the degree. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable.

ADVISING NOTES

Students pursuing a BA should consider completing three terms of a 200-level language courses at COCC. The 100-level language courses will count as electives. The 200-level language courses will partially fill the Arts and Letters requirement.

Students pursuing a BS should consider taking more math, social science and science courses. Language is not necessary for the BS degree, but would be valuable for students with a major or emphasis in international economics. For specific details, speak with an advisor.

EDUCATION

Associate of Arts Oregon Transfer (AAOT) Degree 90 credits

COCC offers lower-division coursework for students preparing to become teachers in Oregon.

In general, the Associate of Arts Oregon Transfer (AAOT) degree (see pages 34-35 for the AAOT degree checklist) is reasonable preparation for students intending to transfer to a teacher preparation program.

In Oregon, students may achieve an initial license to teach through a bachelor's program, a post-baccalaureate program or a master's-level program. Students prepare to teach at different grade levels of authorization, depending on their background, interests and the requirements of specific programs of study. Students may prepare for a transfer degree in Early Childhood Education through COCC (see page 96) as the initial preparation for early childhood education as well as elementary grade-level teaching. However, it is important to work closely with an advisor to ensure that the degree contains the necessary prerequisite coursework for the desired licensure program.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

For students intending to stay in Central Oregon to pursue their studies in education, there are several options for completing a teaching licensure program.

Students should consult with an education advisor as early as possible to discuss program options and determine which courses fulfill transfer requirements to different institutions and different levels of licensure.

For more information on teacher preparation programs in Oregon, see the Oregon Teacher Standard and Practices Commission website at www.oregon.gov/TSPC and the Oregon Teacher advising guide, www.ous.edu/stucoun/prospstu/teached/. Students may wish to review COCC's advising guide for teacher education as well: www.cocc.edu/CAP/Advising/.

EMERGENCY MEDICAL SERVICES

Associate of Applied Science (AAS) Degree

98-100 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Emergency Medical Services

PROGRAM DESCRIPTION

An Associate of Applied Science (AAS) degree in Emergency Medical Services (Paramedic) contains many courses to develop technical skills and knowledge for employment and advancement in pre-hospital employment. The program is challenging and will require participants to spend between 600 and 800 hours in clinical and field settings. The program contains certification requirements at the Emergency Medical Technician (EMT) and Paramedic levels. Students will need to satisfy a computer-based and practical hands-on test through the National Registry of EMTs to complete certification.

Paramedics work in a variety of settings. These include fire departments, private and public ambulance services, hospitals (emergency departments), emergency communication systems, law enforcement agencies, search and rescue, recreation industry, forest service/smokejumpers, and some rural clinical environments. Paramedics provide many services to their communities, often working in teams where communication and technical skills are expected. Starting salaries range from \$2,500 to \$3,500 per month.

COST OF PROGRAM

In addition to standard tuition, student fees, lab fees and textbooks, students should anticipate the following estimated program costs:

- CPR for Healthcare Provider card: \$55. Must remain current throughout Basic and Paramedic classes.
- Background Check: \$55. Students must pass a Criminal History Check prior to enrolling in the Basic or Paramedic classes.
- Drug Screen: \$55.
- Immunization upload \$14. Documentation of completion of the following immunizations; Hepatitis B, current TB, MMR, annual Influenza, Tetanus within previous 10 years, Varicella (Chickenpox).
- In some cases fees associated with immunizations can range from \$20-\$200
- Materials (stethoscope, paramedic field manual, uniforms, etc.) range from \$20-\$150.
- Testing fees which include National Registry computer exams, practical skills testing, fingerprint background checks (depending on location of practical testing): range from \$450-\$1,000 (includes travel outside of the area).
- Paramedic students should anticipate costs for housing and living expenses when doing their field internship outside of the local area.

Note: As some of the above fees are paid to outside institutions, rates may vary throughout the academic year.

PROGRAM PREPARATION AND PREREQUISITES

The AAS in Emergency Medical Services (EMS) is designed for students seeking a career in EMS and/or the fire service industry. The program meets or exceeds the required technical skills and knowledge necessary for national and state licensure testing. The program contains certification at the EMT and Paramedic levels.

ADVISING INFORMATION

- It is strongly recommended that candidates enrolling in the EMS program have a strong background in high school or college math and chemistry. This knowledge will enhance the student's success in Anatomy and Physiology and college-level math.
- Required for Paramedic course: Completion of WR 121 or higher and MTH 65 or higher.
- Second-year Paramedic courses are open only to students who have been admitted to the program.
- Students should contact the Admissions office to obtain details for Paramedic course selection and application process.

- Speak with an advisor prior to registration to get a list of recommended courses in categories that offer more than one option such as the general education requirement.
- Speak with program director to make sure students understand the state and national testing process for EMT and Paramedic courses.

REQUIRED PRIOR TO ENTRY IN PROGRAM EMT OR PARAMEDIC COURSES

- High school diploma or GED.
- Students must be 18 years old or older to test for state and national exams.
- A current Health Care Provider CPR card is required prior to placement into EMT or Paramedic courses.
- Uploaded and verified, required immunizations as set forth in clinical agreement with St. Charles hospital system.
- Information on the courses that are required for entry into the Paramedic course as prerequisites and those used to calculate points for selection can be found on the EMS website, www.cocc.edu/Emergency-Medical-Services/EMS-Program-Requirements/.
- All COCC students enrolled in an EMT, paramedic course and/or seeking agency affiliation 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. 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.
- New policy effective fall term 2014: Prior to entry into a health profession program, students must complete a 10 panel urine drug screen with verified credentials. With the exception of certain prescribed medications, students with a positive drug screen, which prevents them from attending clinical, will be disqualified from entering the program. Please refer to the EMS website and/or program handbook for more detailed information.
- 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 EMS Program. Students with a positive urine drug screen will be disqualified from entering the EMT or Paramedic certification courses at Central Oregon Community College, with the exception of certain prescribed medications. The Director of EMS/SFS will notify the student of positive drug screens and their resulting disqualification from the Program. Students have a right to appeal the decision.

PROCESS FOR APPLYING TO PARAMEDIC PROGRAM FALL TERM

- Complete application process found at www.cocc.edu/Emergency-Medical-Services/EMS-Program-Requirements/.
- Acceptance into the program based on the selection process found on the website listed above.
- All required prerequisite courses completed with an overall GPA of 3.0 (Required prerequisite courses are listed at www.cocc.edu/Emergency-Medical-Services/EMS-Program-Requirements/).

EMERGENCY MEDICAL SERVICES *(continued)*

Associate of Applied Science (AAS) Degree
98-100 credits

MINIMUM GPA OR GRADE REQUIREMENTS

All required prerequisite courses must be completed at an average of a 3.0 GPA grade or better and students must maintain a minimum 2.7 GPA to stay enrolled in the Paramedic course. Students who fall below a minimum 2.7 ongoing GPA during the Paramedic course will have one term to correct the deficit and bring their grades up. Students who fail to bring their grades up may not be allowed to register the following term and complete the course. They may re-apply for the following year if they meet current requirements as set in Paramedic program readmission policy. Students applying for re-admission that have failed a course will have to repeat the entire program sequence.

REGISTRATION INFORMATION

Each year, on the first day of the spring term, the application period for the following academic year's fall term start of the paramedic course is available. The paramedic course admits one cohort per year beginning fall term. All other courses are offered multiple times throughout fall, winter and spring terms. See the online schedule (www.cocc.edu/Degrees-Classes/) for information.

PROGRAM STANDARDS

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.

The EMS handbook outlines requirements for class, lab, clinical and field settings; these can be obtained by contacting the Director of EMS/SFS programs. Continuation in the EMS program will be determined on an individual basis and will depend on the ability of the student to correct deficiencies, broken relationships with clinical personnel and show continued improvements in grades and skills.

Failure to successfully complete each term may affect a student's ability to finish the program and sit for state and national testing.

Each course must be taken in succession, within one academic year and at COCC.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE, ADVANCEMENT, AND/OR ENTRY INTO OCCUPATION.

- Any student wishing to obtain an NREMT paramedic certification must graduate from a program accredited by CoAEMSP.
- The Central Oregon Community College paramedic program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). Commission on Accreditation of Allied Health Education Programs
1361 Park Street
Clearwater, FL 33756
727-210-2350
www.caahep.org
- The Emergency Medical Services program is accredited by the Board of Education and the Oregon State Health Services and Trauma section. This accreditation requires that students complete didactic, lab, clinical and field internships as outlined in the Oregon Administrative Rules (OAR).

In Oregon it is required to have an AAS degree or higher to perform as a paramedic. The OARs can be obtained at www.oregon.gov/DHS/ph/ems/. National Registry requirements may be obtained at www.nremt.org.

TRANSFER INFORMATION

This degree is designed for students planning to enter their chosen career upon graduation. Students who choose to pursue a higher degree in the field of EMS will have several options for transfer of credits; however, students who choose to pursue higher degrees in general studies should be aware that only selected credits may be transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

General education/foundational skills

WR 121	English Composition	4
MTH 65	Algebra II ¹	4
or higher		

Human Relations

FOR 211	Supervision and Leadership	3
or BA 285	Business Human Relations	

EMS program requirements

AH 111	Medical Terminology	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 Comm/Doc	2
EMT 171	Emergency Response Patient Transport	2
EMT 175	Introduction to Emergency Services	3
or SFS 101	Introduction to Emergency Services	
EMT 195	Crisis Intervention	3
EMT 290	EMT Paramedic Part I	8
EMT 291	EMT Paramedic Clinic Part I	2
EMT 292	EMT Paramedic Part II	8
EMT 293	EMT Paramedic Clinic Part II	3
EMT 294	EMT Paramedic Part III	7
EMT 295	EMT Paramedic Clinic Part III	4
EMT 280	EMT-Paramedic Co-op Work Experience	8
SFS 230	Rescue Practices	3

Other requirements

The following is a list of general requirement courses that must be completed for graduation:

HHP 242	Stress Management	3
or HHP 266	Nutrition for Health	
or HHP 295	Health and Fitness	
SP 111	Fundamentals of Public Speaking	3-4
or higher		

EMS Electives²		3-5
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Upon completion of EMT 151 and EMT 152, 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.

FOOTNOTES

¹ Students planning to transfer should take MTH 105 or 111.

² Approved EMS electives: ANTH 103, CJ 100, OL 244, PSY 201, PSY 202, PSY 101, PSY 216, SOC 201, SOC 206, EMT 163, EMT 164.

ENGINEERING

Associate of Science (AS) Degree
90 credits

COCC offers freshman and sophomore core science, engineering and general education courses needed for most engineering majors. Students earning an engineering degree choose from among the many branches of engineering available, such as: civil, mechanical, electrical, chemical, computer and OSU-Cascades' energy engineering management. Certain engineering majors and branches may require additional courses not offered at COCC.

Students who wish to complete lower-division science, engineering and general education courses while at COCC may choose either the Associate of Arts Oregon Transfer degree (which allows students to transfer to an Oregon public university having met all lower-division general education requirements) or an Associate of Science (which includes the science and engineering courses and some general education, more closely mirroring a university course of study). Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

GENERAL EDUCATION/ FOUNDATIONAL REQUIREMENTS

All courses must be completed with a "C" grade or better

Writing

WR 121	English Composition	4
WR 227	Technical Writing	4

Oral communication

SP 111	Fundamentals of Public Speaking	3
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Mathematics

MTH 251	Calculus I	4
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Health

HHP 295	Health and Fitness	3
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GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

Choose two (2) courses from the Discipline Studies list.	6-8
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Social Science

Choose two (2) courses from the Discipline Studies list. (EC 201 is recommended.)	6-8
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PROGRAM REQUIREMENTS

MTH 252	Calculus II	4
MTH 254	Vector Calculus I	4
MTH 256	Applied Differential Equations	4
GE 101	Engineering Orientation	3
GE 102	Engineering Problem Solving and Technology	3
CH 221	General Chemistry I	5
CH 222	General Chemistry II	5
PH 211	General Physics I	5
PH 212	General Physics II	5
PH 213	General Physics III	5
ENGR 201	Electrical Fundamentals	4
ENGR 202	Electrical Fundamentals II	4
ENGR 211	Statics	4
ENGR 212	Dynamics	4
ENGR 213	Strength of Materials	4

ELECTIVES¹

Choose enough electives to reach a minimum total of 90 overall degree credits. Elective credits must number 100 or above with a maximum of 12 CTE credits and 15 credits of CWE/HHP/performance courses.

ADVISING NOTES

¹ Elective Notes: Most engineering majors have few, if any, true electives and students must sequence courses very intentionally. The elective category should be used to tailor the program toward a specific engineering major or branch. Following are some general guidelines though we recommend students to research requirements directly.

Chemical: CH 223, MTH 253. Note that OSU requires a year-long sequence prior to the junior year that COCC does not offer.

Energy Engineering Management: MTH 253, ENGR 202, ENGR 212, EC 201, BA 217, CS 161.

Mechanical: ENGR 212, MFG 103, MFG 112, MFG 113, CIS 125A1, CIS 125A2, CIS programming class (CIS 122, CIS 133JS, CIS 133P, CS 161, CS 162)

Civil: ENGR 212.



ENGLISH/LITERATURE

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

English majors and minors with a solid humanities foundation and strong writing, reading, critical thinking and research skills, are sought after in many careers, including advertising, business, marketing and public administration, communication and media, computer-based information and education, software and web development, counseling and social services, government civil service, law and criminal justice, recreation and teaching/education.

The AAOT degree meets the State of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in English/Literature.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
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(or higher for which Intermediate Algebra is a prerequisite)

Health (3 credits with HHP prefix)		3
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HHP activity courses (1 credit each) are not to be duplicated

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44-45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes. English/Literature majors are advised to choose two courses with an English prefix in British and/or American Literature from:

ENG 204	Survey British Literature I	4
ENG 205	Survey British Literature II	4
ENG 253	Survey American Literature I	4
ENG 254	Survey American Literature II	4

plus one additional course from the arts and letters discipline studies list with a different prefix.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

Choose enough electives to reach the minimum of 90 credits required for the AAOT. Most Oregon and other universities require English/Literature majors to complete lower-division coursework in surveys of British and American Literature, as well as at least one course in Shakespeare;

therefore English/Literature majors are encouraged to complement their general education/discipline studies arts and letters courses with electives chosen from the following courses:

ENG 201	Shakespeare	4
or ENG 202	Shakespeare	
ENG 204	Survey British Literature I	4
ENG 205	Survey British Literature II	4
ENG 253	Survey American Literature I	4
ENG 254	Survey American Literature II	4

However, lower-division requirements for majors, minors and related specializations in English/Literature vary among four-year institutions. To make wise elective course choices, students are advised to work closely with their advisors, consult college catalogs of the destination institution to which they wish to transfer, and determine whether one or more of the following courses should be elected to fulfill their degree objectives.

Education programs may require or recommend

ENG 221	Children's Literature	4
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English/Literature and humanities degree programs may also require or recommend one or more courses in:

Western World Literature

ENG 107	Western World Literature: Ancient	4
ENG 108	Western World Literature: Middle Ages	4
ENG 109	Western World Literature: Modern	4

Non-Western World Literature (may satisfy cultural diversity requirements)

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 the Middle East	4

American Multiculturalism (may satisfy cultural diversity requirements)

HUM 210	Culture and Literature of Asia	4
HUM 230	Immigrant Experience in 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

Introductory genre courses in Literature, Film, Popular Culture and/or Women's Studies courses

ENG 104	Introduction to Literature: Fiction	4
ENG 105	Introduction to Literature: Drama	4
ENG 106	Introduction to Literature: Poetry	4
ENG 212	Autobiography	4
ENG 232	Topics in American Literature	4
ENG 250	Introduction to Folklore and Mythology	4
ENG 256	Folklore and U.S. Culture	4
ENG 260	Introduction to Women Writers	4
FA 101	Introduction to Film	3
FA 125	World Cinema	4
FA 257	Literature into Film	4
HUM 105	Italian Life and Culture (offered in Florence, Italy)	2
HUM 106	British Life and Culture (offered in London, England)	3
HUM 261	Popular Culture: Science Fiction	4
HUM 262	Popular Culture: The American Western	4
HUM 263	Popular Culture: Detective Stories	4
HUM 264	Popular Culture: Spy Thriller	4
HUM 265	Popular Culture: Noir Film and Fiction	4
HUM 266	Popular Culture: Travel Literature	4
HUM 267	Popular Culture: Counterculture	4
HUM 268	Digital Games Culture	4
WS 101	Women's and Gender Studies	4

EXERCISE SCIENCE

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

The AAOT degree meets the State of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements. The following is a suggested course of study for students interested in pursuing a bachelor's degree in Exercise Science.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 111	College Algebra	4
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(or higher for which Intermediate Algebra is a prerequisite.)

Health (3 credits with HHP prefix.)		3
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HHP activity courses (1 credit each) are not to be duplicated.

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes. Recommend including:

PSY 201	Mind and Brain	4
PSY 202	Mind and Society	4
SOC 201	Intro to Sociology	4

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science. Recommend including:

BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4
HHP 261	Exercise Physiology	4

ELECTIVES

17-34 credits. Choose enough elective credits to reach a minimum total of 90 overall degree credits. Elective classes 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/HHP/performance classes (15 credits maximum). The following is a list of recommended electives:

HHP 100	Introduction to Public Health	4
HHP 131	Intro to Exercise/Sport Science	3
HHP 212A	CPR-AHA Health Care Providers	1
HHP 259	Care and Prevention of Athletic Injury	3
HHP 260	Anatomical Kinesiology	4
HHP 262	Training Theory and Applications	3

HHP 266	Nutrition for Health	3
HHP 270	Sport and Exercise Psychology	3
HHP 280	Practicum - EXSS	2

TRANSFER INFORMATION

Oregon University System (OUS) universities that offer bachelor's degrees with majors, minors or specializations in exercise science and related fields include:

- Eastern Oregon University-Distance Education Physical Activity and Health
- Oregon State University Health and Human Sciences
- Oregon State University-Cascades
- Portland State University Health Studies
- Southern Oregon State University Health and Physical Education

ADVISING NOTES

Lab fees:

- \$23 for HHP 295 (3 credits), or HHP 252A (3 credits).
- \$20 for HHP 212A (1 credit).
- \$20 for all HHP 185 activity classes for Mazama Gym user fee.



EXERCISE SCIENCEAssociate of Science (AS) Degree
91 credits

The Associate of Science (Oregon State University, Exercise Science emphasis) is intended for students who know that they are on the academic path to obtaining a Bachelor of Science in Applied Exercise Science from Oregon State University-Cascades. Students who are unsure of where they will be attending after COCC should instead focus on the Associate of Arts Oregon Transfer degree. This AS degree is only for those students transferring from the COCC Exercise Science associate degree program to the OSU Applied Exercise Science bachelor's program and includes lower division major and general education requirements to help guide those students. Please note that requirements can change and students in this degree are not guaranteed of completion of requirements. OSU has announced significant upcoming changes to their Exercise Science program. For program updates, please see your COCC Advisor.

BACCALAUREATE CORE**Skills**

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	
SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 218	Interpersonal Communication	

Mathematics

MTH 112	Trigonometry	4
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Fitness

HHP 295	Health and Fitness	3
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Perspectives

Physical Science	(met by major)	
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Biological Science

BI 101	General Biology: Cells & Genes	4-5
or BI 102	General Biology: Evolution	
or BI 103	General Biology: Ecology	
or BI 211	Principles of Biology I	
or BI 234	Microbiology	
or FOR 208	Soils: Sustainable Ecosystems	

Physical or Biological Science (met by major)

Social Processes and Discrimination (met by major)

Difference, Power, and Discrimination

HST 201	History of the United States	4
or HST202	History of the United States	
or HST 225	US Women's History	
or SOC 212	Race, Class, Ethnicity	
or SOC 215	Social Issues and Social Movements	
or WS 101	Introduction to Women's and Gender Studies	

EXERCISE AND SPORT SCIENCE CORE

HHP 100	Introduction to Public Health	4
HHP 260	Anatomical Kinesiology	4
HHP 261	Exercise Physiology	4
HHP 262	Training Theory and Applications	3
HHP 270	Sport and Exercise Psychology	3

Required supporting courses

CH 221	General Chemistry I	5
CH 222	General Chemistry II	5
CH 223	General Chemistry III	5
PH 201	General Physics I	5
PSY 201	Mind and Brain	4
BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4

APPLIED EXERCISE AND SPORT SCIENCE OPTION REQUIREMENTS

HHP 131	Introduction to Exercise/Sport Science	3
HHP 280	Practicum - Exercise Science	2

Support courses

6 credits of 100-level or higher electives support courses should align with graduate school or career choices; see your advisor for recommendations.

ADVISING NOTES

The following are not required in the Associate of Science degree but will be required for the Bachelor of Science in Applied Exercise Science from Oregon State University-Cascades. Students can meet these requirements with COCC courses but should plan around OSU's upper-division requirement:

- Cultural Diversity
- Literature and the Arts

(See a complete list of COCC courses that meet the above requirements at: oregonstate.edu/admissions/baccalaureate-core-course-equivalencies-central-oregon-community-college/)

Applied EXSS option requirement, Section B, EXSS electives

Options include: HHP 266 (3 credits) or HHP 259 (3 credits) or HHP 267 (3 credits).

OSU Exercise Science major GPA requirements: OSU requires Exercise Science majors to earn a minimum 2.25 GPA in option courses and a minimum 2.5 GPA in all EXSS/HHP department courses.

Lab fees: \$23 for HHP 295 (3 credits).

For further information on the admissions process contact OSU advisors or visit www.osucascades.edu/future-students/cocc-students/.

EXPLORATORY

Associate of Arts Oregon Transfer (AAOT) Degree
 Associate of General Studies (AGS) Degree
 90 credits

If a student plans to earn a college degree but has not yet decided on a major, COCC identifies the student as "exploratory" student which aligns with the Associate of Arts Oregon Transfer (AAOT) degree plan (see pages 34 and 35 for the AAOT degree requirements). The AAOT degree is used for exploratory students because it provides a guideline of courses that meets bachelor's degree general education requirements at Oregon public universities. The AAOT degree does not include all bachelor degree requirements for freshmen and sophomores, and it does not include requirements for COCC's career and technical education programs. For these reasons, it is important for exploratory students to work actively to identify an educational goal.

Some exploratory students may choose to declare the Associate of General Studies degree (see pages 40-41 for AGS requirements). The AGS degree allows students to self-design a program to meet individual needs but it is not designed to meet general education requirements as the AAOT degree is, nor does it align with workforce training and skills as the AAS degrees do. Again, it is important for exploratory students to work actively to identify an educational goal.

COCC recommends that you use several strategies to ensure that you make a good decision about your educational goal. Many COCC resources are available to assist in this.

- Take HD 110 Career Planning, a 3-credit course offered every term.
- Attend a free Process of Choosing a College Major workshop.
- Visit with the Career Services Coordinator in the CAP Center.
- Discuss options with your academic advisor and faculty members in departments that interest you.

Be aware that the AAOT and AGS guidelines may not align with your eventual educational goal.

COCC uses the AAOT and AGS degrees to give exploratory students a framework, but students should change their declared major when they make a decision. Initially, the GradTracks audit will present the Associate of Arts Oregon Transfer requirements but students should be aware that these guidelines are preliminary. Students can explore other COCC programs by using the "What if" option on the GradTracks menu. Give yourself a timeline within which to make a decision.

Many universities require that students declare their major prior within their first 90 credits, but large majors such as 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 the earlier students make a decision, the better.



FOREIGN LANGUAGES

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

In today's globally interconnected world and increasingly competitive job market, students with proficiency in more than one language, supported by cultural knowledge, and empathetic experience of diverse U.S. and world cultures, have a decided advantage in whatever career they may pursue. Bachelor's degree requirements at most Oregon and other universities include demonstrating proficiency at the second-year level in a foreign language.

COCC's World Languages and Cultures department offers first- and second-year French, Spanish, German, Italian, and other courses needed to satisfy lower-division requirements for bachelor's degrees and to prepare transfer students for success in achieving their academic and professional goals. COCC students seeking a bachelor's degree in French, Spanish, German, Italian or a related degree, or a teaching endorsement featuring foreign language, literature and culture studies are often best served by pursuing the Associate of Arts degree. Students wishing to begin or continue study of a foreign language at COCC are encouraged to consult college catalogs and work closely with their advisors.

The Associate of Arts Oregon Transfer (AAOT) degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in foreign languages.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite)		

Health (3 credits with HHP prefix)		3
HHP activity courses (1 credit each) are not to be duplicated		

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

Students must choose enough electives to reach the minimum of 90 credits required for the AAOT.

Note: First-year foreign language courses may be counted as electives, as may any second-year foreign language courses not used to satisfy the arts and letters general education/discipline studies requirement above.

TRANSFER INFORMATION

Oregon University System (OUS) universities that offer bachelor's degrees, minors, certificates or endorsements in foreign languages and related fields:

- Oregon State University-Corvallis
- University of Oregon
- Portland State University
- Eastern Oregon University
- Southern Oregon University
- Western Oregon University

FOREST RESOURCES TECHNOLOGY

Short-Term Certificates
12-15 credits

There are six short-term certificate programs as well as the Associate of Applied Science (AAS) degree available to students. The following certificates include classes that are already included in the Forest Resources Technology AAS degree requirements. These short-term certificates allow for completion along the path to a two-year degree. The certificates are best designed for those who hold degrees in other areas or are already in the work force, and are looking to enhance their skills in a specific area.

The following short-term certificates are available in addition to or in lieu of the AAS degree. All required courses must be passed with at least a "C" grade. Students are expected to provide their own appropriate field clothing and tools.

ADVANCED FOREST CONCEPTS

Short-term Certificate (12 credits)

(Three quarters to complete)

This certificate is designed to train individuals on the complexities of determining forest utilization, planning and management.

FOR 205	Silviculture and Harvesting Processes	5
FOR 215	Forest Resource Capstone	3
FOR 220C	Resource Sampling	4

CONSERVATION OF NATURAL RESOURCES

Short-term Certificate (14 credits)

(Three quarters to complete)

This certificate is designed to train individuals on basic concepts of conserving natural resources including forest, wildlife, soil and water resources.

FOR 111	Forestry Perspectives	4
FOR 208	Soils: Sustainable Ecosystems	4
FOR 240B	Wildlife Ecology	3
FOR 260	Conservation of Natural Resources	3

FOREST ECOLOGY

Short-term Certificate (12 credits)

(Three quarters to complete)

This certificate is designed to introduce the practical aspects of forest ecology, dendrology and their applications.

FOR 203	Applied Forest Ecology	3
FOR 240A	Forest Ecology	3
FOR 241A	Field Dendrology	3
FOR 241B	Dendrology	3

FOREST MEASUREMENTS

Short-term Certificate (13 credits)

(Three quarters to complete)

This certificate is designed to train individuals on basic measurements of trees and land and on-land navigation using maps, compass and GPS.

FOR 220A	Aerial Photo	3
FOR 220B	Resource Measurement	4
FOR 230A	Map, Compass and GPS	3
FOR 230B	Forest Surveying	3

FOREST PROTECTION

Short-term Certificate (15 credits)

(Three quarters to complete)

This certificate is designed to train individuals on identification of forest disease and insects and the basic techniques used to protect forests from fire, disease and insects.

FOR 110	Wildland Fire Science I	2
FOR 202	Forest Entomology/Pathology	3
FOR 203	Applied Forest Ecology	3
FOR 205	Silviculture and Harvesting Processes	5
FOR 210	Wildland Fire Science II	2

MAPPING CARTOGRAPHY

Short-term Certificate (14 credits)

(Two quarters to complete)

This certificate is designed to train individuals on the basic use and production of maps focusing on field techniques and use of basic geographic information systems.

FOR 230A	Map, Compass and GPS	3
FOR 230B	Forest Surveying	3
GEOG 211	Computer Cartography	4
GEOG 265	Geographic Information Systems	4

FOREST RESOURCES TECHNOLOGY

Associate of Applied Science (AAS) Degree
105 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Forest Resources Technology

PROGRAM DESCRIPTION

The Associate of Applied Science (AAS) degree program in Forest Resources Technology provides the education and practical skills needed to succeed as a technician in forestry and natural resource fields throughout the western U.S. The AAS degree program from COCC is accredited by the Society of American Foresters. Job opportunities exist in government agencies (both state and federal) as well as private industry (contractors, consultants and private companies). The U.S. Forest Service is the primary employer for graduates of this program.

Jobs in the forestry industry offer many opportunities for employment locally and nationally. Traditional forest technician positions are now often referred to as natural resource technicians. Technicians spend considerable time outdoors. Typical entry-level positions might include forest management activities such as evaluation of reforestation efforts, timber sale layout, tree measurements, forest damage assessment and numerous other activities that are required when managing a forest.

Additionally, entry-level natural resource technicians may perform noxious weed identification and eradication, plant and wildlife surveys, fire protection and suppression, and stream monitoring and restoration. Natural resource technicians can work for state or federal government agencies and manage public property or work for private industry and private land owners.

COCC's Forest Resources Technology program has the advantage of being located among several national forests. A majority of the courses within the program include outdoor lab opportunities to gain first-hand experiences and knowledge of the necessary elements of being a natural resource technician. Additionally, students are able to take advantage of job opportunities working with local agencies to develop and implement land management plans in the capstone course at the end of their second year.

Students who are interested in gaining employment in wildland fire or are adding these courses to their Forest Resource Technology degree can accomplish both degrees within three years. Students seeking the Wildland Fire Science degree are typically advised to complete the Forest Resources Technology degree first and return for a third year to complete the Wildland Fire Science degree. The dual-degree option is the ideal approach for those students interested in both wildland fire fighting and forestry.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Additional lab fees of approximately \$300
- Equipment costs ranging from \$665-\$915 (suggested equipment includes: hardhat, boots, vest, compass, GPS, tatum, plant press, hand lens, rain gear, field book)

PROGRAM PREPARATION AND PREREQUISITES

This program can be completed within two years provided the student is adequately prepared to take MTH 85 and WR 121 and coursework is initiated during fall term. Students entering in winter or spring term and/or who require developmental writing or math courses, can complete the program within a three-year period. Students are expected to provide their own appropriate field clothing and tools. A list will be provided in FOR 100, Forestry Program Orientation.

MINIMUM GPA OR GRADE REQUIREMENTS

All courses must be completed with a "C" grade or better.

TRANSFER INFORMATION

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. 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 Oregon State University, the University of Idaho or Humboldt State University to acquire a Bachelor of Science degree should meet with a COCC Forestry program advisor to discuss current transfer requirements. Many of the required undergraduate courses for the Bachelor of Science degrees can be taken at COCC and transferred accordingly.

PROGRAM REQUIREMENTS

The following is the course sequence required for students able to attend full time who intend to complete the degree in 2 years. 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.

SAMPLE SCHEDULE

Year One

Fall term

FOR 100	Forestry Program Orientation	1
FOR 111	Forestry Perspectives	4
FOR 230A	Map, Compass and GPS	3
FOR 240A	Forest Ecology	3
FOR 241A	Field Dendrology	3
MTH 085	Technical Math I ¹	4

Winter term

Computer competency ²		0-4
FOR 203	Applied Forest Ecology	3
FOR 220B	Resource Measurement	4
FOR 230B	Forest Surveying	3
MTH 086	Technical Math II	4

Spring term

FOR 110	Wildland Fire Science I	2
FOR 126	Field Studies Pacific NW Forests	1
FOR 127	Plants of the Pacific Northwest	1
FOR 202	Forest Entomology/Pathology	3
FOR 220A	Aerial Photo	3
FOR 241B	Dendrology	3
WR 121	English Composition ³	4

Summer term

FOR 180	Co-op Work Experience Forestry	3
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FOREST RESOURCES TECHNOLOGY *(continued)*

Associate of Applied Science (AAS) Degree
105 credits

Year Two**Fall term**

FOR 205	Silviculture and Harvesting Processes	5
FOR 210	Wildland Fire Science II	2
FOR 240B	Wildlife Ecology	3
HHP 252A	Fitness/First Aid	3
SP 111	Fundamentals of Public Speaking	3
or SP 115	Intro to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Winter term

FOR 211	Supervision and Leadership	3
FOR 220C	Resource Sampling	4
Forest Resource elective ⁴		2
GEOG 265	Geographic Information Systems	4
General education discipline studies courses (see pages 44-45)		4

Spring term

FOR 208	Soils: Sustainable Ecosystems	4
FOR 215	Forest Resource Capstone	3
FOR 260	Conservation of Natural Resources	3
FW 218	Survey of Northwest Mammals	2
or FW 212	Survey of Northwest Birds	
General education discipline studies courses (see pages 44-45)		4

FOOTNOTES

¹ Students can choose to take MTH 85 and MTH 86, or MTH 111.

Students planning to transfer should consider MTH 111 and consult with their advisor for other specific transfer requirements.

² Pass computer basic skills competency test (see page 25 for details) or take CIS 120.

³ Transfer students should also take WR 227.

⁴ The Forest Resource elective can be any course with the following prefixes: BI, CH, FW, GEOG, G or FOR courses not already in the program coursework. The electives can be taken in any term.

FORESTRY

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

Forests make invaluable contributions providing wood products, water quality, urban resources and planning, recreation and carbon storage. The management of the vast acreage of forest is the challenge of the forestry profession. The ever increasing demands for forest products, new forms of recreation, maintaining clean water and the influence of urbanization are all factors that are involved in the Forestry industry. Jobs in the Forestry industry offer many opportunities for employment locally and nationally. Typical entry level positions might include forest management activities such as evaluation of reforestation efforts, timber sale layout, tree measurements, forest damage assessment and numerous other activities that are required when managing a forest. COCC's forestry program has the advantage of being located among several national forests.

Below is an Associate of Arts Oregon Transfer degree adapted to transfer requirements for a four-year degree in forestry or forest management. Students planning on transferring to Oregon State University in Corvallis, or any other university forestry program, to acquire a Bachelor of Science degree must meet with a COCC Forestry Program advisor to discuss current transfer requirements. Students should check with each school to ensure that the latest transfer information is used when designing their program. Many of the required undergraduate courses for the BS degree can be taken at COCC.

The Associate of Arts Oregon Transfer (AAOT) degree meets the State of Oregon transfer degree requirements allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. However, caution is needed in using the AAOT to transfer to a professional program, such as forestry, because the AAOT requires 12 lower division credits in the social sciences or arts and letters that are not required for a BS degree in a professional major such as forestry at Oregon State University. All courses must be completed with a grade of "C" or better.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

Writing

WR 121	English Composition	4
WR 227	Technical Writing	4

Oral Communication

SP 111	Fundamentals of Public Speaking	3
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Mathematics

MTH 111	College Algebra	4
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Health

HHP 295	Health and Fitness	3
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GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 of the college catalog for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

EC 201	Microeconomics	4
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And at least three (3) additional courses from at least two (2) prefixes.

Science/Math/Computer Science

BI 211	Principles of Biology I	5
BI 212	Biology of Plants II	5
CH 221	General Chemistry I	5
MTH 241	Calculus for Management/Social Science	4

Electives

MTH 243	Introduction to Probability and Statistics I	4
MTH 244	Introduction to Probability and Statistics II	4
GEOG 265	Geographic Information Systems	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 220A	Aerial Photo	3
FOR 220B	Resource Measurement	3

Choose any college-level course numbered 100 or higher that brings the total credits to 90 quarter hours.

FORESTRY

Associate of Science (AS) Degree
90-93 credits

The Associate of Science (Forestry) fulfills many of the lower division requirements of a Bachelor of Science in forest management from Oregon State University, Corvallis. Other universities' requirements for a forest management degree will be similar. Course requirements for other majors in forestry at Oregon State University and other universities will differ. Students planning to transfer to any university forestry program must meet with a COCC Forest Resources Technology Program advisor to discuss current transfer requirements.

GENERAL EDUCATION

All courses must be completed with a "C" grade or better

Writing

WR 121	English Composition	4
WR 227	Technical Writing	4

Oral Communication

SP 111	Fundamentals of Public Speaking	3
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Mathematics

MTH 112	Trigonometry	4
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Health

HHP 295	Health and Fitness	3
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Arts and Letters

Choose two (2) courses from the Discipline Studies list.

One to meet the Lit and Arts Baccalaureate Core requirement of OSU ¹	3-4
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One to meet the Western Culture Baccalaureate Core requirement of OSU ¹	3-4
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Social Science

Choose two (2) courses from the Discipline Studies list.

EC 201	Microeconomics	4
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Science/Math/Computer Science

Choose two (2) courses from the Discipline Studies list.

CH 221	General Chemistry I	5
CH 222	General Chemistry II	5

PROGRAM REQUIREMENTS

BI 101	General Biology: Cells & Genes	4-5
or BI 212	Biology of Plants II	
GEOG 265	Geographic Information Systems	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 220A	Aerial Photo	3
FOR 220B	Resource Measurements	3
MTH 241	Calculus for Management and Social Science	4
MTH 243	Introduction to Probability and Statistics I	4
MTH 244	Introduction to Probability and Statistics II	4

ADVISING NOTES

It is recommended that a student also take FOR 251 Recreation Resource Management and BI 212 Biology of Plants II.

FOOTNOTES

¹ See your COCC advisor for a list of OSU Baccalaureate Core courses offered at COCC.



GENERAL SCIENCE

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

The general science curriculum allows students to design academic programs that lead to a Bachelor of Science degree, which provides more breadth than traditional science programs. General science can work for many career interests and for students whose scientific interests do not fit well within a single discipline. Students planning graduate study or technical careers, as well as students preparing for careers in the health sciences, science education, science-related business or social service might be best served by a well-designed multidisciplinary science program. The neurosciences, environmental sciences and biophysical sciences are examples of such cross-disciplinary areas. Combined with a second major or minor in English, for example, general science can be excellent preparation for a writing career in science, technology or natural history. The major also works well for students who want to teach elementary-school or middle-school science.

The Associate of Arts Oregon Transfer (AAOT) degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in general science.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite)		

Health (3 credits with HHP prefix) 3

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

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

BI 211	Principles of Biology I	5
BI 212	Biology of Plants II	5
BI 213	Biology of Animals III	5
CH 221	General Chemistry I	5
CH 222	General Chemistry II	5
CH 223	General Chemistry III	5
G148	Volcanoes & Earthquakes	4
G 201	Geology I	4
G 202	Geology II	4
G 203	Geology III	4
MTH 251	Calculus I	4
MTH 252	Calculus II	4
MTH 253	Calculus III	4
PH 201, 202, 2013	General Physics I, II, III	15
or PH 211, 212, 213	General Physics I, II, III	

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

Certificate of Completion

50 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Geographic Information Systems

PROGRAM DESCRIPTION

The GIS certificate program is designed for students already possessing a two- or four-year college degree that seek to add specific GIS skills to their discipline.

GIS is an information system designed to work with data referenced by spatial or geographic coordinates. GIS is both a database system with specific capabilities for spatially referenced data, as well as a set of operations for working with (analyzing) the data. The program is built on a foundation of computer-aided mapping and surveying technology for collecting spatial data, database generation and manipulation for tabular data, and GIS-specific courses for organization, analysis and reporting. Graduates work in retail and commercial businesses, natural resources, education, federal/state/local governments, banking and insurance, internet, publishing and real estate. GIS careers typically include positions such as GIS technician, project manager, computer programmer, database administrator, system administrator, cartographic designer, business development, and related managerial and administrative roles.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Materials (jump drive, maps, assorted office supplies), \$250

Recommended, but not required:

- A home or laptop computer capable of running the GIS software, \$750. Contact program instructor for specifics.

PROGRAM PREPARATION AND PREREQUISITES**Recommended prior to entry in program (GIS) courses:**

- Two- or four-year degree from accredited institution
- Completion of computer competency (either IC3 exam or CIS 120)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Program (GIS) courses begin once per year, in fall term. Students take non-program support and/or selected GIS courses if they begin in a term other than fall or if they need to build skills related to prerequisites.

PROGRAM STANDARDS

GIS courses offered each term must be taken together and sequentially. Students are discouraged from working more than 10 hours per week during any term due to heavy course load.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

While there are none currently required, various professional organizations offer certification that may enhance placement opportunities.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS**General education/foundational requirements:****Communication**

WR 121 English Composition	4
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Computation

Imbedded in program courses

Human Relations

Human Relations list, see page 45	3
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Program requirements

GEOG 211	Computer Cartography	4
GEOG 265	Introduction to Geographic Information Systems	4
GEOG 266	ArcGIS	5
GEOG 267	Geodatabase Design	5
GEOG 273	Spatial Data Collection	5
GEOG 275	GIS Capstone	5
GEOG 285	Data Conversion and Documentation	5
GEOG 286	Remote Sensing	5
GEOG 287	Analysis of Spatial Data	5

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

Associate of Applied Science (AAS) Degree

94-99 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science Degree, Geographic Information Systems

PROGRAM DESCRIPTION

GIS is an information system designed to work with data referenced by spatial or geographic coordinates. GIS is both a database system with specific capabilities for spatially referenced data, as well as a set of operations for working with (analyzing) the data. The program is built on a foundation of computer-aided mapping and surveying technology for collecting spatial data, database generation and manipulation for tabular data, and GIS-specific courses for organization, analysis and reporting. Graduates work in retail and commercial businesses, natural resources, education, federal/state/local governments, banking and insurance, internet, publishing and real estate. GIS careers typically include positions such as GIS technician, project manager, computer programmer, database administrator, system administrator, cartographic designer, business development, and related managerial and administrative roles.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Materials (jump drive, maps, assorted office supplies), \$250.

Recommended, but not required

- A home or laptop computer capable of running the GIS software, \$750. Contact program instructor for specifics.

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (GIS) courses:

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better)
- Minimum placement scores resulting in MTH 85 placement or completion of MTH 20 and/or MTH 60 equivalent

Recommended prior to, or upon entry, in program (GIS) courses:

- Completion of computer competency (either IC3 exam or CIS 120 which may be taken as part of program).

All COCC students enrolled in the Geographic Information Systems program (which includes requirements for Co-operative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a work site. 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 with a history that may interfere with their ability to complete the program of study should contact the program director.

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Program (GIS) courses begin once per year, in fall term. Students take non-program support and/or selected GIS courses if they begin in a term other than fall or if they need to build skills related to prerequisites. Students receiving federal financial aid are encouraged to speak with the financial aid advisor.

GIS courses, offered each term, must be taken together and sequentially. Students are discouraged from working more than 10 hours per week during any term due to heavy course load.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in GIS program courses. Students who do not meet this standard may be dismissed from the program.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

While there are none currently required, various professional organizations offer certification that may enhance placement opportunities.

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

General education/foundational requirements

Communication

WR 121	English Composition	4
WR 227	Technical Writing	4

Computation

MTH 85	Technical Mathematics I	4
and MTH 86	Technical Mathematics II	4
or MTH 105	Intro to Contemporary Mathematics (or higher)	

Human Relations

Course from Human Relations list, page 45	3
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PROGRAM REQUIREMENTS

GEOG 211	Computer Cartography	4
GEOG 265	Introduction to Geographic Information Systems	4
GEOG 266	ArcGIS	5
GEOG 267	Geodatabase Design	5
GEOG 273	Spatial Data Collection	5
GEOG 275	GIS Capstone	5
GEOG 280	Co-Op Work Experience GIS	3
GEOG 284	GIS Customization	5
GEOG 285	Data Conversion and Documentation	5
GEOG 286	Remote Sensing	5
GEOG 287	Analysis of Spatial Data	5

Other required courses

CIS 135DB	Database Theory/SQL	4
FOR 230A	Map, Compass and GPS	3
FOR 220B	Resource Measurements	4
HHP 252A	Fitness/First Aid	3
Discipline studies courses, see list pages 44-45	(minimum) 8	

ELECTIVES

Two courses minimum

CIS 120	Computer Concepts	4
CIS 125A1	AutoCAD I	4
FOR 220A	Aerial Photo	3
FOR 230B	Forest Surveying	3

GEOGRAPHY

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

The Associate of Arts Oregon Transfer (AAOT) degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in geography.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite.)		

Health (3 credits with HHP prefix.) 3

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

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

GEOG 106	Economic Geography	4
GEOG 201	World Regional Geography I ¹	4
GEOG 202	World Regional Geography II ¹	4

plus another course from the Social Science discipline studies list that does not have a GEOG prefix.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

Recommended:

GEOG 278	Physical Geography-Landforms and Water ^{1,2}	4
or GEOG 279	Physical Geography-Weather and Climate ^{1,2}	

ELECTIVES

GEOG 107	Cultural Geography	4
GEOG 190	Environmental Geography	4

Plus choose any college-level course 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.

FOOTNOTES

¹ Courses in Geography do not need to be taken in sequence.

² Lab science courses.

ADVISING NOTES

Students pursuing a BA after transfer should consider completing three terms of a 200-level language course. The 100-level language courses will count as electives. The 200-level language courses will partially fulfill the arts and letters requirement.

Students pursuing a BS after transfer should consider taking more math and science courses. Language is not necessary. For specific details, speak with an advisor.

GEOLOGY

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

Geology provides an understanding of the materials that constitute the earth and the processes that have shaped the earth, from its deep interior to the surface landforms. It is a science that addresses problems by combining field investigations with laboratory experiments and theoretical studies. Geology addresses many natural hazards that affect humans, such as earthquakes, flooding and volcanic eruptions. It also addresses the impact of humans on the Earth's surface environment where we extract resources, contaminate ground water, contribute to rapid erosion, or attempt to re-engineer rivers and shorelines. In addition, geology draws upon many other disciplines including biology, chemistry, mathematics and physics in order to understand earth processes in the reference frame of geologic time. Emphasis areas vary among universities and typically include mineralogy, paleontology, environmental geology and geophysics.

The Associate of Arts Oregon Transfer (AAOT) degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in geology.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher.)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite)		

Health (3 credits with HHP prefix) 3
HHP activity courses (1 credit each) are not to be duplicated

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

CH 221	General Chemistry I	5
G 201	Geology I	4
G 202	Geology II	4
G 203	Geology III	4

ELECTIVES

BI 101	General Biology: Cells & Genes	4
BI 102	General Biology: Evolution	4
BI 103	General Biology: Ecology	4
CH 222	General Chemistry II	5
CH 223	General Chemistry III	5
G 148	Volcanoes & Earthquakes	4
G 162CV	Cascades Volcanoes	3
G 207	Geology of the Pacific Northwest ¹	4
GS 108	Oceanography	4
MTH 254	Vector Calculus I	4
MTH 255	Vector Calculus II	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

FOOTNOTE

¹ Lab science.

ADVISING NOTES

Students planning to transfer to OUS institutions should take the following:

CH 221, 222 and 223

PH 201, 202 and 203 or PH 211, 212 and 213

Those planning to transfer to

- OSU should take MTH 112, 251 and 252;
- PSU should take MTH 251, 252, 253 and 254;
- SOU should take MTH 111, 112, 251 and 252;
- UO should take MTH 251, 252 and 253.

Students are strongly encouraged to contact the appropriate transfer university for the most current requirements of their major and emphasis area.

TRANSFER INFORMATION

Oregon universities with a geology major include University of Oregon, Oregon State University, Portland State University and Southern Oregon University.

HEALTH INFORMATION TECHNOLOGY

Certificates: Insurance; Medical Office Specialist; Medical Transcription; Medical Billing Specialist; Coding Competency
37-84 credits

The Health Information Technology program provides a career-ladder approach to the health information management profession. Students proceed up the ladder as follows:

- When students have completed the first two academic quarters of HIT curriculum, they receive an Insurance Certificate.
- At the end of the first three quarters students are awarded a Medical Office Specialist Certificate.
- Students earn a Medical Transcription Certificate after completing the first three quarters of coursework, plus the completion of HIT 131C, Transcription Applications, offered summer term, and passing a qualifying exam.
- After completing four academic quarters (first year HIT curriculum plus fall quarter of year two), students earn a Medical Billing Specialist Certificate.
- Adding two additional coding courses and passing a proficiency exam qualifies students for a Medical Coding Competency Certificate.
- Upon completion of all HIT curriculum, students earn an Associate of Applied Science degree in Health Information Technology and are eligible to take the Registered Health Information Technician (RHIT) national credential examination.

Since 2003, the COCC HIT Program has maintained a pass rate of 100% for students taking the RHIT exam within one year of graduation.

Students have the freedom to exit and re-enter the program after the first year. The program includes preparation in technical coursework, human relations, communications, computation and computer technology. It is strongly recommended that students obtain competency in the following areas before entering the health information curriculum:

- Keyboarding: 40 WPM minimum
- Study skills
- Spelling skills
- Reading skills
- Computer skills (essential)

The Health Information Technology program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). It is one of only two accredited health information programs in the State of Oregon.

Prior to enrolling in HIT 103, students must pass CIS 120, AH 111 and WR 121 with a grade of "C" or better. Students entering the HIT program are required to have a criminal history check prior to enrolling in HIT 103. A student may be prevented from entering the program if there is a felony conviction on their record.

The following is the suggested course sequence for students able to attend full time. 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. All courses must be completed with a "C" grade or better.

INSURANCE

Short-term Certificate of Completion

(37 credits; two quarters of HIT curriculum to complete if attending full time)

The following is a suggested course of study for students interested in pursuing a certificate in Insurance and will depend on course availability.

Program Required Prerequisites (11 credits)

AH111	Medical Terminology I	3
CIS 120	Computer Concepts	4
WR 121	English Composition	4

Fall term

BI 231	Human Anatomy and Physiology I	4
HIT 103	Health Information Systems and Procedures	5
MTH 031	Health Care Math	3
AH 112	Medical Terminology II	3

Winter term

BI 232	Human Anatomy and Physiology II	4
HIT 104	Health Data Content and Structure	5

HIT 180	HIPAA Management	2
SP 218*	Interpersonal Communication	3
or BA 285*	Business Human Relations	
or PSY 101*	Applied Psychology	

*(NOTE: not required for Insurance Certificate)

MEDICAL OFFICE SPECIALIST

Certificate of Completion

(56 credits; three quarters of HIT curriculum to complete if attending full time)

The following is a suggested course of study for students interested in pursuing a certificate in Medical Office Specialist and will depend on course availability.

Complete Insurance Certificate (37 credits) plus SP 218 or BA 285 or PSY 101 (3 credits)

Spring term

HIT 184	Advanced Pathophysiology	5
BI 233	Human Anatomy and Physiology III	4
HIT 131A	Document Management and Technology	3
HIT 182	Introduction to Medical Coding	4

MEDICAL TRANSCRIPTION (NOT REQUIRED FOR AAS DEGREE)

Certificate of Completion

(60 credits; four quarters to complete if attending full time)

The following is a suggested course of study for students interested in pursuing a certificate in Medical Transcription and will depend on course availability.

Complete Medical Office Specialist Certificate 56

Summer term

HIT 131C	Medical Transcription Applications	4
Pass qualifying exam		

Fall term (second year curriculum)

MEDICAL BILLING SPECIALIST

Certificate of Completion

(74 credits; five quarters of HIT curriculum to complete if attending full time)

The following is a suggested course of study for students interested in pursuing a certificate in Medical Billing Specialist and will depend on course availability.

Complete Medical Office Specialist Certificate 56
HIT 193 Directed Practice I 2

Fall term

HIT 284	Classification and Reimbursement Systems	4
HIT 201	Legal Aspects of Medical Records	3
HIT 205	Introduction to Medical Record Analysis	3
HIT 296	Ambulatory Data Systems	3
SP 111	Fundamentals of Public Speaking	3

CODING COMPETENCY

Certificate of Completion

(84-88 credits; seven quarters of HIT curriculum to complete if attending full time)

The following is a suggested course of study for students interested in pursuing a certificate in Coding Competency and will depend on course availability.

Complete Medical Billing Specialist Certificate 74-78

Winter term

HIT 283	Coding Classifications	6
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Spring term

HIT 285	Advanced Coding Classification	4
Pass CCA proficiency exam		

HEALTH INFORMATION TECHNOLOGY

Associate of Applied Science (AAS) Degree

104 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Health Information Technology

PROGRAM DESCRIPTION

The Health Information Technology program prepares individuals in technical coursework, human relations, communications, computation and computer technology. The program employs a career ladder approach that includes the following certificates:

- Medical Insurance
- Medical Office Specialist
- Medical Transcription
- Medical Billing Specialist
- Coding Competency

At the end of six academic quarters (approximately two years), students earn an Associate of Applied Science (AAS) degree in Health Information Technology. Students are eligible to take the RHIT (Registered Health Information Technician) national credential examination upon completion of the AAS degree. The Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) accredits the Health Information Technology program.

Health information technicians collect, analyze, code, manage and maintain medical information regarding patients. Health information technicians must be highly organized and pay attention to detail, maintain patient medical information in a complete, accurate and secure manner maintaining high ethical standards. Health information technicians work in a wide range of health care facilities including but not limited to hospitals, clinics, doctors' offices and nursing homes. In Oregon, the number of jobs for health information technicians is expected to grow much faster than the average for all occupations through the year 2016.

COST OF PROGRAM

Total cost depends upon preparatory coursework and extent of completion within the program - certificate/degree.

- Additional costs estimated to be approximately \$2500 include textbooks, technology fees, Directed Practice travel expense, OrHIMA Convention, criminal history check, etc.
- Students are strongly encouraged to have access to a home computer with high-speed Internet access.

PROGRAM PREPARATION AND PREREQUISITES

Successful students in this program have high-level communication skills, computation skills and an aptitude for science and technology. Prior to enrolling in HIT 103 students must pass CIS 120, AH 111 and WR 121 with a grade of "C" or better. Students entering the HIT program are required to have a criminal history check prior to enrolling in HIT 103. A student may be prevented from entering the program if there is a felony conviction on their record.

MINIMUM GPA OR GRADE REQUIREMENTS

All courses must be completed with a "C" grade or better to advance to the second year, and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

HIT is a cohort program, which begins each fall. Waitlists are common for HIT 103; however, students can complete non-HIT courses prior to entry into the cohort or concurrently. Courses are in sequence for first and second year. Students must complete all first-year courses before enrolling in second-year coursework.

PROGRAM STANDARDS

All COCC students enrolled in the Health Information Technology program leading to the AAS degree must pass a Criminal History Check (CHC) as a condition of their acceptance into a medical or other facility for directed practice. Students who do not pass the CHC may not be eligible to complete training at affiliated practicum sites (this could also prevent graduation from the program) or to sit for the certification exam (RHIT).

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Unethical or unprofessional conduct is cause for dismissal from the program, i.e., cheating, plagiarism. Breach of confidentiality is grounds for immediate dismissal.

TRANSFER INFORMATION

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 an online BS in Health Information Management. Graduates of the HIT program who obtain their RHIT and already have a baccalaureate in any field are eligible to apply to Oregon Health Science University to complete a one-year online Master Certificate in Health Information Management, which leads to eligibility to sit for the Registered Health Information Administrator (RHIA) exam.

REQUIRED FOUNDATIONAL SKILLS

General education/foundational requirements

Communication

WR 121	English Composition	4
SP111	Fundamentals of Public Speaking	3

Computation

MTH 031	Health Care Math	3
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Human Relations

SP 218	Interpersonal Communication	3
or PSY 101	Applied Psychology	
or BA 285	Business Human Relations	

All courses with an HIT prefix (except HIT 180 and HIT 184) require instructor approval.

PROGRAM COURSE REQUIREMENTS

HIT 103	Health Info Systems/Procedures	5
HIT 104	Health Data Content and Structure	5
HIT 131A	Document Mgmt Technology (offered online)	3
HIT 180	HIPAA Management (offered online)	2
HIT 182	Intro to Medical Coding	4
HIT 184	Advanced Pathophysiology	5
HIT 131C	Medical Transcription Applications (optional)	4
<i>(Proficiency Exam)</i>		
HIT 193	Directed Practice	2
HIT 284	Classification and Reimbursement Systems	4
HIT 205	Intro/Medical Record Analysis	3
HIT 296	Ambulatory Data Systems	3
HIT 283	Coding Classification	6
HIT 201	Legal Aspects of Health Care	3
HIT 203	Health Care Delivery/Technology	3
HIT 272	Health Information Management	5
HIT 281	Health Data Collection	3
HIT 282	Quality Improvement in Health Care	4
HIT 285	Advanced Medical Coding	4
HIT 293	Directed Practice II	2

Other required courses

AH 111	Medical Terminology I	3
AH 112	Medical Terminology II	3
BI 231	Human Anatomy & Physiology I	4
BI 232	Human Anatomy & Physiology II	4
BI 233	Human Anatomy & Physiology III	4
CIS 120	Computer Concepts	4
HHP 252A	Fitness/First Aid	3

HEALTH PROMOTION

Associate of Arts Oregon Transfer (AAOT) Degree

90 credits

Careers in health promotion are multifaceted, as are the areas of further study. Careers include health promotion, health education/teaching health, working in various disciplines of public health, health science, health care administration and environmental health. This AAOT program is designed as a broad-based degree in the area of health studies. It is also designed for maximum transferability to several specific health programs including:

- Portland State University (School of Community Health)
- Eastern Oregon University (School of Education)
- Eastern Washington University (School of Community Health Education)
- Boise State University (School of Education/Health Promotion)
- Oregon State University (College of Public Health and Human Sciences)
- Eastern Oregon University and Southern Oregon University Department of Health and Physical Education (Health Promotion/Fitness Management).

The AAOT degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in transferring to a bachelor's degree program in health promotion.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 111	College Algebra	4
(or higher for which Intermediate Algebra is a prerequisite.)		

Health (3 credits with HHP prefix.) 3

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

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes. Recommended:

PSY 201	Mind and Brain	4
PSY 202	Mind and Society	4
HHP 248	Health Psychology	3
ANTH 283	Introduction to Medical Anthropology	4

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

Recommended:

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
or FN 225	Human Nutrition	
or HHP 261	Exercise Physiology	

ELECTIVES

Choose enough elective credits to reach a minimum total of 90 overall degree credits. Elective classes 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/HHP/performance classes (15 credits maximum).

Recommended electives: HHP 258 (4), HHP 267 (3), HHP 100 (4), HHP 266 (3), HHP 231 (3), HHP 242 (3), HHP 252 (3), HHP 295 (3).

ADVISING NOTES

The following courses carry an additional fee:

- \$23 for HHP 295 (3 credits) or HHP 252A (3 credits)
- \$20 for HHP 212A (1 credit)
- \$20 for all HHP 185 activity classes for Mazama Gym user fee

HISTORY

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

The Associate of Arts Oregon Transfer (AAOT) degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor’s degree in history.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS
(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite.)		

Health (3 credits with HHP prefix.)	3
HHP activity courses (1 credit each) are not to be duplicated.	

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes. Recommend 12 credits of any HST prefix course.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

Choose any college-level course 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.

ADVISING NOTES

In the field of history it is often necessary to achieve a graduate degree in order to work in the field as a professional. A student who takes a major or minor in history graduates with writing, research and communication skills that can lead to success in multiple career areas other than history. 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 fill the Arts and Letters requirement. Students pursuing a BS after transfer should consider taking more math and science courses. Language is not necessary. For specific details, speak with an advisor.

ARTICULATION INFORMATION

Oregon State University-Cascades:

- American Studies (major)
- Art History (minor)



HUMAN SERVICES

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

Human services programs prepare students to work for organizations that serve people in need. Students learn the theories, principles and practice of providing services. Human services jobs can include drug abuse counselor, youth worker, mental health aide or probation officer, and provide services to schools, prisons, government agencies and nonprofit groups.

The Associate of Arts Oregon Transfer (AAOT) degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite.)		

Health (3 credits with HHP prefix.)		3
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HHP activity courses (1 credit each) are not to be duplicated.

GENERAL EDUCATION/DISCIPLINE STUDIES

(One of the courses must be a cultural literacy course, designated by an asterisk.)

Arts and Letters

At least three (3) courses chosen from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

HS 206 Group Skills for Human Services could fulfill one requirement.

HS 208 Multicultural Issues in Human Services¹

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

32 credits from the Addictions Studies/Counseling Certificate will be applied toward elective credits. No additional elective credits are needed to earn the AAOT.

FOOTNOTES

¹ Recommended to meet cultural literacy requirement.

ADVISING NOTES

Locally, OSU-Cascades offers a bachelor's degree with a major in Human Development and Family Science, Human Services option. This degree requires careful and accurate planning of the first 90 credits. Details can be found at www.osucascades.edu/academics/hdfs/.

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 fill the arts and letters requirement.

HUMANITIES

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

Oregon and other universities offer bachelor’s degrees in specific and interdisciplinary fields of the humanities, which include literature and writing, modern and classical languages, philosophy and ethics, theory and criticism of the arts, history, humanistic content and methods of other social sciences, as well as the "study and application of the humanities to the human environment with particular attention to reflecting our diverse heritage, traditions and history and to the relevance of the humanities to the current conditions of national life" (National Endowment for the Humanities). Many U.S. and global careers are open to students with a solid humanities foundation, which includes strong writing, reading, critical thinking, and research skills, as well as proficiency in one or more foreign languages.

COCC’s Humanities department offers courses in:

- English (American, British, Children’s and Western World Literature, and Introduction to Literature: Fiction, Drama, Poetry, Autobiography);
- Humanities (American Multiculturalism, Women’s Studies, Film Arts, Non-Western Cultures and Literature, Popular Culture);
- Reading
- Writing (English Composition, Technical Writing, and Creative Writing: Fiction, Non-Fiction, Poetry, Scriptwriting)

COCC also offers courses in History, Music and Art History, Foreign Languages, and Philosophy.

A combination of these courses may be used to satisfy lower-division requirements for bachelor’s degrees and to prepare transfer students for success in achieving their academic and professional goals. Students seeking a bachelor’s degree in humanities fields are often best served by pursuing the Associate of Arts degree. COCC transfer students are encouraged to consult college catalogs and work closely with their advisors.

The Associate of Arts Oregon Transfer degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor’s degree in humanities.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher.)

Writing

WR 121	English Composition	4
WR 122	English Composition	4

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite.)		

Health (3 credits with HHP prefix.)	3
HHP activity courses (1 credit each) are not to be duplicated	

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science

ELECTIVES

Students must choose enough electives to reach the minimum of 90 credits required for the AAOT.

TRANSFER INFORMATION

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.

MANUFACTURING TECHNOLOGY – CNC MACHINING

Certificate of Completion

44 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, CNC Machining

PROGRAM DESCRIPTION

The CNC Machining One-Year Certificate of Completion program is a self-directed, outcome-based program designed to prepare students for technician-level employment in manufacturing environments using CNC equipment. The program is offered exclusively at the Manufacturing and Applied Technology Center (MATC) at COCC's Redmond Campus. Department approval is required for enrollment at the Manufacturing and Applied Technology Center.

All credits required to satisfy the requirements of this one-year certificate can also be applied toward the Associate of Applied Science degree in Manufacturing Technology.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35-\$135 per class are assessed when taking classes with Amatrol-based content. See online class schedule for class-specific fees. Classes that have Amatrol content include: MFG 101, 109, 110, 115, 116, 118, 133, 160, 211, 213, 241, 242, 244, 245, 246
- Welding personal protective equipment and tools, approximately \$400

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High school diploma or GED
- Minimum placement scores resulting in WR 95 placement or prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 20 placement or prior completion of MTH 10 or higher ("C" or better)
- Successful completion of or current enrollment in MATC new-student orientation class MFG 100
- Certificate courses require instructor permission
- Recommended completion of CIS 70

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better, and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I,II,III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (MFG) courses. Students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Manufacturing. The MATC offers certification preparation classes to assist students in obtaining certifications.

Students desiring specific certifications such as those provided by AWS or SME should discuss this with their advisor.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS

Foundational requirements

WR 60	Rhetoric and Critical Thinking (or higher)	4
MTH 85	Technical Math I (or higher)	4

PROGRAM REQUIREMENTS

MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 110	Manufacturing Processes I	3
MFG 112	Manufacturing Processes II	3
MFG 114	Manufacturing Processes III	3
MFG 115	Design Processes I	2
MFG 133	Quality Assurance	3
MFG 202	Metals Preparation	2
MFG 211	CNC Mill Operator	2
MFG 213	CNC Lathe Operator	2
MFG 230	CNC Programming Mill	2
MFG 232	CNC Programming Lathe	2
MFG 234	CAD/CAM Mill	2
MFG 236	CAD/CAM Lathe	2

Other required courses

CIS 70	Introduction to Computers: Windows (or higher)	2
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TOTAL: 44

MANUFACTURING TECHNOLOGY – INDUSTRIAL MAINTENANCE

Certificate of Completion
44 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Industrial Maintenance

PROGRAM DESCRIPTION

The Industrial Maintenance One-Year Certificate of Completion program is a self-directed, outcome-based program designed to prepare students for technician-level employment in industrial maintenance in a manufacturing environment. The program is offered exclusively at the Manufacturing and Applied Technology Center (MATC) at COCC’s Redmond Campus. Department approval is required for enrollment at the Manufacturing and Applied Technology Center. All credits required to satisfy the requirements of this one-year certificate can also be applied toward the Associate of Applied Science degree in Manufacturing Technology.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35-\$135 per class are assessed when taking classes with Amatrol-based content. See online class schedule for class-specific fees. Classes that have Amatrol content include: MFG 101, 109, 110, 115, 116, 118, 133, 160, 211, 213, 241, 242, 244, 245, 246.
- Welding personal protective equipment and tools, approximately \$400.

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High school diploma or GED
- Minimum placement scores resulting in WR 95 placement or prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 20 placement or prior completion of MTH 10 or higher ("C" or better)
- Successful completion of or current enrollment in MATC new-student orientation class MFG 100 with a "Pass" grade
- Certificate courses require instructor permission
- Recommended completion of CIS 70

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (MFG) courses; students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Manufacturing. The MATC offers certification preparation classes to assist students in obtaining certifications.

Students desiring specific certifications such as those provided by AWS or SME should discuss this with their advisor.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS

Foundational requirements

WR 60	Rhetoric and Critical Thinking (or higher)	4
MTH 85	Technical Math I (or higher)	4

Program requirements

MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	2
MFG 102	Blueprint Reading Sheet Metal	2
MFG 103	Welding Technology I	3
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	3
MFG 116	Manufacturing Electrical Systems	2
MFG 118	Fluid Power Systems	2
MFG 160	Materials Engineering	2
MFG 241	Electric Motor Control	2
MFG 242	Programmable Logic Controllers I	2
MFG 243	Industrial Sensors	2
MFG 244	Programmable Logic Controllers II	2
MFG 245	Electrical Controls/Fluid Power	2
MFG 246	Mechanical Trouble Shooting	2
MFG 267	Oxygen Fuel and Plasma Cutting	2
MFG 289	Material Handling-Fork Lift Safety	1

Other required courses

CIS 70	Introduction to Computers: Windows (or higher)	2
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TOTAL: 44

MANUFACTURING TECHNOLOGY – MANUAL MACHINING

Certificate of Completion

42 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Manual Machining

PROGRAM DESCRIPTION

The Manual Machining One-Year Certificate of Completion program is a self-directed, outcome-based program designed to prepare students for technician-level employment in manufacturing environments using manual machining equipment. The program is offered exclusively at the Manufacturing and Applied Technology Center (MATC) at COCC's Redmond Campus. Department approval is required for enrollment at the Manufacturing and Applied Technology Center.

All credits required to satisfy the requirements of this one-year certificate can also be applied toward the Associate of Applied Science degree in Manufacturing Technology.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35-\$135 per class are assessed when taking classes with Amatrol based content. See online class schedule for class-specific fees. Classes that have Amatrol content include: MFG 101, 109, 110, 115, 116, 118, 133, 160, 211, 213, 241, 242, 244, 245, 246.
- Welding personal protective equipment and tools, approximately \$400.

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High school diploma or GED
- Minimum placement scores resulting in WR 95 placement or prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 20 placement or prior completion of MTH 10 or higher ("C" or better)
- Successful completion of or current enrollment in MATC new-student orientation class MFG 100 with a "Pass" grade
- Certificate courses require instructor permission
- Recommended completion of CIS 70

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (MFG) courses. Students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Manufacturing. The MATC offers certification preparation classes to assist students in obtaining certifications.

Students desiring specific certifications such as those provided by AWS or SME should discuss this with their advisor.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS**Foundational requirements**

WR 60	Rhetoric and Critical Thinking (or higher)	4
MTH 85	Technical Math I (or higher)	4

PROGRAM REQUIREMENTS

MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 110	Manufacturing Processes I	3
MFG 112	Manufacturing Processes II	3
MFG 114	Manufacturing Processes III	3
MFG 115	Design Processes I	2
MFG 133	Quality Assurance	3
MFG 202	Metals Preparation	2
MFG 203	Layout	2
MFG 205	Drill Press	2
MFG 210	Vertical Milling	2
MFG 214	Lathe Operator I	2
MFG 216	Lathe Operator II	2

Other required courses

CIS 70	Introduction to Computers: Windows (or higher)	2
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TOTAL: 42

MANUFACTURING TECHNOLOGY

Certificate of Completion

47 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Manufacturing Technology

PROGRAM DESCRIPTION

The Manufacturing Technology One-Year Certificate of Completion program is a self-directed, outcome-based program designed to prepare students for technician-level employment in a variety of manufacturing environments. The program is offered exclusively at the Manufacturing and Applied Technology Center (MATC) at COCC's Redmond Campus. Department approval is required for enrollment at the MATC.

All credits required to satisfy the requirements of this one-year certificate can also be applied toward the Associate of Applied Science (AAS) degree in Manufacturing Technology.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35-\$135 per class are assessed when taking classes with Amatrol based content. See online class schedule for class-specific fees. Classes that have Amatrol content include: MFG 101, 109, 110, 115, 116, 118, 133, 160, 211, 213, 241, 242, 244, 245, 246.
- Welding personal protective equipment and tools, approximately \$400.

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High school diploma or GED
- Minimum placement scores resulting in WR 95 placement or prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 20 placement or prior completion of MTH 10 or higher ("C" or better)
- Successful completion of or current enrolment in MATC new-student orientation class MFG 100 with a "Pass" grade
- Certificate courses require instructor permission
- Recommended completion of CIS 70

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the course description section of this catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (MFG) courses; students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Manufacturing. The MATC offers certification preparation classes to assist students in obtaining certifications.

Students desiring specific certifications such as those provided by AWS or SME should discuss this with their advisor.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS

Foundational requirements

WR 60	Rhetoric and Critical Thinking (or higher)	4
MTH 85	Technical Math I (or higher)	4

Program requirements

MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 105	Welding Technology II	3
MFG 107	Welding Technology III	3
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	3
MFG 112	Manufacturing Processes II	3
MFG 114	Manufacturing Processes III	3
MFG 115	Design Processes I	2
MFG 116	Manufacturing Electrical Systems	2
MFG 118	Fluid Power Systems	2
MFG 133	Quality Assurance	3
MFG 160	Materials Engineering	2

Other Required Courses

BA 285 or PSY 101 or SP 218	Business Human Relations Applied Psychology Interpersonal Communication	3
CIS 70	Introduction to Computers: Windows (or higher)	2

TOTAL: 47

MANUFACTURING TECHNOLOGY – QUALITY ASSURANCE

Certificate of Completion

43 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Quality Assurance

PROGRAM DESCRIPTION

The Quality Assurance One-Year Certificate of Completion program is a self-directed, outcome-based program designed to prepare students for technician-level employment in manufacturing in the quality assurance field. The program is offered exclusively at the Manufacturing and Applied Technology Center (MATC) at COCC's Redmond Campus. Department approval is required for enrollment at the Manufacturing and Applied Technology Center.

All credits required to satisfy the requirements of this one-year certificate can also be applied toward the Associate of Applied Science degree in Manufacturing Technology.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35–\$135 per class are assessed when taking classes with Amatrol based content. See catalog for class specific fees. Classes that have Amatrol content include: MFG 101, 109, 110, 115, 116, 118, 133, 160, 211, 213, 241, 242, 244, 245, 246.
- Welding personal protective equipment and tools, approximately \$400.

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High school diploma or GED
- Minimum placement scores resulting in WR 95 placement or prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 20 placement or prior completion of MTH 10 or higher ("C" or better)
- Successful completion of or current enrollment in MATC new-student orientation class MFG 100 with a "Pass" grade
- Certificate courses require instructor permission
- Recommended completion of CIS 70

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (MFG) courses; students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Manufacturing. The MATC offers certification preparation classes to assist students in obtaining certifications.

Students desiring specific certifications such as those provided by AWS or SME should discuss this with their advisor.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS

Foundational requirements

WR 60	Rhetoric and Critical Thinking (or higher)	4
MTH 85	Technical Math I (or higher)	4

Program requirements

MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	2
MFG 102	Blueprint Reading Sheet Metal	2
MFG 103	Welding Technology I	3
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	3
MFG 112	Manufacturing Processes II	3
MFG 115	Design Processes I	2
MFG 133	Quality Assurance	3
MFG 160	Materials Engineering	2
MFG 202	Metals Preparation	2
MFG 203	Layout	2
MFG 238	Optical Comparator	1
MFG 239	Coordinate Measuring Machine	1
MFG 254	Manufacturing Jigs and Fixtures	2
MFG 262	Welding Inspection/Quality Control	2

Other required courses

CIS 70	Introduction to Computers: Windows (or higher)	2
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TOTAL: 43

MANUFACTURING TECHNOLOGY – WELDING

Certificate of Completion

45 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Welding

PROGRAM DESCRIPTION

The Welding One-Year Certificate of Completion program is a self-directed, outcome-based program designed to prepare students for technician-level employment in manufacturing environments using welding equipment. The program is offered exclusively at the Manufacturing and Applied Technology Center (MATC) at COCC's Redmond Campus. Department approval is required for enrollment at the MATC.

All credits required to satisfy the requirements of this one-year certificate can also be applied toward the Associate of Applied Science (AAS) degree in Manufacturing Technology.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35-\$135 per class are assessed when taking classes with Amatrol based content. See online class schedule for class-specific fees. Classes that have Amatrol content include: MFG 101, 109, 110, 115, 116, 118, 133, 160, 211, 213, 241, 242, 244, 245, 246.
- Welding personal protective equipment and tools, approximately \$400.

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High school diploma or GED
- Minimum placement scores resulting in WR 95 placement or prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 20 placement or prior completion of MTH 10 or higher ("C" or better)
- Successful completion of or current enrollment in MATC new-student orientation class MFG 100 with a "Pass" grade
- Certificate courses require instructor permission

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (MFG) courses; students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Manufacturing. The MATC offers certification preparation classes to assist students in obtaining certifications.

Students desiring specific certifications such as those provided by AWS or SME should discuss this with their advisor.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS

Foundational requirements

WR 60	Rhetoric and Critical Thinking (or higher)	4
MTH 85	Technical Math I (or higher)	4

PROGRAM REQUIREMENTS

MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 105	Welding Technology II	3
MFG 107	Welding Technology III	3
MFG 110	Manufacturing Processes I	3
MFG 202	Metals Preparation	2
MFG 262	Welding Inspection/Quality Control	2
MFG 267	Oxygen Fuel & Plasma Cutting	2
MFG 271	SMAW I	2
MFG 272	GMAW I	2
MFG 281	GTAW I	2
MFG 282	FCAW I	2
MFG 273	SMAW II	2
MFG 274	GMAW II	2
MFG 283	GTAW II	2
MFG 284	FCAW II	2

TOTAL: 45

MANUFACTURING TECHNOLOGY

Two-Year Certificate of Completion

85 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Manufacturing Technology II

PROGRAM DESCRIPTION

The two-year Certificate of Completion, Manufacturing Technology program is a self-directed, outcome-based program designed to prepare students for technician-level employment in a variety of manufacturing environments. The program is offered exclusively at the Manufacturing and Applied Technology Center (MATC) at COCC's Redmond Campus. Department approval is required for enrollment at the MATC.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35-\$135 per class are assessed when taking classes with Amatrol-based content. See online class schedule for class specific fees. Classes that have Amatrol content include: MFG 101, 109, 110, 115, 116, 118, 133, 160, 211, 213, 241, 242, 244, 245, 246.
- Welding personal protective equipment and tools, approximately \$400.

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High school diploma or GED
- Minimum placement scores resulting in WR 95 placement or prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 20 placement or prior completion of MTH 10 or higher ("C" or better)
- Successful completion of or current enrollment in MATC new-student orientation class MFG 100 with a "Pass" grade
- Certificate courses require instructor permission
- Recommended completion of CIS 70

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (MFG) courses. Students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Manufacturing. The MATC offers certification preparation classes to assist students in obtaining certifications.

Students desiring specific certifications such as those provided by AWS or SME should discuss this with their advisor.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS**Foundational requirements**

WR 60	Rhetoric and Critical Thinking (or higher)	4
MTH 85	Technical Math I (or higher)	4

Program requirements

MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 105	Welding Technology II	3
MFG 107	Welding Technology III	3
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	3
MFG 112	Manufacturing Processes II	3
MFG 114	Manufacturing Processes III	3
MFG 115	Design Processes I	2
MFG 116	Manufacturing Electrical Systems	2
MFG 118	Fluid Power Systems	2
MFG 133	Quality Assurance	3
MFG 160	Materials Engineering	2

PROGRAM ELECTIVES

Students must choose at least 38 credits from the following program electives:

CIS 1355 I	Solidworks I	4
MFG 102	Blueprint Reading Sheet Metal	2
MFG 201	Benchwork	2
MFG 202	Metals Preparation	2
MFG 203	Layout	2
MFG 205	Drill Press	2
MFG 210	Vertical Milling	2
MFG 211	CNC Mill Operator	2
MFG 213	CNC Lathe Operator	2
MFG 214	Lathe Operator I	2
MFG 216	Lathe Operator II	2
MFG 230	CNC Programming Mill	2
MFG 232	CNC Programming Lathe	2
MFG 234	CAD/CAM Mill	2
MFG 236	CAD/CAM Lathe	2
MFG 238	Optical Comparator	1
MFG 239	Coordinate Measuring Machine	1
MFG 241	Electric Motor Control	2
MFG 242	Programmable Logic Controllers I	2
MFG 243	Industrial Sensors	2
MFG 244	Programmable Logic Controllers II	2
MFG 245	Electrical Controls/Fluid Power	2
MFG 246	Mechanical Troubleshooting	2
MFG 250	Additive Manufacturing	2
MFG 254	Manufacturing Jigs and Fixtures	2
MFG 262	Welding Inspection/Quality Control	2
MFG 264	Automated Welding/Cutting	2
MFG 266	Manufacturing Cost Estimating	2
MFG 267	Oxygen Fuel and Plasma Cutting	2
MFG 271	SMAW I	2
MFG 272	GMAW I	2
MFG 273	SMAW II	2
MFG 274	GMAW II	2
MFG 275	SMAW III	2

MANUFACTURING TECHNOLOGY *(continued)*

Two-Year Certificate of Completion

85 credits

MFG 276	GMAW III	2
MFG 281	GTAW I	2
MFG 282	FCAW I	2
MFG 283	GTAW II	2
MFG 284	FCAW II	2
MFG 285	GTAW III	2
MFG 286	FCAW II	2
MFG 287	CNC Press Brake/Shearing	3
MFG 288	Industrial Fabrication	3
MFG 289	Material Handling–Fork Lift Safety	1
MFG 290	Certification Test Prep AWS I	1
MFG 291	Certification Test Prep NIMS I	1
MFG 292	Certification Test Prep AWS II	1
MFG 293	Certification Test Prep NIMS II	1
MFG 294	Certification Test Prep AWS III	1
MFG 295	Certification Test Prep NIMS III	1
MFG 296	Certification Test Prep SME	1
MFG 297	Certification Test Prep NAIT	1

OTHER REQUIRED COURSES

BA 285	Business Human Relations	3
or PSY 101	Applied Psychology	
or SP 218	Interpersonal Communication	
CIS 70	Introduction to Computers: Windows (or higher)	2

TOTAL: 85 CREDITS



MANUFACTURING TECHNOLOGY

Associate of Applied Science (AAS) Degree

99 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Manufacturing Technology

PROGRAM DESCRIPTION

The Manufacturing Technology AAS degree program is a self-directed, outcome-based program designed to prepare students for technician-level employment in a variety of manufacturing environments. The program is offered exclusively at the Manufacturing and Applied Technology Center (MATC) at COCC's Redmond Campus. Department approval is required for enrollment at the MATC.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35-\$135 per class are assessed when taking classes with Amatrol based content. See online class schedule for class-specific fees. Classes that have Amatrol content include: MFG 101, 109, 110, 115, 116, 118, 133, 160, 211, 213, 241, 242, 244, 245, 246.
- Welding personal protective equipment and tools, approximately \$400.

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High school diploma or GED
- Minimum placement scores resulting in WR 95 placement or prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 20 placement or prior completion of MTH 10 or higher ("C" or better)
- Successful completion of or current enrollment in MATC new-student orientation class MFG 100 with a "Pass" grade
- Certificate courses require instructor permission
- Recommended completion of CIS 70

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Manufacturing Processes I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (MFG) courses. Students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Manufacturing. The MATC offers certification preparation classes to assist students in obtaining certifications.

Students desiring specific certifications such as those provided by AWS or SME should discuss this with their advisor.

TRANSFER INFORMATION

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. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS**Foundational requirements**

WR 60	Rhetoric and Critical Thinking (or higher)	4
MTH 85	Technical Math I (or higher)	4

Program requirements

MFG 100	MATC Orientation	1
MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 105	Welding Technology II	3
MFG 107	Welding Technology III	3
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	3
MFG 112	Manufacturing Processes II	3
MFG 114	Manufacturing Processes III	3
MFG 115	Design Processes I	2
MFG 116	Manufacturing Electrical Systems	2
MFG 118	Fluid Power Systems	2
MFG 133	Quality Assurance	3
MFG 160	Materials Engineering	2

PROGRAM ELECTIVES

Students must choose at least 38 credits from the following program electives:

CIS 135S1	Solidworks I	4
MFG 102	Blueprint Reading Sheet Metal	2
MFG 201	Benchwork	2
MFG 202	Metals Preparation	2
MFG 203	Layout	2
MFG 205	Drill Press	2
MFG 210	Vertical Milling	2
MFG 211	CNC Mill Operator	2
MFG 213	CNC Lathe Operator	2
MFG 214	Lathe Operator I	2
MFG 216	Lathe Operator II	2
MFG 230	CNC Programming Mill	2
MFG 232	CNC Programming Lathe	2
MFG 234	CAD/CAM Mill	2
MFG 236	CAD/CAM Lathe	2
MFG 238	Optical Comparator	1
MFG 239	Coordinate Measuring Machine	1
MFG 241	Electric Motor Control	2
MFG 242	Programmable Logic Controllers I	2
MFG 243	Industrial Sensors	2
MFG 244	Programmable Logic Controllers II	2
MFG 245	Electrical Controls/Fluid Power	2
MFG 246	Mechanical Troubleshooting	2
MFG 250	Additive Manufacturing	2
MFG 254	Manufacturing Jigs and Fixtures	2
MFG 262	Welding Inspection/Quality Control	2
MFG 264	Automated Welding/Cutting	2
MFG 266	Manufacturing Cost Estimating	2
MFG 267	Oxygen Fuel & Plasma Cutting	2
MFG 271	SMAW I	2
MFG 272	GMAW I	2
MFG 273	SMAW II	2
MFG 274	GMAW II	2
MFG 275	SMAW III	2
MFG 276	GMAW III	2

MANUFACTURING TECHNOLOGY *(continued)*

Associate of Applied Science (AAS) Degree

99 credits

MFG 281	GTAW I	2
MFG 282	FCAW I	2
MFG 283	GTAW II	2
MFG 284	FCAW II	2
MFG 285	GTAW III	2
MFG 286	FCAW II	2
MFG 287	CNC Press Brake/Shearing	3
MFG 288	Industrial Fabrication	3
MFG 289	Material Handling-Fork Lift Safety	1
MFG 290	Certification Test Prep AWS I	1
MFG 291	Certification Test Prep NIMS I	1
MFG 292	Certification Test Prep AWS II	1
MFG 293	Certification Test Prep NIMS II	1
MFG 294	Certification Test Prep AWS III	1
MFG 295	Certification Test Prep NIMS III	1
MFG 296	Certification Test Prep SME	1
MFG 297	Certification Test Prep NAIT	1

OTHER REQUIRED COURSES

CIS 70	Introduction to Computers: Windows (or higher)	2
CIS 120	Computer Concepts (or higher)	4
HHP 252A	Fitness/First Aid	3
BA 285	Business Human Relations	3
or PSY 101	Applied Psychology	
or SP 218	Interpersonal Communication	
MFG 280	CWE Manufacturing	3
SP 219	Small Group Communication	3
SP 250	Listening	1
or SP 252	Team Skills	
or SP 253	Conflict Management	

TOTAL: 99 CREDITS

MASSAGE THERAPY PROGRAM

PREREQUISITES, STANDARDS, AND REQUIREMENTS

PROGRAM DESCRIPTION

Students integrate the sciences relating to the human body and theories of the practice of massage therapy. Students develop skills that include a variety of massage techniques and modalities, how to maintain client and business records, practice ethical client/practitioner boundaries, demonstrate excellent client communication skills and use universal sanitation practices at all times.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following program costs:

- Program fees per credit for all LMT courses \$25
(at time of publication fee per credit under review)
- First year LMT classes per credit \$17
- Textbooks \$600-700
- Black COCC logo polo shirt and black pants \$40
- CPR certification \$35-\$40
- Oregon Board of Massage Therapist License \$150
- Licensing exams (one written and one practical required for licensure)
- Oregon Board of Massage Therapists practical exam \$200
- National Written exams options:
MBLEx (Massage and Bodywork Licensing Exam) \$195
or NCBTMB (National Certifying Board of Therapeutic
Massage and Bodywork) \$185
- Tools:
 - Massage table \$400-\$700
 - Massage chair \$200-\$400
 - Bolster \$30-\$40
 - Lotion bottle and holster \$10-\$15
 - Stool \$35-\$85
 - Sheets and blanket \$40-\$65
 - Face covers \$15-\$25
 - Lotions \$38-\$60

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry in LMT program courses:

- 18 years of age
- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65 or WR 95
- Completion of BI 121 or BI 122 or BI 231 or BI 232 or BI 233
- Placement score into MTH 20 or complete MTH 10 or higher

Recommended prior to entry in LMT program courses:

LMT 101	Intro to a Massage Therapy Career	1
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Criminal background and fingerprinting for Massage Therapy licensing information.

A student who has been arrested or convicted of a crime, excluding minor traffic violations, or has been sanctioned by any other licensing agency in any state or jurisdiction will be required to provide a copy of the police report, a copy of the judgment and a copy of the settlement of the judgment or final order to the Oregon Board of Massage Therapists when applying for the state licensing practical exam.

An arrest record and/or conviction do not automatically result in a denial of licensure. The Oregon Board of Massage Therapists will require that an applicant submit to fingerprinting and may use the fingerprints to request a criminal records check of the applicant. For information, see the Oregon Board of Massage Therapists website, www.oregon.gov/OBMT/miscinfo.shtml.

Students, whose past history may interfere with their ability to complete the program of study or to obtain licensure in the massage therapy field, should contact the appropriate state board or discuss this with the program director.

MINIMUM GPA OR GRADE REQUIREMENTS

All Massage Therapy program one- and two-year certificate and AAS degree required courses must be completed with a grade of "C" (75 percent) or higher. Students must maintain a 2.0 overall GPA to graduate.

Contact hour transcripts will be based on 90% attendance and a grade of "C" (75%) or higher. Verification of contact hours is required for Oregon Board of Massage Therapists licensing requirements.

Courses listed under the Foundational Skills section must be completed at a "C" grade or better, and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Students are offered two opportunities to enter the Massage Therapy program each year which includes a fall day-program start and a spring evening-program start. Each program start requires the block of classes to be completed before moving to the next sequence of related classes. Students may take non-Massage Therapy courses (any course that doesn't begin with a LMT prefix) at any time prior to enrollment into the LMT program or during enrollment in the LMT program if time is available.

PROGRAM STANDARDS

The following actions may result in probation and/or dismissal of a student from the LMT program:

- Poor personal hygiene resulting in verbal notification to the student that may include, but is not limited to: perfumes, smoking and hygiene
- Improper attire that exposes the midriff, the gluteal cleft or breast cleavage
- Continued failure to maintain an academic level of 75 percent
- Unsatisfactory attendance or excessive tardiness
- Missing more than 10 percent of classroom instruction
- Habitual tardiness
- Behaving in an illegal or non-professional manner or in any manner that may harm the massage profession's reputation and/or the Central Oregon Community College LMT program's reputation
- Behaving in a manner that interferes with class instruction or class participation such as sleeping, non-participation, illness or aggressive actions
- Attending classes under the influences of alcohol, illegal drugs or prescription drugs that adversely affect behavior
- Failure to be current on tuition payments
- Displaying inappropriate sexual overtures or behaviors
- Harassment or verbal abuse toward any student, staff member or clinic participant that may include rudeness, ridiculing or condescending actions
- Failure to comply with probationary requirements as designated in the student action plan

Massage therapy is regulated by the State of Oregon and these requirements are subject to change.

Applicants for a massage therapy license are required to take a state board approved national written exam and a state administered practical exam.

Eligibility to license is based on 500 contact hours in specific subjects, a current CPR card, and fingerprinting.

1. 200 hours combined total in Anatomy, Kinesiology, and Pathology
2. 300 hours in Massage theory, ethics, business, and supervised clinic

Applicants apply for a massage license after passing both a written and practical exam requirements and the license will be contingent on a background check.

MASSAGE THERAPY PROGRAM *(continued)*

Certificates of Completion

52-81 credits

TRANSFER INFORMATION

This certificate/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.

MASSAGE THERAPY

One-Year Certificate

51-56 credits

PROGRAM REQUIREMENTS

BI 121, 122	Anatomy and Function I, II	8
or BI 231, 232, 233	Anatomy and Physiology I, II, III	12
LMT 113	Kinesiology I	3
LMT 118	Kinesiology II	4
LMT 124	Kinesiology III	3
LMT 128	Kinesiology IV	3
LMT 130	Massage Fundamentals	2
LMT 135	Managing a Massage Practice	3
LMT 140	Pathology	4
LMT 145	Massage I	4
LMT 150	Massage II	4
LMT 155	Eastern Theory and Practice	2
LMT 160	Hydrotherapy	1
LMT 170	Professional Ethics and Rules	2
LMT 175	Swedish Relaxation Clinic	2
LMT 180	Therapeutic Clinic	3
MTH 20	Pre-Algebra (or higher)	3-4
or MTH 31	Health Care Math	

MASSAGE THERAPY

Two-Year Certificate

73-78 credits

PROGRAM REQUIREMENTS

BI 121, 122	Anatomy and Function I, II	8
or BI 231, 232, 233	Anatomy and Physiology I, II, III	12
LMT 113	Kinesiology I	3
LMT 118	Kinesiology II	4
LMT 124	Kinesiology III	3
LMT 128	Kinesiology IV	3
LMT 130	Massage Fundamentals	2
LMT 135	Managing a Massage Practice	3
LMT 140	Pathology	4
LMT 145	Massage I	4
LMT 150	Massage II	4
LMT 155	Eastern Theory and Practice	2
LMT 160	Hydrotherapy	1
LMT 170	Professional Ethics and Rules	2
LMT 175	Swedish Relaxation Clinic	2
LMT 180	Therapeutic Clinic	3
BA 111	Applied Accounting	3
LMT 210	Advanced Clinic I	2
LMT 245	Effective Office Decisions	2
LMT 200-level	electives	15
MTH 20	Pre-Algebra (or higher)	3-4
or MTH 31	Health Care Math	



MASSAGE THERAPY

Associate of Applied Science (AAS) Degree
96-103 credits

See page 134-135 for information about the following:

- Program description
- Cost of program
- Program preparation and prerequisites
- Minimum GPA or grade requirements
- Registration information
- Program standards
- State eligibility requirements for licensure
- Transfer information

PROGRAM REQUIREMENTS

BI 121, 122	Anatomy and Function I,II	8-12
or BI 231, 232, 233 Anatomy and Physiology I, II, III		
BA 111	Applied Accounting	3
CIS 120	Computer Concepts	0-4
or computer competency test		
LMT 113	Kinesiology I	3
LMT 118	Kinesiology II	4
LMT 124	Kinesiology III	3
LMT 128	Kinesiology IV	3
LMT 130	Massage Fundamentals	2
LMT 135	Managing a Massage Practice	3
LMT 140	Pathology	4
LMT 145	Massage I	4
LMT 150	Massage II	4
LMT 155	Eastern Theory and 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 210	Advanced Clinic	2
or LMT Advanced Clinic course substitutions ¹		
LMT 245	Effective Office Decisions	2
LMT 200-level	electives	15
MTH 20	Pre-Algebra (or higher)	4
SP 218	Interpersonal Communication	3
WR 121	English Composition	4
WR 214	Business Communication	3
Courses from the discipline studies list, pages 44-45		9
Health²		
(choose one of the following two options)		
HHP 231	Human Sexuality	3
HHP 242	Stress Management	3
HHP 258	Holistic Wellness	3
HHP 266	Nutrition for Health	3
HHP 295	Health & Fitness	3
Any one course above and an activity/health module		1-3
or HHP 252A Fitness/First Aid ²		

FOOTNOTES

¹ Choose from the following advanced clinic course substitutions:

FN 225	Human Nutrition (4)
HHP 131	Introduction to Exercise/Sport Science (3)
HHP 220	Introduction to Epidemiology (3)
HHP 231	Human Sexuality (3)
HHP 242	Stress Management (3)
HHP 248	Health Psychology (3)
HHP 252A	Fitness/First Aid (3)
HHP 258	Holistic Wellness (3)
HHP 259	Care and Prevention of Athletic Injury (3)
HHP 260	Anatomical Kinesiology (4)
HHP 261	Exercise Physiology (4)
HHP 262	Training Theory and Applications (3)
HHP 266	Nutrition for Health (3)
HHP 270	Sport and Exercise Psychology (3)
HHP 295	Health and Fitness (3)

² HHP 252A is recommended.

MATHEMATICS

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

The Associate of Arts Oregon Transfer degree meets the State of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in mathematics.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite)		

Health (3 credits with HHP prefix)	3
HHP activity courses (1 credit each) are not to be duplicated	

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

Recommend:

PH 211	General Physics I	5
PH 212	General Physics II	5
PH 213	General Physics III	5
MTH 112	Trigonometry	4

ELECTIVES

MTH 113	Topics in Precalculus	4
MTH 231	Discrete Mathematics I	4
MTH 241	Calculus for Management/Social Science	4
MTH 243	Introduction to Methods of Probability and Statistics I	4
MTH 244	Introduction to Methods of Probability and Statistics II	4
MTH 245	Mathematics for Management, Life, and Social Sciences	4
MTH 251	Calculus I	4
MTH 252	Calculus II	4
MTH 253	Calculus III	4
MTH 254	Vector Calculus I	4
MTH 255	Vector Calculus II	4
MTH 256	Applied Differential Equations	4

ADVISING NOTES

Students planning to transfer to OSU need to take:

HHP 295	Health and Fitness	3
and HHP 185	Activity class	1



MEDICAL ASSISTANT

Certificate of Completion

63-68 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Medical Assistant

PROGRAM DESCRIPTION

The Medical Assistant program is a five- to six-term program that trains individuals to assist health care providers in their offices or other medical settings in both clinical and administrative procedures. Medical assistants work primarily in medical offices and are usually responsible for both clinical and administrative functions. Clinical duties include infection control, taking patient histories and vital signs, preparing patients for medical procedures, assisting the providers with examinations and treatments, and administering selected diagnostic tests and medications as directed by the clinician. Administrative duties include scheduling and receiving patients, preparing and maintaining medical documentation, handling oral and written correspondence between the office and outside agencies and individuals, and working with insurance regulations and requirements. The medical assistant may also be responsible for equipment maintenance and supply inventories, as well as managing financial records.

Students are eligible to sit for the AAMA CMA (Certified Medical Assistant) certification examination upon completion of the certificate. In Oregon it is not necessary to be a CMA to work as a medical assistant. However, opportunities for advancement in the occupation are enhanced with certification. The COCC Medical Assistant Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs
1361 Park Street
Clearwater, FL 33756
727-210-2350
www.caahep.org

COST OF PROGRAM

Due to the rapidly changing nature of health care and associated costs, the following are only estimates.

Supplies

- Stethoscope and blood pressure cuff estimated at \$35, uniform estimated at \$60 but cost will vary depending on where purchased
- Course and lab packets estimated at \$60-\$100 per term
- Lab fees estimated at \$450-\$600

Other Costs

- Two TB tests or alternatives specified at <http://www.cocc.edu/medical-assistant/immunizations-background-check-and-cpr-requirements/>, two MMR immunizations, two varicella vaccinations, evidence of one pertussis immunization as an adult (tdap) and a Hepatitis B immunization series including titer (or must sign a release form indicating refusal to be immunized). Total cost estimated for immunizations and titers is \$600, but cost varies depending on the clinic
- By the end of winter term after entering the program, enrolled students must have CPR and first aid cards issued upon successful completion of HHP 252 or 252A (\$20 fee in addition to tuition)
- Background check \$55
- Drug Screen \$45-60
- American Association of Medical Assistants (AAMA CMA) Examination (\$125)
- Books: Estimate \$500/term for full-time attendance

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry into program (MA) courses:

- High school diploma (or high school transcript noting successful graduation) or GED
- Minimum placement scores resulting in WR 121 placement or

completion of WR 65/95 ("C" or better). See the CAP Center website for scores needed to place in the above classes.

- Completion of: AH 111, AH 112 and AH 113, MTH 20 or 31, CIS 120 (or test out prior to registration for MA 113, MA 145 and MA 125)
- COCC's Health Careers programs follow the current Center for Disease Control Healthcare Personnel Vaccination Recommendations. Practicum sites may not accept students who have not met immunization requirements.
- Completion of HHP 252 or HHP 252A with successful acquisition of current CPR and first aid cards by end of winter term (including adult, child and infant CPR as well as first aid)
- All COCC students enrolled in the Medical Assistant program, which includes requirements for practical experience have to complete Criminal History Checks (CHC) as a condition of their acceptance into the program.
- Students who have violations that appear on 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. Felonies and some misdemeanors may dramatically reduce a student's chance of completing the practicum or finding employment. Students with crimes noted on the DHS permanent, 10-year or 5-year review list will be disqualified from attending the MA program until their criminal record has been cleared. For a list of disqualifying crimes, see www.oregon.gov/dhs/chc/.
- New policy effective fall term 2014: Prior to entry into a health profession program, students must complete a 10 panel urine drug screen with verified credentials. With the exception of certain prescribed medications, students with a positive drug screen, which prevents them from attending clinical, will be disqualified from entering the program. Please refer to the Medical Assisting website and/or program handbook for more detailed information.
- Students are required to follow the dress and professional standards set by the program and practicum sites.
- Students are required to sign the program student handbook, program letter of agreement, invasive procedure consents, release of information consents (for practicum sites) and background check consents. Some practicum sites may require additional background checks or immunizations at the student's expense.
- Flexibility during weekday hours and transportation to Central Oregon locations are necessary during the term when practicum hours occur.
- Students give and receive injections and blood draws as part of the learning process in the program.

MINIMUM GPA OR GRADE REQUIREMENTS

All courses required for the program must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher. Failure to maintain a 2.0 in any of the core MA classes or meet the minimum average test grade requirement in any of the core MA class will result in failure to complete coursework and/or practicum.

REGISTRATION INFORMATION

Program (MA) courses begin once per year in fall term. The Medical Assistant program does not have a selective admissions process. However, students wishing to register in the fall MA cohort must meet the basic prerequisite competencies and may register according to seat availability on a first-come, first-served basis as determined by the priority registration schedule. Students may view the priority registration schedule at www.cocc.edu/Registration-Home.aspx/.

All Medical Assistant courses offered each term must be taken together and sequentially. Students are discouraged from working during the term(s) they are assigned practicum due to the need to be flexible enough to attend practicum assignments when facilities are available. For any questions please see the Medical Assistant program website or contact the program director and/or the CAP Center for current information.

MEDICAL ASSISTANT *(continued)*

Certificate of Completion

63-68 credits

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program (MA) courses; students who do not meet this standard may be dismissed from the program. In order to maintain a "C" in core classes, students must maintain an average of 70 percent on tests and quizzes in each class and an overall average of 75 percent in each class and each lab. In addition, CAAHEP accreditation requires 100 percent of all medical assisting graduates pass 100 percent of all psychomotor and affective competencies. Students must participate in at least 80 percent of the classes and the labs for each section to be retained in the program and must pass all required check-offs, work samples and skill demonstrations. All required documentation must be submitted by dates specified by the student handbook, class syllabus/schedule or program website. Failure to maintain these standards in any of the core MA classes will result in inability to complete coursework and/or practicum.

The following actions may also result in probation and/or inability to complete coursework and practicum:

- Poor personal hygiene resulting in verbal notification to the student that may include, but is not limited to: perfumes, smoking and hygiene
- Improper attire that exposes the midriff, the gluteal cleft or breast cleavage
- Habitual tardiness
- Behaving in an illegal or non-professional manner which may harm the reputation of either the Medical Assistant program or that of Central Oregon Community College.
- Behaving in a manner that interferes with class instruction or class participation such as sleeping, non-participation, illness or aggressive actions
- Attending classes under the influences of alcohol, illegal drugs or prescription drugs that adversely affect behavior
- Displaying inappropriate sexual overtures or behaviors
- Harassment or verbal abuse toward any student, staff member or clinic participant that may include rudeness, ridiculing or condescending actions
- Failure to comply with probationary requirements as designated in the student action plan

Students with physical or mental conditions that have the potential to jeopardize patient safety may need medical clearance and/or additional supervision by preceptors and instructors in the practicum settings. Students who cannot meet safety requirements may be dismissed from the program.

Students must be available to attend a minimum of 160 hours of practicum when assigned. Practicum schedules are often changed during the term due to facility availability. Students' personal schedules cannot be accommodated due to the volume of students and limited number of practicum sites available.

Students who leave or are dropped from the program may re-enter the next fall with the permission of the program director. In rare cases, a student may re-enter at a different point in the program on a space available basis and with permission from the director of the program. Students may be required to repeat demonstrations of previous competencies to ensure they retained the required skills and knowledge to progress in the program.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

The Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of Medical Assisting Education Review Board (MAERB). Upon successful completion of the program, students receive a certificate of completion from COCC. At that time students

are eligible to submit an application and, if accepted, sit for the AAMA CMA Certification examination. Upon passing the AAMA exam, medical assistants have earned the CMA (Certified Medical Assistant). Only graduates of accredited medical assistant programs are eligible to sit for the AAMA CMA Certification Examination.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

General education/foundational requirements

WR 121	English Composition	4
MTH 20 or MTH 31	Pre-Algebra Health Care Math (or higher)	3-4
SP 218	Interpersonal Communication	3

Program requirements

MA 113	Introduction to Medical Assisting	4
MA 125	Medical Office Procedures I	4
MA 145	Computerized Medical Office Procedures	1
MA 123	Medical Assisting Basic Procedures	5
MA 150	Pharmacology for Medical Assistants	3
MA 135	Medical Office Procedures II	4
MA 133	Medical Assisting Advanced Procedures	4
MA 147	Medical Assistant Practicum I	5

Other required courses

AH 111	Medical Terminology I	3
AH 112	Medical Terminology II	3
BI 121	Human Anatomy and Function I	4
BI 122	Human Anatomy and Function II	4
CIS 120	Computer Concepts	0-4
or computer competency test passed prior to registration for MA 113 and MA 125		
CIS 10	Computer Keyboarding	1
HHP 252	First Aid and CPR	3
or HHP 252A	Fitness/First Aid	
AH 113	Introduction to the Study of Disease	5

Suggested course of study Prior to entering the program:

(Any class not beginning with the letters MA can be completed prior to entering the program. It is suggested that students complete as many as possible in addition to the prerequisites prior to entering the program.)

Prerequisites:

MTH 20 or MTH 31	Pre-Algebra (or higher) Health Care Math	3-4
AH 111	Medical Terminology I	3
AH 112	Medical Terminology II	3
AH 113	Introduction to Study of Disease	5
or co-requisite fall term		
BI 121	Human Anatomy and Function I	4
BI 122	Human Anatomy and Function II	4
CIS 120	Computer Concepts	0-4
or computer competency test		

TOTAL PRIOR TO ENTRY: 17-27

The following classes can be taken any time before, during or after entry into the Medical Assistant program, but are recommended prior to entry:

WR 121	English Composition	4
SP 218	Interpersonal Communication	3
CIS 10	Computer Keyboarding	1

(Note: HHP 252 or HHP 252A can also be taken prior to entry if desired. This is recommended when possible)

TOTAL REQUIRED PRIOR TO ENTRY: 17-22

TOTAL RECOMMENDED PRIOR TO ENTRY: 33-38

MEDICAL ASSISTANT *(continued)*

Certificate of Completion

63-68 credits

AFTER ENTERING THE PROGRAM:**Fall**

AH 113	Introduction to the Study of Disease (if not taken prior to entry into core MA classes)	5
MA 113	Introduction to Medical Assisting	4
MA 125	Medical Office Procedures I	4
MA 145	Computerized Medical Office Procedures	1

Total fall: 9- 14**Winter**

MA 123	Medical Assisting Basic Procedures	5
MA 135	Medical Office Procedures II	4
MA 150	Pharmacology for Medical Assistants	3
HHP 252 or HHP 252A	First Aid and CPR Fitness/First Aid	3

Total winter: 15**Spring**

MA 133	Medical Assisting Advanced Procedures	4
MA 147	Medical Assistant Practicum I	5

(Some or all of practicum may be offered in the summer depending on availability.)

Total spring: 9**Summer**

MA 147	Medical Assistant Practicum I	2-5
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(Some or all of practicum may be offered in the summer depending on availability.)

Total summer: 0-5

MEDICAL IMAGING

Associate of Science (AS) Degree
90 credits

Central Oregon Community College does not have a degree in medical/ diagnostic imaging, but offers many prerequisite courses required for entry into such a program. The following information is informed generally by Oregon Institute of Technology's Medical Imaging (www.oit.edu/mit) degree requirements, but students should check with their destination college to confirm requirements. Linn-Benton Community College and Portland Community College are other Oregon colleges offering this type of program.

GENERAL EDUCATION

All courses must be completed with a "C" grade or better

Writing

WR 121	English Composition	4
WR 122	English Composition	4

Oral Communication

SP 111	Fundamentals of Public Speaking	3
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Mathematics

MTH 111	College Algebra	4
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Health

HHP 295	Health and Fitness	3
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Arts And Letters

Choose two (2) courses from the Discipline Studies list.

Social Science

PSY 201	Mind and Brain	4
or PSY 202	Mind and Society	

Science/Math/Computer Science

Choose one (1) courses from the Discipline Studies list.

PROGRAM REQUIREMENTS

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
CH 104	Intro to Chemistry I	5
or CH 221	General Chemistry I	
MTH 112	Trigonometry	4

ELECTIVES

Choose enough electives to reach a minimum total of 90 overall degree credits. Elective credits must number 100 or above with a maximum of 12 CTE credits and 15 credits of CWEIHP/performance courses.

ADVISING NOTES

OIT requires students to take MIT 103 in order to apply to the program; this course is offered online and can be used in the elective category of the AS degree. Another course recommended by OIT (and the AS requirement it can be used to meet) is WR 227 (elective).



MUSIC

Associate of Arts Oregon Transfer (AAOT) Degree 90 credits

The mission of COCC's Music program is to provide the opportunity for music majors pursuing a transfer degree (and those simply interested in music) to take the core classes that are typically required in the first two years of a bachelor's of music program. This includes music fundamentals, class piano, two years of music theory and musicianship, and a listening-based class called Understanding Music. Additionally, most music schools require participation in a major ensemble and private lessons in voice or instrument every term. To that end, we have no fewer than six ensembles in which a student can participate, including the Cascade Chorale, College Choir, Central Singers, Big Band Jazz, Cascade Winds Symphonic Band and Central Oregon Symphony.

The Associate of Arts Oregon Transfer degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in music.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite.)		

Health (3 credits with HHP prefix.)		3
HHP activity courses (1 credit each) are not to be duplicated.		

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses chosen from at least two (2) prefixes. Recommend MUS 101, MUS 201 and MUS 111 as well as another non-music arts and letters course. Additional MUS classes can that will be applied to the AAOT as elective credits.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

Choose enough electives to reach the minimum of 90 credits for the AAOT. Music majors should participate in a performing ensemble each term, and take Musicianship IA, IB, IC, IIA, IIB and IIC, Music Theory IA, IB, IC, IIA, IIB and IIC, and have proficient keyboard skills, which can be gained by taking Class Piano I, II, and III.

MUS 201, 202 and 203 (Understanding Music), while not required, are excellent survey courses of music history, providing a solid background for future in-depth studies of music history.

Private Lessons, (applied voice, violin, trombone, et cetera), while not required for the AAOT degree, are an integral part of the music major. Studying with a private teacher will foster individual growth, technique development, provide a solid background in solo repertoire, proper language enunciation as well as in-depth studies of music genres.

A second year of a foreign language is also recommended.

TRANSFER INFORMATION

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 classes intended specifically for music majors, such as Music Theory. Instead, they will test students upon arrival to see what they have learned in their previous classes, and then place them at the appropriate level for their program. It has been our experience that students who perform well in COCC music theory and musicianship classes regularly meet or exceed the requirements to continue on with the next level of study at the transfer institution (i.e., students who have completed the first year of theory typically test into the second year of theory at their new school).

NATURAL RESOURCES

Associate of Science (AS) Degree
94-100 credits

The Associate of Science (Natural Resources) fulfills 94-100 credits of the lower division requirements of a Bachelor of Science in Natural Resources, (Conservation and Technology option) from Oregon State University-Cascades. Other universities' requirements for a natural resources degree may be similar. Students planning to transfer to any university natural resources program should meet with a COCC Forest Resources Technology Program advisor to discuss current transfer requirements.

GENERAL EDUCATION

All courses must be completed with a "C" grade or better

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

Choose one:		
SP 111, 114, 115, 218, or 219		3

Mathematics

Choose one:		
MTH 111, 112, 241, 245, or 251		4

Health

HHP 295	Health and Fitness	3
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Arts And Letters

Choose three (3) courses from the Discipline Studies list as follows:		
One to meet the Lit and Arts Baccalaureate Core requirement of OSU ¹		3-4
One to meet the Western Culture Baccalaureate Core requirement of OSU ¹		3-4
One to meet the Cultural Diversity Baccalaureate Core requirement of OSU ¹		4

Social Science

ECON 201	Microeconomics	4
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Science/Math/Computer Science

CH 104	Introduction to Chemistry I	5
or CH 221	General Chemistry I	
BI 101	General Biology: Cells & Genes	4-5
or BI 211	Biology of Plants I ²	

PROGRAM REQUIREMENTS

BI 102 and 103	General Biology II & III,	8-10
or 212 and 213 ²	Biology of Plants, Biology of Animals	
G 201	Geology I	4
or G 202	Geology II	
or GEOG 278	Land Forms and Water	
GEOG 279	Weather and Climate	4
FW 212		2
or FW 218	Survey of NW Birds or Mammals	
FW 251	Principles of Wildlife Conservation	3
FOR 208	Soils: sustainable Ecosystems	4
FOR 220A	Aerial Photo	3
FOR 220B	Resource Measurements	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		3
or 241 B	Field Dendrology or Dendrology	
FOR 251	Recreation Resource Mgmt	3
or ANTH 103	Cultural Anthropology	
Additional math course:		
MTH 112, 241, 245 or 251		4

FOOTNOTES

¹ See your COCC advisor for the list of OSU Baccalaureate Core classes offered at COCC.

² BI 211, 212 and 213 recommended

ADVISING NOTES

The following courses are not required in the Associate of Science, but are required within the OSU-Cascades Bachelor's:

MTH 243	Introduction to Probability and Statistics I	4
GEOG 265	Introduction to GIS	4

NON DESTRUCTIVE TESTING AND INSPECTION

Associate of Applied Science (AAS) Degree

90-102 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Non Destructive Testing and Inspection

PROGRAM DESCRIPTION

The Non Destructive Testing and Inspection AAS degree program is a self-directed, outcome-based program designed to prepare students for technician-level careers in the field of non destructive testing and inspection. The program is offered exclusively through the Manufacturing and Applied Technology Center (MATC) at COCC's Redmond Campus. Department approval is required for enrollment.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35-\$135 per class are assessed when taking classes with Amatrol based content. See online class schedule for class-specific fees. Classes that have Amatrol content include: MFG 101, 109, 110, 115, 116, 118, 133, 160, 211, 213, 241, 242, 244, 245, 246.
- Welding personal protective equipment and tools, approximately \$400.

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry in program courses:

- Minimum Placement Scores resulting in MTH 85 placement or Completion of MTH 20 ("C" or better)
- Minimum Placement Scores resulting in WR 121 placement or Completion of WR 65/95 ("C" or better)
- Completion of GS 104 or one higher Physics course: PH 201, 202, 203, 211, 212.

Recommended prior to entry in program courses:

- Completion of Computer Competency (either Competency Test or CIS 120)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Ultrasonic Techniques I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (NDTI) courses. Students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Non Destructive Testing and Inspection. One major credentialing body for this field is the American Society for Non Destructive Testing (ASNT). Their recommended practice SNT-TC-1A is used by many employers in the field and consists of both on-the-job and classroom training to define an ASNT Level 1 NDT technician credential. COCC's curriculum follows the SNT-TC-1A to provide students with the classroom training portion of the certification.

TRANSFER INFORMATION

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. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS

Foundational requirements

WR 121	English Composition (or higher)	4
MTH 85	Technical Math I (or higher)	4
MTH 86	Technical Math II (or higher)	4
GS 104	Physical Science (or higher)	4

Program requirements

NDT 100	NDT Orientation	1
NDT 110	Introduction to Ultrasonic Inspection	3
NDT 111	Ultrasonic Techniques I	2
NDT 112	Ultrasonic Techniques II	2
NDT 120	Eddy Current Inspection Techniques I	3
NDT 130	Introduction to Metallurgy	3
NDT 140	Magnetic Particle Inspection Techniques I	2
NDT 150	Dye Penetrant Inspection Techniques I	2
NDT 160	Introduction to Industrial Radiography	3
NDT 161	X-Ray Radiography Techniques I	2
NDT 162	X-Ray Radiography Techniques II	2
NDT 210	Ultrasonic Techniques III	3
NDT 211	Ultrasonic Techniques IV	2
NDT 212	Ultrasonic Techniques for Non Ferrous Materials	2
NDT 220	Eddy Current Inspection Techniques II	2
NDT 221	Eddy Current Inspection Techniques III	2
NDT 240	Magnetic Particle Inspection Techniques II	1
NDT 250	Dye Penetrant Inspection Techniques II	1
NDT 260	Radiological Safety for Isotopes	3
NDT 261	Isotopic Radiography Techniques I	2
NDT 262	Isotopic Radiography Techniques II	3
NDT 270	Visual Inspection Techniques	2
NDT 280	Cooperative Work Experience-NDT	3

Other required courses

MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	3
MFG 133	Quality Assurance	3
MFG 262	Welding Inspection/Quality Control	2
PH 201	General Physics I	5
CIS 120	Computer Concepts	0-4
or Computer Competency Test		
BA 285	Business Human Relations	3
or PSY 101	Applied Psychology	
or SP 218	Interpersonal Communication	

NON DESTRUCTIVE TESTING AND INSPECTION *(continued)*

Associate of Applied Science (AAS) Degree

90-102 credits

PROGRAM ELECTIVES

Note: all prerequisites apply to electives; MFG prefixed courses require instructor approval.

Students must choose at least 8 credits from the following program electives:

NDT 271	Miscellaneous NDT Tools	3
CIS 135S1	Solidworks I	4
MFG 102	Blueprint Reading Sheet Metal	2
MFG 201	Benchwork	2
MFG 202	Metals Preparation	2
MFG 203	Layout	2
MFG 205	Drill Press	2
MFG 210	Vertical Milling	2
MFG 211	CNC Mill Operator	2
MFG 213	CNC Lathe Operator	2
MFG 214	Lathe Operator I	2
MFG 216	Lathe Operator II	2
MFG 230	CNC Programming Mill	2
MFG 232	CNC Programming Lathe	2
MFG 234	CAD/CAM Mill	2
MFG 236	CAD/CAM Lathe	2
MFG 238	Optical Comparator	1
MFG 239	Coordinate Measuring Machine	1
MFG 241	Electric Motor Control	2
MFG 242	Programmable Logic Controllers I	2
MFG 243	Industrial Sensors	2
MFG 244	Programmable Logic Controllers II	2
MFG 245	Electrical Controls/Fluid Power	2
MFG 246	Mechanical Troubleshooting	2
MFG 250	Additive Manufacturing	2
MFG 254	Manufacturing Jigs and Fixtures	2
MFG 264	Automated Welding/Cutting	2
MFG 266	Manufacturing Cost Estimating	2
MFG 267	Oxygen Fuel & Plasma Cutting	2
MFG 271	SMAW I	2
MFG 272	GMAW I	2
MFG 273	SMAW II	2
MFG 274	GMAW II	2
MFG 275	SMAW III	2
MFG 276	GMAW III	2
MFG 281	GTAW I	2
MFG 282	FCAW I	2
MFG 283	GTAW II	2
MFG 284	FCAW II	2
MFG 285	GTAW III	2
MFG 286	FCAW II	2
MFG 287	CNC Press Brake/Shearing	3
MFG 288	Industrial Fabrication	3
MFG 289	Material Handling-Fork Lift Safety	1

NON DESTRUCTIVE TESTING AND INSPECTION

Eddy Current Testing Certificate

44-48 credits

DEGREE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Eddy Current Testing

PROGRAM DESCRIPTION

The Eddy Current Testing Certificate is a self-directed, outcome-based program designed to prepare students for technician-level careers in the field of non destructive testing and inspection. The program is offered exclusively through the Manufacturing and Applied Technology Center (MATC) at COCC's Redmond Campus. Department approval is required for enrollment.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35-\$135 per class are assessed when taking classes with Amatrol based content. See online class schedule for class-specific fees. Classes that have Amatrol content include: MFG 101, 109, 110, 133.
- Welding personal protective equipment and tools, approximately \$400.

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry in program courses:

- Minimum Placement Scores resulting in MTH 85 placement or Completion of MTH 20 ("C" or better)
- Minimum Placement Scores resulting in WR 121 placement or Completion of WR 65/95 ("C" or better)
- Completion of GS 104 or one higher Physics course: PH 201, 202, 203, 211, 212

Recommended prior to entry in program courses:

- Completion of Computer Competency (either Competency Test or CIS 120)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Ultrasonic Techniques I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (NDTI) courses. Students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Non Destructive Testing and Inspection. One major credentialing body for this field is the American Society for Non Destructive Testing (ASNT). Their recommended practice SNT-TC-1A is used by many employers in the field and consists of both on-the-job and classroom training to define a ASNT Level 1 NDT technician credential. COCC's curriculum follows the SNT-TC-1A to provide students with the classroom training portion of the certification.

TRANSFER INFORMATION

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. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS

Foundational requirements

WR 121	English Composition (or higher)	4
MTH 85	Technical Math I (or higher)	4
MTH 86	Technical Math II (or higher)	4

Program requirements

NDT 100	NDT Orientation	1
NDT 120	Eddy Current Inspection Techniques I	3
NDT 130	Introduction to Metallurgy	3
NDT 220	Eddy Current Inspection Techniques II	2
NDT 221	Eddy Current Inspection Techniques III	2
NDT 270	Visual Inspection Techniques	2

Other required courses

MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 110	Manufacturing Processes I	3
MFG 133	Quality Assurance	3
PH 201	General Physics I	5
CIS 120	Computer Concepts	0-4
or Computer Competency Test		
BA 285	Business Human Relations	3
or PSY 101	Applied Psychology	
or SP 218	Interpersonal Communication	

NON DESTRUCTIVE TESTING AND INSPECTION

Magnetic Particle-Dye Penetrant Testing Certificate

45-49 credits

DEGREE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Magnetic Particle-Dye Penetrant Testing

PROGRAM DESCRIPTION

The Magnetic Particle-Dye Penetrant Testing Certificate is a self-directed, outcome-based program designed to prepare students for technician-level careers in the field of non destructive testing and inspection. The program is offered exclusively through the Manufacturing and Applied Technology Center (MATC) at COCC's Redmond Campus. Department approval is required for enrollment.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35-\$135 per class are assessed when taking classes with Amatrol based content. See online class schedule for class-specific fees. Classes that have Amatrol content include: MFG 101, 110, 133.
- Welding personal protective equipment and tools, approximately \$400.

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry in program courses:

- Minimum Placement Scores resulting in MTH 85 placement or Completion of MTH 20 ("C" or better)
- Minimum Placement Scores resulting in WR 121 placement or Completion of WR 65/95 ("C" or better)
- Completion of GS 104 or one higher Physics course: PH 201, 202, 203, 211, 212

Recommended prior to entry in program courses:

- Completion of Computer Competency (either Competency Test or CIS 120)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Ultrasonic Techniques I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (NDTI) courses. Students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Non Destructive Testing and Inspection. One major credentialing body for this field is the American Society for Non Destructive Testing (ASNT). Their recommended practice SNT-TC-1A is used by many employers in the field and consists of both on-the-job and classroom training to define an ASNT Level 1 NDT technician credential. COCC's curriculum follows the SNT-TC-1A to provide students with the classroom training portion of the certification.

TRANSFER INFORMATION

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. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS

Foundational requirements

WR 121	English Composition (or higher)	4
MTH 85	Technical Math I (or higher)	4
MTH 86	Technical Math II (or higher)	4

Program requirements

NDT 100	NDT Orientation	1
NDT 130	Introduction to Metallurgy	3
NDT 140	Magnetic Particle Inspection Techniques I	2
NDT 150	Dye Penetrant Inspection Techniques I	2
NDT 240	Magnetic Particle Inspection Techniques II	1
NDT 250	Dye Penetrant Inspection Techniques II	1
NDT 270	Visual Inspection Techniques	2

Other required courses

MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 110	Manufacturing Processes I	3
MFG 133	Quality Assurance	3
MFG 262	Welding Inspection/Quality Control	2
PH 201	General Physics I	5
CIS 120	Computer Concepts	0-4
or Computer Competency Test		
BA 285	Business Human Relations	3
or PSY 101	Applied Psychology	
or SP 218	Interpersonal Communication	

NON DESTRUCTIVE TESTING AND INSPECTION

Radiography Testing Certificate

52-56 credits

DEGREE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Radiography Testing

PROGRAM DESCRIPTION

The Radiography Testing Certificate is a self-directed, outcome-based program designed to prepare students for technician-level careers in the field of non destructive testing and inspection. The program is offered exclusively through the Manufacturing and Applied Technology Center (MATC) at COCC's Redmond Campus. Department approval is required for enrollment.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35-\$135 per class are assessed when taking classes with Amatrol based content. See online class schedule for class-specific fees. Classes that have Amatrol content include: MFG 101, 110, 133.
- Welding personal protective equipment and tools, approximately \$400.

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry in program courses:

- Minimum Placement Scores resulting in MTH 85 placement or Completion of MTH 20 ("C" or better)
- Minimum Placement Scores resulting in WR 121 placement or Completion of WR 65/95 ("C" or better)
- Completion of GS 104 or one higher Physics course: PH 201, 202, 203, 211, 212

Recommended prior to entry in program courses:

- Completion of Computer Competency (either Competency Test or CIS 120)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Ultrasonic Techniques I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (NDTI) courses. Students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Non Destructive Testing and Inspection. One major credentialing body for this field is the American Society for Non Destructive Testing (ASNT). Their recommended practice SNT-TC-1A is used by many employers in the field and consists of both on-the-job and classroom training to define a ASNT Level 1 NDT technician credential. COCC's curriculum follows the SNT-TC-1A to provide students with the classroom training portion of the certification.

TRANSFER INFORMATION

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. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS

Foundational requirements

WR 121	English Composition (or higher)	4
MTH 85	Technical Math I (or higher)	4
MTH 86	Technical Math II (or higher)	4

PROGRAM REQUIREMENTS

NDT 100	NDT Orientation	1
NDT 130	Introduction to Metallurgy	3
NDT 160	Introduction to Industrial Radiography	3
NDT 161	X-Ray Radiography Techniques I	2
NDT 162	X-Ray Radiography Techniques II	2
NDT 260	Radiological Safety for Isotopes	3
NDT 261	Isotopic Radiography Techniques I	2
NDT 262	Isotopic Radiography Techniques II	3
NDT 270	Visual Inspection Techniques	2

Other required courses

MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 110	Manufacturing Processes I	3
MFG 133	Quality Assurance	3
PH 201	General Physics I	5
CIS 120	Computer Concepts	0-4
	or Computer Competency Test	
BA 285	Business Human Relations	3
or PSY 101	Applied Psychology	
or SP 218	Interpersonal Communication	

NON DESTRUCTIVE TESTING AND INSPECTION

Ultrasonic Testing Certificate

51-55 credits

DEGREE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Ultrasonic Testing

PROGRAM DESCRIPTION

The Ultrasonic Testing Certificate is a self-directed, outcome-based program designed to prepare students for technician-level careers in the field of non destructive testing and inspection. The program is offered exclusively through the Manufacturing and Applied Technology Center (MATC) at COCC's Redmond Campus. Department approval is required for enrollment.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Program fees of \$35-\$135 per class are assessed when taking classes with Amatrol based content. See online class schedule for class-specific fees. Classes that have Amatrol content include: MFG 101, 110, 133.
- Welding personal protective equipment and tools, approximately \$400.

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry in program courses:

- Minimum Placement Scores resulting in MTH 85 placement or Completion of MTH 20 ("C" or better)
- Minimum Placement Scores resulting in WR 121 placement or Completion of WR 65/95 ("C" or better)
- Completion of GS 104 or one higher Physics course: PH 201, 202, 203, 211, 212

Recommended prior to entry in program courses:

- Completion of Computer Competency (either Competency Test or CIS 120)

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Nearly all MATC courses are self-directed, outcome-based curricula. This provides students with a greater degree of flexibility than most other COCC programs. The MATC hours of operation provide students with ample time to complete their coursework during a term.

Upon starting their program, students review their desired certificate or degree outcome with their advisor and a sequence of coursework is identified for them. With the exception of classes in a series (e.g. Ultrasonic Techniques I, II, III) or those with specific prerequisites (as identified in the catalog) most classes can be taken in any order, provided that instructor permission is obtained.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA each term while enrolled in the program (NDTI) courses. Students who do not meet this standard may be dismissed from the program. Students wishing to re-enter the program after being dismissed must gain the prior approval of their MATC advisor.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Employer requirements vary considerably regarding secondary certifications in Non Destructive Testing and Inspection. One major credentialing body for this field is the American Society for Non Destructive Testing (ASNT). Their recommended practice SNT-TC-1A is used by many employers in the field and consists of both on-the-job and classroom training to define a ASNT Level 1 NDT technician credential. COCC's curriculum follows the SNT-TC-1A to provide students with the classroom training portion of the certification.

TRANSFER INFORMATION

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. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferrable.

PROGRAM COURSE REQUIREMENTS

Foundational requirements

WR 121	English Composition (or higher)	4
MTH 85	Technical Math I (or higher)	4
MTH 86	Technical Math II (or higher)	4

Program requirements

NDT 100	NDT Orientation	1
NDT 110	Introduction to Ultrasonic Inspection	3
NDT 111	Ultrasonic Techniques I	2
NDT 112	Ultrasonic Techniques II	2
NDT 130	Introduction to Metallurgy	3
NDT 210	Ultrasonic Techniques III	3
NDT 211	Ultrasonic Techniques IV	2
NDT 212	Ultrasonic Techniques for Non Ferrous Materials	2
NDT 270	Visual Inspection Techniques	2

Other required courses

MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 110	Manufacturing Processes I	3
MFG 133	Quality Assurance	3
PH 201	General Physics I	5
CIS 120	Computer Concepts	0-4
or Computer Concepts		
BA 285	Business Human Relations	3
or PSY 101	Applied Psychology	
or SP 218	Interpersonal Communication	

NURSING PROGRAM

PREREQUISITES, STANDARDS AND REQUIREMENTS

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Practical Nursing
Associate of Applied Science, Nursing

PROGRAM DESCRIPTION

The Nursing program is approved by the Oregon State Board of Nursing to provide students with the academic and clinical preparation to sit for the national licensure exam upon completion of the program. The Nursing program provides a career ladder with exit points at the nursing assistant (NA), practical nurse (PN) and registered nurse (RN) levels. All students, regardless of desired exit point, apply and enter the Nursing program together.

After completing all required support and prerequisite courses, as well as the first three terms of the nursing courses, students are awarded COCC's certificate in Practical Nursing. This certificate qualifies students to take the NCLEX-PN national licensure examination and apply for licensure as a practical nurse (PN) from a State Board of Nursing. Students admitted into the Nursing program and completing the first year of nursing courses may continue into the RN sequence of courses without additional application requirements.

After completion of all required support and prerequisite courses, as well as all six terms of the nursing courses, the students are awarded an AAS in nursing degree and are eligible to take the NCLEX-RN national licensure examination and apply for licensure as a registered nurse (RN) from a State Board of Nursing.

Students may choose to exit the program at the end of the second term of nursing courses to work at the nursing assistant level. Students leaving at the end of the second term may apply for readmission. Students may choose to exit the program at the end of the first year of nursing courses to work at the PN level. Students may apply for advanced placement into the second year of the program at a later time. Students leaving at the end of the first term would be required to reapply to the program. Students leaving the Nursing program at any point after the first term must apply for re-admission into the program. Re-admission is competitive and on a space-available basis. Students seeking re-admission should look at the COCC website for current prerequisite and support courses requirements and the Nursing program's re-admission policy. LPNs who have graduated from another nursing program may seek advanced placement into the RN level of the program and should look at the COCC website for the advanced placement requirements and application materials.

COST OF PROGRAM

In addition to the standard tuition and student fees, students should anticipate the following additional estimated program costs:

- Nursing textbooks \$1500
- Nursing courses \$300 per term fee
- Nursing course supplies \$90 first year, \$45 second year
- Specialized clothing or uniform \$150
- Tools and equipment \$80
- State exam/licensure fee \$320 (\$160 LPN, \$160 RN)
- State fingerprinting fee \$104 (\$52 LPN, \$52 RN)
- Background check \$55
- Drug screen \$45-60
- Immunizations & screenings \$300
- CPR certification \$50

PROGRAM PREPARATION AND PREREQUISITES

For a detailed discussion of all program admission requirements, students must refer to the current year Selection Process Handbook on the Nursing website. Students must complete a Nursing program application, which includes completion of the Test of Essential Academic Skills (TEAS-V)[™] and short-answer essay questions, and submit any required

documentation, as part of their application packet. Admission packets are available at www.cocc.edu/Nursing/. Applications are accepted annually during spring term for admission to the Nursing program the following fall term.

An applicant must be classified as an in-district resident for the term in which they will be admitted to the program.

Students must complete an Oregon nursing assistant course for credit from a regionally accredited college in Oregon with a "C" grade or higher and provide an official transcript from the college if not taken at COCC (this course may be no older than five years at the time of application to the Nursing program). Or, students may complete either a nursing assistant course from an unaccredited agency (i.e. nursing home or hospital) and obtain an Oregon CNA certificate. The CNA certificate must be issued or renewed within the last five years.

Students must complete the following support courses with a "C" grade or better to meet degree requirements:

CH 104	Intro to Chemistry I ¹	5
or CH 221	General Chemistry I ¹	
FN 225	Human Nutrition	4
PSY 215	Developmental Psychology	4
or PSY 215N	Developmental Psychology for Nurses	
WR 122	English Composition	4
or WR 227	Technical Writing	

Completion of the following prerequisite courses:

BI 231	Anatomy and Physiology I ¹	4
BI 232	Anatomy and Physiology II ¹	4
BI 233	Anatomy and Physiology III ¹	4
BI 234	Microbiology ²	4
CIS 120	Computer Concepts ¹	0-4
	or Computer Competency Test	
MTH 95	Intermediate Algebra or higher	4
WR 121	English Composition	4

Prerequisite courses must be completed with a "C" grade or better, with a cumulative GPA of 3.0 or higher.

FOOTNOTES

¹ Chemistry, Anatomy & Physiology, Microbiology, and Computer Concepts courses may be no older than five years at the time of application to the Nursing program. The five-year requirement is defined as the academic year the course was taken, e.g. five years from 2014-2015 is 2009-2010.

REQUIRED PRIOR TO ENTRY INTO NURSING COURSES

Once admitted into the Nursing program, students will need to complete the following before the start of fall term (See *Nursing Program Entrance Policies and Technical Standards* handbook for more details on the Nursing website):

- Healthcare provider CPR certification documentation of completion of immunizations and screenings as follows:
 - Hepatitis
 - Measles, Mumps, Rubella
 - Varicella
 - Tdap
 - TB test
- All COCC students enrolled in the Nursing program, which includes requirements for practical experience, have to complete Criminal History Checks (CHC) as a condition of their acceptance into the Nursing program. 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

NURSING PROGRAM *(continued)*

PREREQUISITES, STANDARDS AND REQUIREMENTS

certification in their chosen field should contact the appropriate state board or the program director.

- New policy effective fall term 2014: Prior to entry into a health profession program, students must complete a 10 panel urine drug screen with verified credentials. With the exception of certain prescribed medications, students with a positive drug screen, which prevents them from attending clinical, will be disqualified from entering the program. Please refer to the Nursing website and/or program handbook for more detailed information.

MINIMUM GPA OR GRADE REQUIREMENTS

Greater than or equal to a 3.0 cumulative GPA for BI 231, 232, 233, 234, WR 121 and MTH 95. All other support courses must be completed with "C" 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 clinical practicum to remain in the Nursing program.

REGISTRATION INFORMATION

Students are admitted to the Nursing program through a selective admission process. The application process is handled through COCC's Admissions and Records office. Admission to the Nursing program is competitive and enrollment is limited. Admission to the program allows a student to take the required Nursing (NUR) courses. Program courses must be taken in sequence.

Students are required to attend a Nursing program information session offered by Admissions and Records to learn about COCC's Nursing program and admission requirements. Students should refer to the Nursing Selection Process Handbook found on the COCC website for all current admission requirements and for specific information about the process, financial aid and strategies for program success. Nursing program prerequisite and support courses are open to all students. Due to the rigor and time required for program-specific coursework, students are highly encouraged to complete non-specific program coursework prior to admission.

PROGRAM STANDARDS

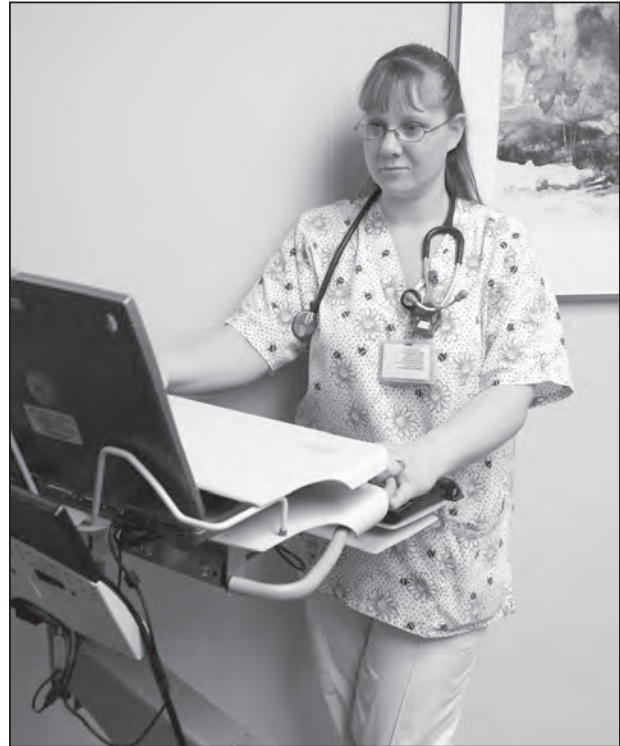
The Nursing program reserves the right to refuse or discontinue enrollment at any time of any student if the student violates the Nurse Practice Act of the state of Oregon. Additionally, students are required to consistently meet the outcomes, technical standards, policies and/or safety standards of 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 College policies including Student Rights and Responsibilities which can be found at www.cocc.edu/Student-Life/Student-Policies/. The Nursing program progression policy can be found by going to www.cocc.edu/Nursing/Traditional-Nursing-Program and clicking on Progression Policies.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

Completion of the Practical Nursing certificate qualifies graduates to take the NCLEX-PN national licensure exam and to apply for licensure as a practical nurse from a state board of nursing.

Completion of the AAS degree in Nursing qualifies graduates to take the NCLEX-RN national licensure exam and to apply for licensure as a registered nurse from a state board of nursing.

Licensure information in Oregon can be found at www.oregon.gov/OSBN/RN-LPNlicensure.shtml/.



TRANSFER INFORMATION

This certificate/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. Graduates of the Practical Nurse certificate program may continue to the second year of COCC's Nursing program or seek admission or advanced placement at any Oregon community college.

Articulation agreements are in place for graduates of the AAS degree Nursing program wanting to continue on to a Bachelor of Science in Nursing degree with Linfield College and Oregon Health Sciences University. Several other universities and colleges in Oregon and Washington offer RN-BSN completion.

A co-admission agreement is in place with Linfield College for students admitted to the COCC Nursing program.

NURSING

PRACTICAL NURSING
Certificate of Completion 60-64 credits

REGISTERED NURSING
Associate of Applied Science (AAS) Degree 103-107 credits

See preceding pages 150-151 for information about the following: program description; cost of program; program preparation and prerequisites; minimum GPA or grade requirements; registration information; program standards; national/state legal eligibility or unique requirements for licensure and/or entry into occupation, or advancement in the occupation; and transfer information.

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate, Practical Nursing

PROGRAM COURSE REQUIREMENTS**General education/foundational requirements**

MTH 95	Intermediate Algebra or higher	4
WR 121	English Composition	4

Program prerequisites

BI 231	Anatomy and Physiology I ¹	4
BI 232	Anatomy and Physiology II ¹	4
BI 233	Anatomy and Physiology III ¹	4
BI 234	Microbiology ¹	4

Other required support courses

PSY 215	Developmental Psychology	4
Pass Computer Competency test or CIS 120	Computer Concepts	0-4

Program requirements

NUR 106	Nursing I	11
NUR 107	Nursing II	10
NUR 108	Nursing III	11

FOOTNOTES

¹ Anatomy & Physiology, Microbiology, CIS 120 or pass Computer Competency test (see page 25), and Chemistry may be no older than five years at the time of application to the Nursing program. The five-year requirement is defined as the academic year the course was taken, e.g., five years from 2014-2015 is 2009-2010.

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Nursing

PROGRAM COURSE REQUIREMENTS**General education/foundational requirements**

MTH 95	Intermediate Algebra or higher	4
WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Program prerequisites

BI 231	Anatomy and Physiology I ¹	4
BI 232	Anatomy and Physiology II ¹	4
BI 233	Anatomy and Physiology III ¹	4
BI 234	Microbiology ¹	4

Other required support courses

CH 104	Intro to Chemistry I	5
or CH 221	General Chemistry I ¹	
FN 225	Human Nutrition	4
PSY 215	Developmental Psychology	4
Pass Computer Competency test or CIS 120	Computer Concepts	0-4

Program requirements

NUR 106	Nursing I	11
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

FOOTNOTES

¹ Anatomy & Physiology, Microbiology, CIS 120 or pass Computer Competency test (see page 25), and Chemistry may be no older than five years at the time of application to the nursing program. The five-year requirement is defined as the academic year the course was taken, e.g., five years from 2014-2015 is 2009-2010.

ADVISING NOTES

Students considering pursuing a bachelor's degree in nursing should see a nursing advisor, the COCC website or the baccalaureate institution's catalog for other course requirements.

NURSING

Associate of Arts Oregon Transfer (AAOT) Degree - Transfer Preparation
90 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associates of Arts Oregon Transfer Degree

In addition to the registered nurse license, COCC students may choose from several paths to transfer into upper-division Bachelor of Science in Nursing (BSN) programs.

Option 1: Students may complete the RN, AAS at COCC and then complete an online RN-to-BSN program. Information on the RN, AAS program is available on page 152 of this catalog.

Option 2: Students may complete prerequisite coursework for a specific university at COCC and then apply to that university's BSN program.

Option 3: Students may complete the prerequisites for applying to the majority of Oregon's BSN programs by completing the AAOT degree at COCC, then apply to multiple BSN programs.

The AAOT degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some private and out-of-state universities having met all lower-division general education requirements. With appropriate planning, all lower-division major requirements may also be met. Students should carefully review the program websites for any universities they are considering and then work closely with an advisor to review specific transfer requirements. All of Oregon's BSN programs have a selective admission process and are highly competitive.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

Oregon has six baccalaureate degree programs (offered at 10 universities or colleges). For specific information, contact the school. The following programs are approved by the Oregon State Board of Nursing.

Concordia University

www.cu-portland.edu/hhs/undergraduate/nursing

George Fox University

www.georgefox.edu/academics/undergrad/departments/nursing/index.html

Linfield-Good Samaritan School of Nursing

www.linfield.edu/portland -Also offers an online RN-to-BSN program.

Oregon Health & Science University (OHSU) School of Nursing-Portland

www.ohsu.edu/son

OHSU School of Nursing at Eastern Oregon University

www.eou.edu/ohsu

OHSU School of Nursing at Oregon Institute of Technology

www.ohsu.edu/xd/education/schools/school-of-nursing/about/index.cfm

OHSU School of Nursing at Southern Oregon University

www.sou.edu/nursing

OHSU School of Nursing at Western Oregon University

www.ohsu.edu/son

University of Portland School of Nursing

www.nursing.up.edu

Walla Walla University School of Nursing

www.wallawalla.edu/nursing

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4

Oral Communication

SP 111	Fundamentals of Public Speaking	3
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Mathematics

MTH 111	College Algebra	4
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Health

HHP 295	Health and Fitness	3
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GENERAL EDUCATION/DISCIPLINE STUDIES**Arts and Letters¹**

ARH 201	Introduction to Art History	4
or ARH 202	Introduction to Art History	
or ARH 203	Introduction to Art History	
ENG 107	Western World Literature: Ancient	4
or ENG 108	Western World Literature: Middle Ages	
or ENG 109	Western World Literature: Modern	
PHL 202	Problems of Philosophy - Ethics	4

Social Science²

ANTH 103	Cultural Anthropology	4
PSY 201	Mind and Brain	4
PSY 215	Developmental Psychology	4
or PSY 215N	Developmental Psychology for Nurses	
SOC 201	Introduction to Sociology	4

Science/Math/Computer Science

BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4
FN 225	Human Nutrition	4

ELECTIVES

BI 101	General Biology: Cells & Genes	4
BI 234	Microbiology	4
CIS 120	Computer Concepts	4
CH 104	Introduction to Chemistry I	5
MTH 243	Introduction to Methods of Probability and Statistics I	4

Foreign Language³

Two terms of the same foreign language	8
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FOOTNOTES

¹ Additional course choices may be available; consult advisor for suggestions.

² Additional course choices may be available; consult advisor for suggestions.

³ Students who completed two years of the same foreign language in high school with a "C" or higher, may choose 8 elective credits numbered 100+ instead of foreign language; consult advisor for suggestions.

OUTDOOR LEADERSHIP

Associate of Science (AS) Degree
93 credits

The general area of outdoor leadership includes developing students to participate professionally in various outdoor related industries, including: outdoor recreation, outdoor education, adventure education, wilderness therapy, and tourism and leisure enterprises. A student can earn an AAOT (see page 156) or AS degree with a focus in outdoor leadership at COCC in preparing to transfer to a baccalaureate institution to pursue a higher degree in any one of the above areas.

The AS is designed for students planning to transfer to OSU-Cascades. This degree will allow students to meet all lower-division baccalaureate and major requirements for a Bachelor of Science in Tourism and Outdoor Leadership.

There are no entrance requirements for the outdoor leadership program; however, there are several pre-requisites for many of the OL courses. Please refer to the list below, which outlines the variety of courses. Students entering into the OL program are expected to complete a set of first year courses before enrolling in second year courses.

OUTDOOR LEADERSHIP COURSES – MAJOR REQUIREMENTS

OL 111	Introduction to Outdoor Leadership	3
OL 171	Technical Skills for Outdoor Leaders	2
OL 207	Seminar in Outdoor Leadership	2
OL 244	Psychology of Risk and Adventure	3
OL 253	Wilderness Advanced First Aid	3
OL 255	Outdoor Living Skills	5
*OL 271	Facilitating Group Experiences	4
*OL 273	Outdoor Recreation Leadership	5
*OL 280	Practicum – Outdoor Leadership	2
*OL 294	(various guide level skills classes)	3
or HTRM 233	Event Planning	

*First Year completion requirements for enrollment into the second year level include: a completion of OL prefixed courses at a grade of "C" or higher; completion of a minimum of 36 college-level credits made up, in part, by the above courses, appropriate pre-requisites (see pre-requisite requirements below). See advisor for details.

During their time in the Outdoor Leadership Program, students are encouraged to complete a variety of general education/discipline studies requirements for the AS and the BS in Tourism and Outdoor Leadership at OSU-Cascades. Please refer to the list below for suggested courses that meet these requirements. See advisor with any questions.

GENERAL EDUCATION/DISCIPLINE STUDIES – MAJOR REQUIREMENTS

WR 121	English Composition	4
WR 122	English Composition	4
MTH 105	Intro to Contemporary Math	4
SP 111	Fundamentals of Public Speaking	3
CIS 120	Computer Concepts	4
or CIS 131	Software Applications	
BA 101	Intro to Business	4
HHP 295	Health and Fitness for life	4
FOR 255	Resource Interpretation	3

Choose courses for each Perspective requirement below from the approved list at: <http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-central-oregon-community-college/>.

Physical Science
Biological Science
Physical or Biological Science
Cultural Diversity
Western Culture
Difference, Power, Discrimination
Social Processes and Institutions
Literature and Art

OL Pre-Requisite Program

Course	Pre-Req.
OL 111	WR 65
OL 271	OL 111, OL 253, OL 255, WR 121
OL 273	OL 111, OL 253, OL 255, WR 121
OL 294WG	
Whitewater Raft Guiding	OL 271, OL 273, OL 171
OL 294RC	
Teaching Rock Climbing	OL 271, OL 273, OL 171
OL 294CC Challenge Course Practices	OL 271, OL 273, OL 171
OL 294MB Mountain Bike Guiding	OL 271, OL 273,

SAMPLE AS TWO-YEAR PLAN (INCLUDES ATTENDANCE IN THE FALL BLOCK)

This is not a definitive schedule of classes, but simply an example of an AS program in Outdoor Leadership.

Year One

Fall term – Outdoor Leadership Fall Block: Students complete the following classes as a cohort. Classes are held in an outdoor classroom and students complete an 8-day backpacking trip towards the end of the term. Students are immersed in Outdoor Leadership studies while gaining extensive and unique experiences outdoors. Students must register for each and all of the courses of the Fall Block. Please see an OL advisor for more information.

OL 111	Intro to Outdoor Leadership	3
OL 253	Wilderness Advanced First Aid	3
OL 255	Outdoor Living Skills	5
OL 171	Technical Skills	3
HHP 185	Orienteering (elective)	1
OL 162	Processing the Experience (elective)	1

Winter term

BA 101	Intro to Business	4
CIS 120	Computer Concepts	4
or CIS 131	Software Applications	
MTH 111	College Algebra	4
WR 121	English Composition	4

Spring term

HHP 295	Health and Fitness for Life	3
Social Processes Perspective Requirement ¹		3-4
SP 111	Fundamentals of Public Speaking	3
WR 122	English Composition	4

OUTDOOR LEADERSHIP *(continued)*

Associate of Science (AS) Degree

93 credits

Year Two

Fall term

Literature and the Arts Perspective Requirement ¹	3-4
Bio Science Perspective Requirement ¹	4-5
Western Culture Perspective Requirement ¹	3-4
FOR 255 Resource Interpretation	3

Winter term

OL 207 Seminar in Outdoor Leadership	2
OL 271 Facilitating Group Experiences	4
OL 273 Outdoor Recreation Leadership	5
Cultural Diversity Perspective Requirement ¹	3-4
Physical Science Perspective Requirement ¹	4-5

Students are encouraged to complete the Snow Science Learning Community program, which includes both GS 104 Physics and OL 194 AA Avalanche Level 1; students must register for both classes, which is taught as an immersion into the subject of snow and safe practices in avalanche terrain.

Spring term

OL 244 Psychology of Risk and Adventure	3
OL Skills course(s) requirement ²	3-4
Bio/Phys. Science Perspective Requirement ¹	4-5
Difference, Power and Discrimination Perspective Requirement ¹	3-4

Summer Term

OL 280 Practicum - OL	2
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ELECTIVES

Choose enough elective credits to reach a minimum total of 93 overall degree credits. Elective classes 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/HHP/performance classes (15 credits maximum).

Lab fees may be assessed at time of registration for certain OL courses pending approval by the College Affairs Committee

- \$23 for HHP 295 or HHP 252A
- \$20 for all HHP 185 classes for Mazama user fee
- \$75 for OL 294CC

FOOTNOTES

¹ Choose one approved course from the list at <http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-central-oregon-community-college/>.

² Choose one from:

HTRM 233 Event Planning	3
OL 294CC Challenge Course Practices	3
OL 294MB Mountain Bike Guiding	3
OL 294RC Teaching Rock Climbing	3
OL 294WG Whitewater Raft Guiding	3
OL 199MA Alpine Climbing	3

OUTDOOR LEADERSHIP

Associate of Arts Oregon Transfer (AAOT) Degree

90 credits

The general area of outdoor leadership includes specific careers in outdoor recreation, outdoor education, wilderness therapy, and tourism and leisure enterprises. A student can earn an AAOT or AS (see page 154) degree with a focus in outdoor leadership at COCC to prepare to transfer to a baccalaureate institution to pursue a higher degree in any one of the areas mentioned above.

The AAOT degree meets the State of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, 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.

There are no entrance requirements for the Outdoor Leadership program. However, students entering the program are required to complete a set of freshman courses before enrolling in the sophomore-level courses. Freshman completion requirements for enrollment into the sophomore level include completion of a minimum of 36 college-level credits made up, in part, by the following courses. See advisor for details.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite.)		

Health (3 credits with HHP prefix.) 3

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

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

Choose enough elective credits to reach a minimum total of 90 overall degree credits. Elective classes 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/HHP/performance classes (15 credits maximum). The following courses are recommended:

FOR 240A	Forest Ecology	3
FOR 251	Recreational Resource Management	3
GEOG 212	Tourism and Recreation	3
OL 111	Introduction to Outdoor Leadership	3
OL 253	Wilderness Advanced First Aid	3
OL 255	Outdoor Living Skills	5
OL 271	Facilitating Group Experiences	4
OL 273	Outdoor Recreation Leadership	5
Choose one of the following:		
OL 294CC	Challenge Course Practices	3
OL 294MB	Mountain Bike Guiding	3
OL 294RC	Teaching Rock Climbing	3
OL 294WG	Whitewater Raft Guiding	3
OL 199MA	Alpine Climbing	3
FOR 255	Resource Interpretation	

ADVISING NOTES

Lab fees may be assessed at time of registration for certain OL courses pending approval by the College Affairs Committee

- \$23 for HHP 295 or HHP 252A
- \$20 for all HHP 185 classes for Mazama user fee
- \$5 for OL 271
- \$75 for OL 294CC

PHARMACY TECHNICIAN

Certificate of Completion

48-56 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Pharmacy Technician

PROGRAM DESCRIPTION

The Pharmacy Technician training program prepares individuals for employment in the pharmacy industry. Pharmacy technicians are skilled workers who are educated and trained to work in a pharmacy and assist in all areas of the pharmacy not requiring the professional judgment of the registered pharmacist. Some current practice areas for the pharmacy technician include retail, hospital, manufacturing, disease state management, and mail order and insurance claim specialists. The pharmacy technician processes prescriptions and medication orders and plays an integral role in maintaining the pharmacy department.

Courses are completed in an online and hybrid format, and focus on the abilities needed to assist the pharmacist and provide the skills necessary to process prescriptions accurately, participate in administration and management of a pharmacy, and maintain inventory. Topics of study include medical terminology, anatomy and functions of the human body, therapeutic classification and drug names, pharmacy procedures, pharmaceutical calculations, pharmacy law and interpersonal communications. Students will have a working knowledge of sterile technique, standards of practice, quality assurance and patient confidentiality. In addition, students will develop and practice communication skills needed to function in a professional setting. In order to gain workplace experience, students will also participate in a hospital and retail pharmacy practicum.

The pharmacy technician curriculum was developed using the accreditation standards of the American Society of Health-System Pharmacists (ASHP) and is tailored specifically to the students in the program. This program prepares students to pass the National Pharmacy Technician Certification exam required by the Oregon Board of Pharmacy to practice as a pharmacy technician in the state of Oregon. Students are required to obtain a pharmacy technician license from the Oregon Board of Pharmacy to participate in the practicum. The application process for the pharmacy technician license will require a criminal background search.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following program costs:

- Program fee of \$150 per term (or a total of \$450 for the three-term pharmacy technician cohort);
- In some cases \$150 to \$300 for fees associated with required immunizations and tuberculosis screening;
- \$45-60 drug screening;
- \$55 background check;
- \$35 pharmacy technician license;
- \$65 for American Heart Association CPR for Health Care Providers certificate;
- Distance students will be responsible for the cost of travel and expenses to the COCC campus for the two lecture labs in the fall and winter terms.

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry into the pharmacy technician program:

- High school diploma or GED;
- WR 65/95 ("C" or better) or placement into WR 121;
- MTH 20 or MTH 31 ("C" or better) or placement into MTH 60;
- CIS 120 ("C" or better) or pass Computer Competency exam;
- Current American Heart Association CPR for Health Care Providers certification;
- Complete COCC Online Orientation available at www.cocc.edu/onlineorientation/;

REQUIRED PRIOR TO THE START OF THE FALL TERM:

COCC's Health Careers programs follow the current Center for Disease Control Healthcare Personnel Vaccination Recommendations.

- Three dose series of Hepatitis B vaccines, or vaccine series in progress (dose #1 completed, #2 in one month, #3 approximately five months after #2) and anti-HBs serological testing showing immunity (taken one to two months after third immunization);
- One-time dose of Tdap (Tetanus, Diphtheria, Pertussis) as an adult;
- Two Measles, Mumps, Rubella (MMR) vaccines, at least four weeks apart, or if born before 1957, one vaccine; or vaccine series in progress, with first dose prior to the winter term and second dose at one month or laboratory evidence of measles, mumps and rubella immunity;
- Two doses Varicella vaccine, four weeks apart; or serological evidence of immunity (titer) to Varicella.
- 2 Step TB Testing (PPD) or blood draw (IGRA): Provide documentation of a blood test (IGRA), either Quantiferon Gold or T-Spot, within the past the past 12 months.

OR

-Documentation of two negative TB tests, administered 14-21 days apart, and read within 48 hours of placement by the administering agency. If both are negative, nothing further needs to be done.

OR

-If either test is positive, provide documentation of the TB tests, a chest x-ray and an evaluation by a physician.

OR

-Students with a past positive TB test must provide documentation of the positive TB test and, if not already completed, provide documentation of a baseline chest x-ray prior to the deadline. Please note: A TB test cannot be placed within 30 days of receiving the MMR vaccine. Plan accordingly. The CDC recommends the following vaccination but it is not required by the program: 1 dose of influenza vaccine annually.

- Documentation of completion of a Criminal Background Check. All COCC students enrolled in the Pharmacy Technician program, which includes requirements for practical experience, will have to pass Criminal History Checks (CHC).
- New policy effective fall term 2014: Prior to entry into a health profession program, students must complete a 10 panel urine drug screen with verified credentials. With the exception of certain prescribed medications, students with a positive drug screen, which prevents them from attending clinical, will be disqualified from entering the program. Please refer to the Pharmacy Tech website and/or program handbook for more detailed information.

PHARMACY TECHNICIAN *(continued)*

Certificate of Completion

48-56 credits

MINIMUM GPA OR GRADE REQUIREMENTS

To earn a certificate of completion all required courses must be completed with a grade of "C" or better and students must maintain a 2.0 overall GPA or higher.

REGISTRATION INFORMATION

The Pharmacy Technician program is a cohort which begins once a year in the fall term. The Pharmacy Technician program does not have a selective admissions process. However, students wishing to register in the fall PHM cohort must meet the basic prerequisite competencies and may register according to seat availability on a first-come, first-served basis as determined by the priority registration schedule. Students may view the priority registration schedule at www.cocc.edu/Registration-Home.aspx. The program coursework is for the most part an online format and computer competency is a program admission requirement. It is highly recommended that the student begin general education courses such as English Composition, Anatomy and Function, Medical Terminology or Interpersonal Communication prior to registering for the Pharmacy Technician program.

Once admitted to the program, students must obtain a one-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 equivalency (GED) and be at least 18 years of age. Application for the license will require a background check. 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 past 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 and can be found at www.pharmacy.state.or.us/ 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.

PROGRAM STANDARDS

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 this will result in the student's dismissal from the Pharmacy Technician program.

NATIONAL AND/OR STATE LEGAL ELIGIBILITY REQUIREMENTS FOR LICENSURE OR ENTRY INTO OCCUPATION

Students must be at least 18 years of age, have a high school diploma, 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.

TRANSFER INFORMATION

This certificate is designed for students planning to enter the pharmacy technician field upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS**General education/foundational requirements**

AH 111	Medical Terminology I	3
AH 112	Medical Terminology II	3
BI 121, 122	Anatomy and Function I, II	8
or BI 231, 232, 233	Anatomy and Physiology I, II, III	12
CIS 120	Computer Concepts (grade of "C" or better)	0-4
or pass Computer Competency exam		
SP 218	Interpersonal Communication	3
WR 121	English Composition	4

Program requirements

PHM 100	Pharmacy Technician Practice I ¹	4
PHM 101	Pharmacy Law and Ethics ¹	3
PHM 110	Pharmacy Calculations ¹	3
PHM 120	Drug Classification and Therapeutics I ¹	3
PHM 130	Drug Classification and Therapeutics II ¹	3
PHM 140	Pharmacy Technician Practice II ¹	4
PHM 181	Pharmacy Technician Seminar ¹	1
PHM 190	Practicum I Hospital/Institution	3
PHM 191	Practicum II Retail/Community	3

FOOTNOTE

¹ Indicates online course

PHYSICS

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

While there are small differences between the physics programs, COCC works to provide the courses common to all programs. Students may have to take some additional classes at the university after transferring to reach junior status within their major.

The Associate of Arts Oregon Transfer (AAOT) degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in physics.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

English Composition

WR 121	English Composition	4
WR 227	Technical Writing	4

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 251	Calculus I	4
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Health (3 credits with HHP prefix.) 3

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

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44-45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three courses from at least two (2) prefixes.

Science/Math/Computer Science

PH 211	General Physics I	5
PH 212	General Physics II	5
PH 213	General Physics III	5
MTH 252	Calculus II	4

Social Science

A minimum of 15 credits from the social science discipline studies list, see pages 44-45, with at least two different prefixes and at least two courses with the same prefix. At least four courses chosen from at least two (2) prefixes.

ELECTIVES

CH 221	General Chemistry I	5
CH 222	General Chemistry II	5
CH 223	General Chemistry III	5
ENGR 201	Electrical Fundamentals	4
ENGR 202	Electrical Fundamentals II	4
ENGR 211	Statics	4
ENGR 212	Dynamics	4
ENGR 213	Strength of Materials	4
GE 101	Engineering Orientation	3
GE 102	Engineering Problem Solving and Technology	3
MTH 253	Calculus III	4
MTH 254	Vector Calculus I	4
MTH 255	Vector Calculus II	4
MTH 256	Applied Differential Equations	4

POLITICAL SCIENCE

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

The Associate of Arts Oregon Transfer degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in political science.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite)		

Health (3 credits with HHP prefix)		3
HHP activity courses (1 credit each) are not to be duplicated		

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

PS 201	Intro to US Government and Politics ¹	4
PS 204	Intro to Comparative Politics ¹	4
PS 205	Intro to International Relations ¹	4

plus another course from the Social Science discipline studies list that does not have a PS prefix.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

PS 206	Intro to Political Thought ¹	4
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Plus choose any college-level course 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.

FOOTNOTE

¹ Courses in Political Science do not need to be taken in sequence.

ADVISING NOTES

Students pursuing a BA after transfer should consider completing three terms of a 200-level language course. The 100-level language courses will count as electives. The 200-level language courses will partially fill the arts and letters requirement.

Students pursuing a BS after transfer should consider taking more math and science courses. Language is not necessary. For specific details, speak with an advisor. It is recommended that students pursuing a political science major take additional social sciences courses to fulfill some of their elective credits. Economics, geography and history courses are particularly helpful in this regard.

PRE-DENTAL HYGIENE

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

Below is an Associate of Arts Oregon Transfer degree adapted towards common dental hygiene requirements. While COCC does not offer a Dental Hygiene program, many students begin their courses here with the intent of transferring to another college for their actual degree.

Dental Hygiene programs typically have selective admission determined by the institution. A criminal history may affect employment opportunities. Students should contact their intended transfer school to determine exact requirements.

The Associate of Arts Oregon Transfer (AAOT) degree meets the State of Oregon transfer degree requirements allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher.)

Writing

WR 121	English Composition	4
WR 122	English Composition	4

Oral Communication

SP 111	Fundamentals of Public Speaking	3
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Mathematics

MTH 111	College Algebra	4
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Health (3 credits with HHP prefix.) 3

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

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk; SOC 201 in the following list meets that requirement.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

SOC 201	Introduction to Sociology	4
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At least four (3) additional courses from at least two (2) prefixes.

Science/Math/Computer Science

BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4
FN 225	Human Nutrition	4

ELECTIVES

BI 234	Microbiology	4
CHEM 104	Introduction to Chemistry I	4
CHEM 105	Introduction to Chemistry II	4
CHEM 106	Introduction to Chemistry III	4
AH 111	Medical Terminology I	3

Choose any college-level course that brings the total credits to 90 quarter hours. This may include up to 9 credits of Career and Technical Education courses (in addition to AH 111) designated by COCC as acceptable.

ADVISING NOTES

For a list of accredited Dental Hygiene programs, contact the American Dental Association (www.ada.org/357.aspx).

If transferring to Oregon Tech (OIT): Oregon Institute of Technology requires DHE 100 Introduction to Dental Hygiene (2) and is offered online. See OIT's catalog and web site for details.

If transferring to Lane Community College: PSY 201 or 202 and WR 227 are recommended. Lane gives additional application points for Spanish language proficiency (completion of SPAN 102 or CLEP test score of 50 or higher). See LCC's catalog and web site for details.

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

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

PRE-LAW

Associate of Arts Oregon Transfer (AAOT) Degree

90 credits

The Associate of Arts Oregon Transfer degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

Most law schools have no requirements for a pre-law curriculum and will accept a bachelor's degree in any major. Students should develop an educational program that is broad, yet provides depth of understanding in at least one subject area, along with fundamental insights into human institutions and values. The emphasis should be on a degree program that meets students' needs and interests, that students find challenging, and in which students will do their best work and will earn good grades.

Legal educators agree that the development of particular skills and habits will contribute more to success in law school than a major in any one subject. Therefore, coursework should focus on strengthening habits of thoroughness, intellectual curiosity, scholarship, the ability to research a topic, write concisely, analyze information and think critically. Verbal and written communication skills are very important.

Courses in literature, language, composition, logic and linguistics are directly concerned with the cultivation of these skills. In addition, lawyers must be adept at problem solving and organizing information to support a point of view. Courses in political science, economics, American and British history, journalism, philosophy and business principles will provide an opportunity to practice these skills and to gain an understanding of social institutions and values.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in pre-law.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite)		

Health (3 credits with HHP prefix) 3
HHP activity courses (1 credit each) are not to be duplicated

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

Choose any college-level course 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.

ADVISING NOTES

Students pursuing a BA after transfer should consider completing three terms of a 200-level language course. The 100-level language courses will count as electives. The 200-level language courses will partially fill the arts and letters requirement.

Students pursuing a BS after transfer should consider taking more math and science courses. Language is not necessary. For specific details, speak with an advisor.

PRE-MEDICINE, PRE-DENTISTRY, PRE-VETERINARY

Associate of Arts Oregon Transfer (AAOT) Degree

90 credits

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 sciences. 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-med, -vet and -dentistry related coursework. A suggested course of study is listed below. Students may transfer to a baccalaureate institution without the AAOT; however, completion of this degree guarantees that a student will transfer with junior standing and that all lower-division general education coursework is complete.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite)		

Health (3 credits with HHP prefix)		3
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HHP activity courses (1 credit each) are not to be duplicated

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses chosen from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

BI 211	Principles of Biology I	5
BI 212	Biology of Plants II	5
BI 213	Biology of Animals III	5
CH 221	General Chemistry I	5

ELECTIVES

CH 222	General Chemistry II	5
CH 223	General Chemistry III	5
FN 225	Human Nutrition	4
MTH 112	Elementary Functions	4
MTH 113	Analytic Geometry	4
MTH 251	Calculus I	4
MTH 252	Calculus II	4
MTH 253	Calculus III	4
PH 201, 202, 203	General Physics I, II, III	15
or PH 211, 212, 213	General Physics I, II, III	

Students should take enough electives to reach the 90 minimum credits required for the AAOT degree.

PRE-PHYSICIAN ASSISTANT AND PRE-PHYSICAL THERAPY

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

Students interested in pursuing professional degrees to become a Physician Assistant (PA) or Physical Therapist (PT) are required to complete a bachelor's degree, preferably in a related area, including any of the biological sciences. 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-PA or pre-PT coursework. A suggested course of study is listed below. Students may transfer to a baccalaureate institution without the AAOT; however, completion of this degree guarantees that a student will transfer with junior standing and that all lower-division general education coursework is complete.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 111	College Algebra or higher	4
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Health (3 credits with HHP prefix) 3

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

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Science/Math/Computer Science

The two PA programs in Oregon, at Oregon Health & Sciences University (OHSU) and Pacific University have a year of human anatomy & physiology as a pre-requisite. BI 231-233 (Human Anatomy & Physiology I, II, III) fulfills this requirement.

The OHSU PA program also has a Microbiology lecture-and-lab course as a pre-requisite. BI 234 fulfills this requirement. BI 234 also can be applied as a biological sciences pre-requisite for the PA program at Pacific University.

The two PA programs in Oregon also have a chemistry prerequisite, which can be met with courses in CH 104-106 and/or CH 221-223. The Pacific University PT program also has one year of general physics (non-calculus based) as a pre-requisite, which can be met with PH 201-203.

The student and her/his advisor should review program pre-requisites to determine what other courses may be taken at COCC.

The AAOT itself has the following requirements:

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

Recommend:

BI 211	Principles of Biology I	5
BI 212	Biology of Plants II	5
BI 213	Biology of Animals III	5
CH 221	General Chemistry I	5

ELECTIVES

CH 222	General Chemistry II	5
CH 223	General Chemistry III	5
FN 225	Human Nutrition	4
MTH 112	Elementary Functions	4
MTH 113	Analytic Geometry	4
MTH 251	Calculus I	4
MTH 252	Calculus II	4
MTH 253	Calculus III	4
PH 201, 202, 203	General Physics I, II, III	15
or PH 211, 212, 213	General Physics I, II, III	

Students should take enough electives to reach the 90 minimum credits required for the AAOT degree.

The following websites are helpful tools in identifying colleges across the U.S. which offer either a Physician Assistant and/or Physical Therapy degree and their respective lower division requirements.

American Physical Therapy Association web site (www.apta.org).

Physician Assistant Education Association (www.paeonline.org).

PSYCHOLOGY

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

The Associate of Arts Oregon Transfer degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in psychology.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher.)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite.)		
Recommended: MTH 111 College Algebra		

Health (3 credits with HHP prefix.)		3
HHP activity courses (1 credit each) are not to be duplicated.		

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.		
PSY 201	Mind and Brain ¹	4
PSY 202	Mind and Society ¹	4

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

Choose any college-level course 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.

ADVISING NOTES

Students pursuing a BA after transfer should consider completing three terms of a 200-level language course. The 100-level language courses will count as electives. The 200-level language courses will partially fill the arts and letters requirement.

Students pursuing a BS after transfer should consider taking more math and science courses. Language is not necessary. However, if a student has graduated high school or earned a GED after 1997, two years of the same foreign language must be earned at the high school level or two quarters of the same foreign language at the undergraduate level is required for admittance to most OUS institutions. For specific details, speak with an advisor. In general two 100+ math classes beyond the foundational mathematics requirement fulfills the Bachelor of Science. These will also partially fulfill the Science/Math/Computer Science discipline studies requirements.

Although students may take whichever science sequence they prefer, it is recommended to take BI 101-103 or BI 231-233 due to the relevance these courses have to upper-division psychology courses.

Students are advised to consider the following psychology courses as electives to gain a further insight into the field and to help them determine what area of psychology they may be interested in pursuing: PSY 213, PSY 214, PSY 215, PSY 219, PSY 216, PSY 233, PSY 227 and any other potential special topics courses that are offered from time to time.

Students who are considering clinical or counseling psychology might consider the following electives: HS 162, HS 262, HS 161, HS 206, HS 201, HS 260, EMT 195 and ED 265.

Psychology students will be required to take Statistics when they transfer. Although MTH 111 is sufficient for the math requirement, advisors recommend taking one or both of MTH 243 and MTH 244 to finish the science requirement and to allow students to be exposed to statistics beforehand.

TRANSFER INFORMATION

Note that individual institutions may have additional requirements or will change the category that a course satisfies if the AAOT is not completed, or is transferred to an out-of-state college or university. For admission into a particular program, courses may be added. Students who plan to transfer should contact the institution they plan to attend to ensure they have fulfilled the specific requirements for their program.

Students have the option of pursuing a bachelor's degree in psychology through Oregon State University (contact Diane Pritchard, OSU advisor, 541-322-2023) or through a distance program with Eastern Oregon University (contact Brenda McDonald, EOU advisor, 541-385-1137); both programs are available in Central Oregon. Students planning to attend OSU should include in their AA degree the following OSU major requirements: WR 227, BI 101-103 or BI 211-213, PSY 201, PSY 202.

FOOTNOTES

¹ These courses do not need to be taken in sequence.

SOCIOLOGY

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

The Associate of Arts Oregon Transfer degree meets the State of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in sociology.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher.)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics (or higher for which Intermediate Algebra is a prerequisite.)	4
Recommended: MTH 111 College Algebra		

Health (3 credits with HHP prefix.)		3
HHP activity courses (1 credit each) are not to be duplicated.		

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

SOC 201	Introduction to Sociology	4
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Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

Choose any college-level course 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.

ADVISING NOTES

Students pursuing a BA after transfer should consider completing three terms of a 200-level language course. The 100-level language courses will count as electives. The 200-level language courses will partially fill the arts and letters requirement.

Students pursuing a BS after transfer should consider taking more math and science courses. Language is not necessary. For specific details, speak with an advisor.

Students are advised to consider the following sociology courses as electives to gain further insight into the field and to help them determine what area of sociology they may be interested in pursuing: SOC 206, SOC 211, SOC 208, SOC 212, SOC 215, SOC 219, SOC 250 and any other potential special topics courses that are offered from time to time.

Sociology students typically will be required to take Statistics when they transfer. Although MTH 111 is sufficient for the math requirement, advisors recommend taking one or both of MTH 243 and MTH 244 to finish the science requirement and to allow students to be exposed to statistics beforehand.

TRANSFER INFORMATION

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.

SPEECH COMMUNICATION

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

COCC’s Speech Communication program offers courses in public speaking, small group communication, interpersonal communication, as well as classes on the media, gender, intercultural communication and communicating love. One-credit, workshop-style courses are also available for those who want to learn team skills, conflict management, listening skills and emotional intelligence. A degree in speech communication can lead to a career in teaching, the hospitality industry, broadcast and cyber media, human resources, business management, public relations, politics, law or the arts.

The Associate of Arts Oregon Transfer degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and to review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor’s degree in speech communication.

Students should check with each school to ensure that the latest transfer information is used when designing their program.

GENERAL EDUCATION/FOUNDATIONAL REQUIREMENTS

(Courses must be completed with a grade of "C" or higher.)

Writing

WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

Oral Communication

SP 111	Fundamentals of Public Speaking	3
or SP 114	Argumentation and Critical Discourse	
or SP 115	Introduction to Intercultural Communication	
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Mathematics

MTH 105	Intro to Contemporary Mathematics	4
(or higher for which Intermediate Algebra is a prerequisite.)		

Health (3 credits with HHP prefix.)	3
HHP activity courses (1 credit each) are not to be duplicated.	

GENERAL EDUCATION/DISCIPLINE STUDIES

(See pages 44 and 45 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)

Arts and Letters

At least three (3) courses from at least two (2) prefixes. Speech communication majors should consider courses with ART, HUM, ENG, PHL, SP, or TA prefixes.

Social Science

At least four (4) courses from at least two (2) prefixes.

Speech communication majors interested in quantitative communication studies should consider courses with a PSY or SOC prefix.

Speech communication majors interested in rhetoric and public address should consider courses with an HST or PS prefix.

Science/Math/Computer Science

At least four (4) courses from at least two (2) prefixes including at least three (3) laboratory courses in biological and/or physical science.

ELECTIVES

Choose enough electives to reach the minimum of 90 credits for the AAOT. In addition to the recommendations listed below, speech communication majors should consider taking a broad range of courses.

SP 115	Introduction to Intercultural Communication	3
SP 218	Interpersonal Communication	3
SP 219	Small Group Communication	3
SP 220	Gender Communication	3
SP 230	Introduction to the Rhetoric of Film	3
SP 234	Introduction to Visual Rhetoric	3
SP 241	Media, Communication and Society	4
SP 270	Communicating Love	3

ADVISING NOTES

Students planning to transfer to OSU need to take:

HHP 295	Health and Fitness	3
and HHP 185	Activity class	1

TRANSFER INFORMATION

The Oregon University System offers a variety of programs for speech communication majors who seek a bachelor’s or more advanced degree. Some Oregon two-year and four-year colleges have required speech courses that are 4 credits, so students transferring to those colleges may find it helpful to take one of the 1 credit courses, such as SP 250, SP 252 or SP 253, to supplement one of the 3 credit speech courses.

Oregon State University-Cascades offers a speech communication minor; contact its Admissions office for more information.

OSU’s (Corvallis) Department of Speech Communication offers undergraduate programs leading to BA or BS degrees, with concentrations in communication or theater art. Additionally, students at OSU can complete a minor either in communication or theater arts, as well as one in the multimedia minors. At the graduate level they participate in the Master of Arts in Interdisciplinary Studies program. The University of Oregon’s School of Journalism and Communication offers majors in six areas: advertising, electronic media, communication studies, magazine journalism, news-editorial or public relations.

Southern Oregon University’s Department of Communication provides students the opportunity to develop verbal and nonverbal communication knowledge and skills through exploration of human communication, mass media studies and journalism. In addition to these three degree programs, the department offers four minor options to support a variety of goals: human communication, journalism, media studies and public relations.

Western Oregon University’s Speech Communication Department offers a 57-hour major and a 27-hour minor in speech communication. In the liberal arts tradition, their program emphasizes classic texts of rhetoric, modern communication theory, and the latest developments in mass media and communication technology.

STRUCTURAL FIRE SCIENCE

Associate of Applied Science (AAS) Degree

95-98 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Structural Fire Science

PROGRAM DESCRIPTION

The AAS degree in Structural Fire Science 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.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- CPR for Healthcare Provider card \$55, must remain current throughout Basic class.
- Background check \$55. This will be required prior to Basic class.
- Drug Screen \$45-60
- Immunization upload \$14. Documentation of completion of the following immunizations; Hepatitis B, current TB, MMR, annual Influenza, Tetanus within previous 10 years, Varicella (Chickenpox).
- In some cases fees associated with immunizations can range from \$20-\$200.
- Fee for State Certification Testing and National Registry Test (currently \$170-\$250).
- Materials (boots, ear protection, gloves, etc.), \$200-\$350
- Other special equipment and clothing may be required as part of this program.

ADVISING NOTES

The program requires hands-on training in fire and emergency medical skills and significant on-the-job training (OJT) by joining a fire agency that require students to work with and around mechanical equipment, ropes, fire pumps, fire hose and appliances, ladders, various apparatus and hand tools (both manual and powered). Most local fire agencies have student and volunteer positions. Students must apply and compete for these positions. Passing a written and physical agility exam is required for acceptance into these positions. Students desiring to complete a degree in Structural Fire Science and Emergency Medical Services must follow a specific course of study. Please see the program director for information.

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry into Structural Fire program-specific courses:

- High school diploma or GED.
- Students must be 18 or older for state and national testing for EMT and affiliation with a fire agency. Students do NOT need to be 18 to begin taking SFS courses.
- All COCC students seeking enrollment in the EMT course and/or agency affiliation that requires practical experience, will have to pass a Criminal History Check (CHC) as a condition of their acceptance into a medical, fire or other facility for training. Students who do not pass the CHC may not be eligible to complete training at affiliated sites, to sit for licensure or certification exams, or to be hired for some professional positions. Students who believe their personal history may interfere with their ability to complete the program of study or to obtain licensure or certification in their chosen field should contact the appropriate state board or the program director.
- New policy effective fall term 2014: Prior to entry into a health profession program, students must complete a 10 panel urine drug screen with verified credentials. With the exception of certain prescribed medications, students with a positive drug screen, which prevents them from attending clinical, will be disqualified from entering the program. Please refer to the Structure Fire Science website and/or program handbook for more detailed information.

- 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 EMS Program. Students with a positive urine drug screen will be disqualified from entering the EMT or Paramedic certification courses at Central Oregon Community College, with the exception of certain prescribed medications. The Director of EMS/SFS will notify the student of positive drug screens and their resulting disqualification from the Program. Students have a right to appeal the decision.

MINIMUM GPA OR GRADE REQUIREMENTS

All courses listed in the degree requirements must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Most Structural Fire Science program-specific courses begin once per year in fall term; there are a few entry-level courses offered several times per year and non-program support courses can begin in a term other than fall or if students need to build skills related to the prerequisites. As a general rule, general education courses should be taken during year one and SFS specific courses in year two. Exceptions are based on individual student's education and experience.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program and if affiliated and receiving a scholarship will be held to a higher GPA standard; students who do not meet this standard may be dismissed from the program. Students may also be dismissed if the student has violated a criminal or ethical standard.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

The Structural Fire Science program is accredited by the Department of Public Safety Standards and Training (DPSST).

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 EMS director, 541-383-7751.

TRANSFER INFORMATION

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. Currently, the COCC Structural Fire Science program has articulation agreements with Eastern Oregon University. For more information on these bachelor degree programs, please contact the Fire Programs director at 541-383-7751.

STRUCTURAL FIRE SCIENCE *(continued)*

Associate of Applied Science (AAS) Degree
95-98 credits

PROGRAM COURSE REQUIREMENTS

Foundational requirements

Communication

WR 121	English Composition	4
WR 227	Technical Writing	4

Computation

MTH 065 or higher ¹		4
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Program requirements

EMT 151	Emergency Medical Technician-Part A	5
EMT 152	Emergency Medical Technician-Part B	5
SFS 101	Introduction to Emergency Services	3
or EMT 175	Introduction to Emergency Services	
SFS 230	Rescue Practices	3
SFS 102	Firefighter Safety and Survival	3
SFS 105	Fire Behavior and Combustion I	3
SFS 110	Building Construction for Fire	3
SFS 112	Public Education and Fire Prevention	3
SFS 120	Fixed Systems & Extinguisher	3
SFS 205	Fire Behavior and Combustion II	3
SFS 210	Fire Investigation	3
SFS 212	Fire Codes and Ordinances	3
SFS 232	Hydraulics and Water Supply	4
SFS 215	Urban Interface	3
SFS 211	Fire Tactics and Strategies W/Capstone	3
SFS 233	Fire Entry Exams	3

Other required courses

Health and Human Performance course ²		3
HHP activity course		1
CH 104	Introduction to Chemistry	4-5
or GS 105	Chemistry	
PH 201	General Physics	4-5
or GS 104	Physics	
FOR 211	Supervision & Leadership	3
or BA 285	Business Human Relations	
SP111	Fundamentals of Speech	3
or higher		

Approved Discipline studies list

ANTH 103, CJ 100, OL 244, PSY 201, PSY 202, PSY 101, PSY 216, SOC 201, SOC 206.	3-4
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ELECTIVES

Students are required to choose nine credits from the SFS technical elective list:

AH 111	Medical Terminology	3
EMT 170	Emergency Response Comm./Documentation	2
EMT 171	Emergency Response and Patient Transport	2
EMT 195	Crisis Intervention	3
FOR 130	Chainsaw Use & Maintenance	2
SFS 121	Fire Law	1
SFS 122	Fire Department Budgets	1
WF 100	Incident Command Systems	3
WF 101	Introduction to Fire Behavior and Training	3
WF 201	NFPA Instructor I	3



FOOTNOTES

- ¹ Students planning to transfer to an institution offering a four-year degree should take MTH 105 or higher.
- ² Students can choose between HHP 295, HHP 242 or HHP 266.

The following are required for graduation in the SFS program and are only obtainable through affiliation in a fire agency:

- NFPA Firefighter I
- NFPA Hazmat Awareness & Operations
- I-200 FEMA or NWCG certified course

Upon Completion of EMT 151 and EMT 152, student must pass the National Registry of EMT's written and Oregon Practical exams. Currently certified students do no need to retake the courses for the degree.

Students must hold a current EMT or higher Oregon certification for graduation with an SFS degree.

VETERINARY TECHNICIAN

Associate of Applied Science (AAS) Degree

105 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Veterinary Technician

PROGRAM DESCRIPTION

Veterinary technicians are professionals who typically conduct clinical work under the supervision of licensed veterinarians, but may also work in research, laboratory animal medicine, pharmaceutical or veterinary supply sales, and other zoological medicine, practice management, education, non-profit and shelter medicine scientists and more. Duties may include animal restraint, medication administration, anesthesia induction, monitoring and recovery, performing laboratory tests, cleaning teeth, dental prophylaxis, taking X-rays, preparing an animal for surgery, assisting the veterinary doctor in surgery and client communication.

The COCC Associate of Applied Science degree in Veterinary Technician is a two-year program which will prepare students to take the National Veterinary Technician Examination (VTNE) to become a Certified Veterinary Technician (CVT). After January 1, 2013, "on the job" training experience (grandfathering) will no longer qualify an applicant to sit for the VTNE. Only students who graduate from an American Veterinary Medical Association (AVMA) accredited program will be able to take the exam and become certified in this state. The COCC Veterinary Technician program is accredited by the AVMA.

The Veterinary Technician program includes instruction in animal nursing and husbandry, animal health and nutrition, animal handling, clinical pathology, parasitology, hematology, microbiology, radiology, anesthesiology, dental prophylaxis, surgical assisting, office administration, records management and includes internships designed to give students practical "hands-on" experience in honing the skills learned in the classroom.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate additional program costs. Costs will include:

Immunization for Tetanus and Rabies	\$100-\$800
Background check	\$45-60
Scrubs x 2	\$60
Lab jacket	\$21
Coveralls	\$35
Muck Boots-rubber	\$25
Stethoscope	\$20
Thermometer	\$5
Bandage Scissors	\$6-\$40
Watch with second hand, water resistant	\$25
Drug Screen	\$55

PROGRAM PREPARATION AND PREREQUISITES

New policy effective fall term 2014: Prior to entry into a health profession program, students must complete a 10 panel urine drug screen with verified credentials. With the exception of certain prescribed medications, students with a positive drug screen, which prevents them from attending clinical, will be disqualified from entering the program. Please refer to the Vet Tech website and/or program handbook for more detailed information.

All COCC students enrolled in the Vet Tech program, which includes requirements for practical experience, have to complete Criminal History Checks (CHC). Students who do not pass the CHC may not be eligible to sit for licensure or certification exams. 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.

Prior to enrolling, students must have completed the first four classes listed below. It is highly recommended to complete the last two classes prior to enrolling as well. Students must also possess a high school diploma or GED equivalency.

Veterinary Technician program prerequisites

MTH 60	Applied Mathematics	4
or higher		
BI 101	General Biology: Cells & Genes	4
or BI 211	Principles of Biology I	
WR 121	English Composition	4
GS 105	Physical Science: Chemistry	4-5
or CH 104	Introduction to Chemistry I	
SP 218	Interpersonal Communication ¹	3

Health¹ (Three credits with HHP prefix) 3

Identical HHP activity courses (one credit) can only be counted once in this section.

40 hours of observation in a veterinary clinic

FOOTNOTE

¹ May be taken while in program

REGISTRATION INFORMATION

The Veterinary Technician program does not have a selective admissions process. However, students wishing to register in the VT cohort must have completed the prerequisite courses and observation hours. Once completed, students may register in the program according to seat availability on a first-come, first-served basis as determined by the priority registration schedule available on COCC's website.

PROGRAM STANDARDS

Students must enroll full time in all courses listed for each term. In order to progress to the next term, students must pass all previous coursework with a grade of "C" or better. All Veterinary Technician coursework must be successfully completed prior to entering the Clinical Practicum course.

TRANSFER INFORMATION

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-Vet program). Some courses may transfer to other veterinary technician programs. Please contact your transfer institution for more information.

TWO-YEAR COURSE SCHEDULE

(students must enroll in all courses each term)

First term

VT 101	Introduction to Veterinary Tech	4
VT 117	Animal Anatomy and Physiology I	4
VT 103	Animal Hospital and Office Procedures	4
VT 102	Veterinary Terminology	3

Second term

VT 108	Animal Nursing I	4
VT 118	Animal Anatomy and Physiology II	4
VT 114	Pharmacology I	3
VT 110	Clinical Pathology I	4

Third term

VT 112	Animal Nursing II	4
VT 113	Exotic and Lab Animal Medicine	4
VT 116	Pharmacology II	3
VT 111	Clinical Pathology II	4

Fourth term

VT 203	Animal Nursing III	4
VT 212	Clinical Pathology III	4
VT 206	Animal Diseases	4
VT 201	Anesthesiology and Surgery Techniques	4

Fifth term

VT 211	Animal Nursing IV	4
VT 202	Veterinary Special Procedures	4
VT 204	Veterinary Radiology	4

Sixth term

VT 280	Clinical/practicums	10
(300 hours onsite at veterinary practices)		
VTNE Review and Preparation		

WILDLAND FIRE/FUELS MANAGEMENT FIREFIGHTER TYPE II CERTIFICATE

Short-Term Certificate – 13 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Short-term Certificate of Completion, Wildland Firefighter Type II

PROGRAM DESCRIPTION

The certificate is designed to provide basic skills for students interested in working in the wildland fire profession. Courses are open to all students and the certificate takes one term/quarter (winter) to complete for students attending full time.

The Wildland Fire program also offers more extensive training with a Certificate of Completion in Wildland Fire Suppression (page 172) as well as an Associate of Applied Science (AAS) degree in Wildland Fire/Fuels Management (page 173).

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Hard hat, gloves, 12" leather boots with Vibram soles, fire clothes, ear protection, eye protection: \$250 - \$500. (Some fire clothes may be provided by the College, check with the program director. Boots will NOT be provided.)

PROGRAM PREPARATION AND PREREQUISITES

High school diploma or GED is recommended.

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Program courses begin in winter term.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

- For all Suppression short courses (S-courses), students will be given National Wildfire Coordinating Group (NWCG) certification.
- Minimum qualifications for entry into the occupation is Firefighter Type II (FFT2) which is offered winter term for the less-than-one-year Firefighter Type II certificate.
- Students will need to be physically fit for employment in the occupation of wildland firefighter. For an FFT2 position, students are required to pass the arduous "pack test" (three miles in 45 minutes carrying 45 pounds).

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

FOR 100	Forestry Program Orientation	1
FOR 111	Forestry Perspectives	4
WF 100	Incident Command Systems	3
WF 101	Introduction to Fire Behavior and Firefighter Training	3
WF 134	S-134 Lookouts, Communication, Escape Routes, Safety Zones	2



WILDLAND FIRE/FUELS MANAGEMENT WILDLAND FIRE SUPPRESSION

Certificate of Completion – 47 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Wildland Fire Suppression

PROGRAM DESCRIPTION

The certificate of completion is designed to provide basic skills for students interested in working in the wildland fire profession. Courses are open to all students and the certificate takes three terms/quarters to complete for students attending full time.

The Wildland Fire program also offers more extensive training with an Associate of Applied Science (AAS) degree in Wildland Fire/Fuels Management (page 173).

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Hard hat, gloves, 12" leather boots with Vibram soles, fire clothes, ear protection, eye protection: \$250-\$500. (Some fire clothes may be provided by the College, check with the program director. Boots will NOT be provided.)

PROGRAM PREPARATION AND PREREQUISITES

- High school diploma or GED is recommended
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 with a grade "C" or better.
- Minimum placement scores resulting in MTH 60/85 placement or completion of MTH 20 with a grade "C" or better.

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Program courses begin once per year in fall term. Students can take non-program support courses if they begin in a term other than fall or if they need to build skills related to the prerequisites.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

- For all Suppression short courses (S-courses), students will be given National Wildfire Coordinating Group (NWCG) certification.
- Minimum qualifications for entry into the occupation is Firefighter Type II (FFT2) which is offered winter term for the less-than-one-year Firefighter Type II certificate.
- Students will need to be physically fit for employment in the occupation of wildland firefighter. For an FFT2 position, students will be required to pass the arduous "pack test" (three miles in 45 minutes carrying 45 pounds).

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

Communication

WR 121	English Composition	4
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Human Relations

SP 111	Public Speaking	3
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	

Computation

MTH 85	Technical Math I	4
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Program requirements

BA 101	Intro to Business	4
FOR 100	Forestry Program Orientation	1
FOR 110	Wildland Fire Science I	3
FOR 111	Forestry Perspectives	4
FOR 130	Chainsaw Use and Maintenance	2
FOR 230A	Maps, Compass and GPS	3
HHP 252A	Fitness/First Aid	3
WF 100	Incident Command Systems	3
WF 101	Introduction to Fire Behavior and Firefighter Training	3
WF 134	S-134 Lookouts, Communication, Escape Routes, Safety Zones	2
WF 211	S-211 Portable Pumps	2
WF 270	S-270 Basic Air Operations	2
WF 281	L-280 Followership/Leadership	2
WF 290	S-290 Intermediate Wildfire Behavior	3

ADVISING NOTES

Because the short courses are sponsored by the East Slope Training region, the short courses (S-courses) are available to students in the following order:

1. Sponsored government and state employees, including structure fire agencies, from within the East Slope Training area;
2. Sponsored government and state employees, including structure fire agencies, from outside the East Slope Training area; and
3. Full-time COCC students/part-time COCC students/private contractors (in that order) who meet the qualifications of the course. Students must provide a copy of training records to the program director.

WILDLAND FIRE/FUELS MANAGEMENT

Associate of Applied Science (AAS) Degree
102-106 credits

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Wildland Fire/Fuels Management

PROGRAM DESCRIPTION

The degree is designed to update the skills of fire/fuels employees. It is a supplementary degree for current employees of wildland fire suppression organizations only. New students interested in earning an AAS degree are encouraged to pursue the AAS in Forest Resources or talk with the Wildland Fire director about other options.

COST OF PROGRAM

In addition to standard tuition, student fees and textbooks, students should anticipate the following estimated program costs:

- Hard hat, gloves, 12" leather boots with Vibram soles, fire clothes, ear protection, eye protection: \$250-\$500. (Some fire clothes may be provided by the College, check with the program director. Boots will NOT be provided.)

PROGRAM PREPARATION AND PREREQUISITES

- High school diploma or GED is recommended
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 with a grade "C" or better.
- Minimum placement scores resulting in MTH 60/85 placement or completion of MTH 20 with a grade "C" or better.
- Current employment with a wildland fire suppression organization.

MINIMUM GPA OR GRADE REQUIREMENTS

All required courses must be completed at a "C" grade or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Program courses begin once per year in fall term. Students can take non-program support courses if they begin in a term other than fall or if they need to build skills related to the prerequisites.

Please note that first year and second year core courses if not taken in consecutive years, may overlap on time. Please check with your advisor and the current schedule.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

- All Suppression short courses (S-courses), students will be given National Wildfire Coordinating Group (NWCG) certification.
- Minimum qualifications for entry into the occupation is Firefighter Type II (FFT2) which is offered winter term for the less-than-one-year Firefighter Type II certificate.
- Students will need to be physically fit for employment in the occupation of Wildland Firefighter. For an FFT2 position, students will be required to pass the arduous "pack test" (three miles in 45 minutes carrying 45 pounds).

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

Communication

WR 121	English Composition	4
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Computation

MTH 85	Technical Math I	4
MTH 86	Technical Math II	4

Human Relations

FOR 211	Supervision and Leadership	3
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Program requirements

FOR 110	Wildland Fire Science I	2
FOR 202	Forest Entomology/Pathology	3
FOR 203	Applied Forest Ecology	3
FOR 205	Silviculture and Harvesting	5
FOR 209	Fire Ecology and Effects	3
FOR 210	Wildland Fire Science II	2
FOR 220A	Aerial Photo	3
FOR 220B	Resource Measurements	4
FOR 230A	Maps, Compass and GPS	3
FOR 240A	Forest Ecology	3
FOR 241A	Field Dendrology	3
FOR 241B	Dendrology	3
FOR 260	Conservation of Natural Resources	3
WF 101	Introduction to Fire Behavior and Firefighter Training	3
WF 100	Incident Command Systems	3
WF 215	Fire Operations in the Urban Interface	3
WF 211	S-211 Portable Pumps	2
WF 270	S-270 Basic Air Operations	2
WF 290	S-290 Intermediate Wildfire Behavior	3

Additional Wildland Fire Management short courses required

WF 230	S-230 Crew Boss	3
WF 234	S-234 Ignition Operations	2
WF 281	L-280 Followership/Leadership	2
WF 298	S-390 Fire Behavior Calculations	3

Other required courses

HHP 252A	Fitness/First Aid	3
SP 111	Public Speaking	3
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	
Computer Competency		0-4
or CIS 120	Computer Concepts	
Discipline Studies courses (see pages 44-45)		9

Other program requirements

A minimum of 60 days fire-related work experience approved by the Wildland Fire Science director is required for graduation.

ELECTIVES

Students can choose three credits of Wildland Fire open electives (any course with a WF prefix) and four credits of Wildland Fire specific electives (see list below).

BA 101, FOR 130, FOR 208, FOR 240B, WF 134, FOR 100, FOR 126, FOR 220C, FW 218, FOR 111, FOR 127, FOR 230B, GEOG 211

ADVISING NOTES

Because the short courses are sponsored by the East Slope Training region, the short courses (S-courses) are available to students in the following order:

1. Sponsored government and state employees, including structure fire agencies, from within the East Slope Training area;
2. Sponsored government and state employees, including structure fire agencies, from outside the East Slope Training area; and
3. Full-time COCC students/part-time COCC students/private contractors (in that order) who meet the qualifications of the course. Students must provide a copy of training records to the program director.

INDUSTRIAL MECHANICS AND MAINTENANCE TECHNOLOGY APPRENTICESHIP – BOILER OPERATOR PATHWAY

Certificate of Completion – 16 credits

Apprenticeship is a structured training program combining on-the-job training and classroom coursework. COCC contracts with trade specific committees to provide classroom coursework for the trade listed above. For information on how to become an apprentice in these trades, contact Lou Long at 541-279-1543. Some of these programs are only open to employees of training agents registered with the local apprenticeship committee. For information about other Apprenticeship programs and jobs, phone the Bureau of Labor and Industries/Apprenticeship and Training at 971-673-0760 or visit its website at www.boli.state.or.us/.

Registered apprentice training at COCC is offered in accordance with Oregon Law and Plan of Apprenticeship and Training, U.S. Department of Labor and Oregon State Apprenticeship Council.

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Boiler Operator

PROGRAM DESCRIPTION

The Boiler Operator Apprenticeship program prepares apprentices to run automatically fired boilers generating steam for buildings or industrial plants. The work includes feeding fuel into furnaces or boilers, observing pressure, temperature and draft meters on panels to verify specified boiler fuel feed, draft openings, water level and steam pressure. A person in this position will also maintain meter logs, read gauges and record data.

These workers maintain and repair stationary steam boilers and boiler house auxiliaries, using hand tools and portable power tools. They clean or direct other workers to clean boilers and auxiliary equipment, using rakes, breaker bars, scrapers, wire brushes and cleaning solvent. In addition, they inspect and repair boiler fittings, such as safety valves, regulators and plates. Boiler repairers may remove and replace defective firebrick.

Work is often in close and confined spaces and often requires the use of potentially dangerous equipment such as torches and power grinders. The work is physically demanding and dirty.

COST OF PROGRAM

Standard tuition, student fees, textbooks and any cost related to becoming a journey person in the state of Oregon.

PROGRAM PREPARATION AND PREREQUISITES

To enroll in this program students must be an employee of a training agent registered with the local apprenticeship committee and accepted into the state-approved apprenticeship program.

MINIMUM GPA OR GRADE REQUIREMENTS

To earn a certificate, students must complete the following coursework with a grade of "C" or better.

REGISTRATION INFORMATION

This program is only open to employees of training agents registered with the local apprenticeship committee who have been accepted into the state-approved apprenticeship program. All new students to COCC are required to submit a \$25 nonrefundable application fee at the time of application. Applications will not be processed without this fee.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

At this time, no state licensing exam is required for boiler operator in the state of Oregon.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

Related training

APR 121	Boiler Operator 1 – Stationary Engine Principles	4
APR 122	Boiler Operator 2 – Boiler Accessories	4
APR 221	Boiler Operator 3 – Boiler Operation	4
APR 222	Boiler Operator 4 – Steam Usage	4

INDUSTRIAL MECHANICS AND MAINTENANCE TECHNOLOGY APPRENTICESHIP – BOILER OPERATOR PATHWAY

Associate of Applied Science (AAS) Degree – 94-99 credits

Apprenticeship is a structured training program combining on-the-job training and classroom coursework. COCC contracts with trade specific committees to provide classroom coursework for the trade listed above. For information on how to become an apprentice in these trades, contact Lou Long at 541-279-1543. Some of these programs are only open to employees of training agents registered with the local apprenticeship committee. For information about other Apprenticeship programs and jobs, phone the Bureau of Labor and Industries/Apprenticeship and Training at 971-673-0760 or visit its website at www.boli.state.or.us/.

Registered apprentice training at COCC is offered in accordance with Oregon Law and Plan of Apprenticeship and Training, U.S. Department of Labor and Oregon State Apprenticeship Council.

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Boiler Operator

PROGRAM DESCRIPTION

Earning an AAS degree in Industrial Mechanics and Maintenance Technology Apprenticeship takes an apprentice above and beyond the standard related training classes which are required to become a journeyperson in this field, giving the student a more well-rounded education in the trades with greater opportunity for advancement to a supervisory position.

The Boiler Operator Apprenticeship program prepares apprentices to run automatically fired boilers generating steam for buildings or industrial plants. The work includes feeding fuel into furnaces or boilers, observing pressure, temperature and draft meters on panels to verify specified boiler fuel feed, draft openings, water level and steam pressure. A person in this position will also maintain meter logs, read gauges and record data.

These workers maintain and repair stationary steam boilers and boiler house auxiliaries, using hand tools and portable power tools. They clean or direct other workers to clean boilers and auxiliary equipment, using rakes, breaker bars, scrapers, wire brushes and cleaning solvent. In addition, they inspect and repair boiler fittings, such as safety valves, regulators and plates. Boiler repairers may remove and replace defective firebrick.

Work is often in close and confined spaces and often requires the use of potentially dangerous equipment such as torches and power grinders. The work is physically demanding and dirty.

COST OF PROGRAM

Standard tuition, student fees, textbooks and any cost related to becoming a journeyperson in the state of Oregon.

PROGRAM PREPARATION AND PREREQUISITES

To enroll in this program students must be an employee of a training agent registered with the local apprenticeship committee and be accepted into the state-approved apprenticeship program or be a journeyperson in the field. Journeypersons who have completed their related training in a registered Oregon apprenticeship program outside of COCC may earn an AAS degree from COCC in this career pathway by submitting a college transcript or course syllabi for credit evaluation. To earn a degree under this pathway, a student must have 57 credits of trade-specific related training, complete all required general education classes and obtain 11 credits for on-the-job training, awarded after presenting a journeyperson's card, and all other degree requirements have been met. Twenty-four of the general education or related training coursework credits must be completed at COCC.

MINIMUM GPA OR GRADE REQUIREMENTS

Graduates must complete the following coursework with a grade of "C" or better and have a valid journeyperson's card.

REGISTRATION INFORMATION

To earn an AAS degree in this field a student must have completed or be concurrently enrolled in the related training courses required for this trade. This program is only open to journeypersons in the field or current employees of training agents registered with the local apprenticeship committee who have been accepted into the state-approved

apprenticeship program. All new students to COCC are required to submit a \$25 nonrefundable application fee at the time of application. Applications will not be processed without this fee.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

At this time, no state licensing exam is required for boiler operator in the State of Oregon.

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

Boiler operator related training

APR 121	Boiler Operator 1 – Stationary Engine Principles	4
APR 122	Boiler Operator 2 – Boiler Accessories	4
APR 221	Boiler Operator 3 – Boiler Operation	4
APR 222	Boiler Operator 4 – Steam Usage	4

Industry Electives to bring trade-specific training to 57 credits

MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 105	Welding Technology II	3
MFG 107	Welding Technology III	3
MFG 262	Welding Inspection/Quality Control	2
MFG 271	Shielded Metal Arc Welding I	2
MFG 272	Gas Metal Arc Welding I	2
MFG 281	Gas Tungsten Arc Welding I	2
MFG 282	Flux Core Arc Welding I	2
MFG 267	Oxygen-Fuel and Plasma Cutting	2
MFG 273	Shielded Metal Arc Welding II	2
MFG 274	Gas Metal Arc Welding II	2
MFG 283	Gas Tungsten Arc Welding II	2
MFG 284	Flux Core Arc Welding II	2
MFG 115	Design Processes I	2
MFG 110	Manufacturing Processes I	3
MFG 112	Manufacturing Processes II	3
MFG 114	Manufacturing Processes III	3
MFG 203	Layout	2
MFG 210	Vertical Milling	2
MFG 214	Lathe Operator I	2
MFG 205	Drill Press	2
MFG 216	Lathe Operator II	2
MFG 202	Metals Preparation	2

GENERAL EDUCATION REQUIREMENTS

Writing and Communication

(choose writing and one speech course)

WR 121	English Composition	4
SP 111	Fundamentals of Public Speaking	3
or SP 218	Interpersonal Communication	

Mathematics

MTH 85	Technical Mathematics I	4
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Health

Choose any HHP class or combination of classes	3
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Human Relations

Choose one course from the Human Relations list, see page 45	3
Additional elective credits	9

ON-THE-JOB EXPERIENCE

Upon completion of the required credits for this academic degree, a student may present their journeyperson's card to be awarded 11 credits in recognition of 4,000 hours of on-the-job training.	11
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TOTALS: 94-99 CREDITS

INDUSTRIAL MECHANICS AND MAINTENANCE TECHNOLOGY APPRENTICESHIP – BOILER/TURBINE OPERATOR PATHWAY

Certificate of Completion – 43 credits

Apprenticeship is a structured training program combining on-the-job training and classroom coursework. COCC contracts with trade specific committees to provide classroom coursework for the trade listed above. For information on how to become an apprentice in these trades, contact Lou Long at 541-279-1543. Some of these programs are only open to employees of training agents registered with the local apprenticeship committee. For information about other Apprenticeship programs and jobs, phone the Bureau of Labor and Industries/Apprenticeship and Training at 971-673-0760 or visit its website at www.boli.state.or.us/.

Registered apprentice training at COCC is offered in accordance with Oregon Law and Plan of Apprenticeship and Training, U.S. Department of Labor and Oregon State Apprenticeship Council.

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Boiler/Turbine Operator

PROGRAM DESCRIPTION

The Boiler/Turbine Operator Apprenticeship program prepares apprentices to run and control steam-driven turbo generators in electric power generating stations. The work includes starting turbines, turbine auxiliaries and boiler auxiliary units, adjusting throttle and vacuum-breaker valves to regulate turbine speeds, monitoring panel boards to control turbine operations and stopping turbines when malfunctions occur. Workers record instrument readings at specified intervals and may perform minor maintenance of equipment.

In addition, boiler/turbine operators run automatically fired boilers to generate steam for buildings or industrial plants. The work includes feeding fuel into furnaces or boilers, observing pressure, temperature and draft meters on panels to verify specified boiler fuel feed, draft openings, water level and steam pressure. A person in this position will also maintain meter logs, read gauges and record data.

These workers maintain and repair turbines, turbine auxiliaries, stationary steam boilers and boiler house auxiliaries, using hand tools and portable power tools. They clean or direct other workers to clean boilers and auxiliary equipment, using rakes, breaker bars, scrapers, wire brushes and cleaning solvent. In addition, they inspect and repair boiler fittings, such as safety valves, regulators and plates. Boiler repairers may remove and replace defective firebrick.

Work is typically performed indoors in an industrial setting.

COST OF PROGRAM

Standard tuition, student fees, textbooks and any cost related to becoming a journey person in the state of Oregon.

PROGRAM PREPARATION AND PREREQUISITES

To enroll in this program students must be an employee of a training agent registered with the local apprenticeship committee and accepted into the state-approved apprenticeship program.

MINIMUM GPA OR GRADE REQUIREMENTS

Graduates must complete the following coursework with a grade of "C" or better.

REGISTRATION INFORMATION

This program is only open to employees of training agents registered with the local apprenticeship committee who have been accepted into the state-approved apprenticeship program. All new students to COCC are required to submit a \$25 nonrefundable application fee at the time of application. Applications will not be processed without this fee.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

At this time, no state licensing exam for boiler/turbine operator is required in the State of Oregon.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

Boiler/turbine operator related training

APR 121	Boiler Operator 1 – Stationary Engine Principles	4
APR 122	Boiler Operator 2 – Boiler Accessories	4
APR 221	Boiler Operator 3 – Boiler Operation	4
APR 222	Boiler Operator 4 – Steam Usage	4
APR 223	Turbine Operator 1 – Applied Mechanics	4
APR 224	Turbine Operator 2 – Instrumentation	4
APR 225	Turbine Operator 3 – Thermodynamics	4
APR 226	Turbine Operator 4 – Electrical Theory	4

Total related-training credits: 32

RELATED INSTRUCTION/GENERAL EDUCATION

Mathematics

MTH 85	Technical Mathematics I	4
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Communications

WR 121	English Composition	4
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Human Relations

PSY 101	Applied Psychology	3
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TOTAL GENERAL EDUCATION CREDITS: 11

TOTAL CREDITS: 43

INDUSTRIAL MECHANICS AND MAINTENANCE TECHNOLOGY APPRENTICESHIP – BOILER/TURBINE OPERATOR PATHWAY

Associate of Applied Science (AAS) Degree – 94-99 credits

Apprenticeship is a structured training program combining on-the-job training and classroom coursework. COCC contracts with trade specific committees to provide classroom coursework for the trade listed above. For information on how to become an apprentice in these trades, contact Lou Long at 541-279-1543. Some of these programs are only open to employees of training agents registered with the local apprenticeship committee. For information about other Apprenticeship programs and jobs, phone the Bureau of Labor and Industries/Apprenticeship and Training at 971-673-0760 or visit its website at www.boli.state.or.us/.

Registered apprentice training at COCC is offered in accordance with Oregon Law and Plan of Apprenticeship and Training, U.S. Department of Labor and Oregon State Apprenticeship Council.

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Boiler/Turbine Operator

PROGRAM DESCRIPTION

Earning an AAS degree in Industrial Mechanics and Maintenance Technology Apprenticeship takes an apprentice above and beyond the standard related training classes that are required to become a journeyperson in this field, giving the student a more well rounded education in the trades with greater opportunity for advancement to a supervisory position.

The Boiler/Turbine Operator Apprenticeship program prepares apprentices to run and control steam-driven turbo generators in electric power generating stations. The work includes starting turbines, turbine auxiliaries and boiler auxiliary units, adjusting throttle and vacuum-breaker valves to regulate turbine speeds, monitoring panel boards to control turbine operations and stopping turbines when malfunctions occur. Workers record instrument readings at specified intervals and may perform minor maintenance of equipment.

In addition, boiler/turbine operators run automatically fired boilers to generate steam for buildings or industrial plants. The work includes feeding fuel into furnaces or boilers, observing pressure, temperature and draft meters on panels to verify specified boiler fuel feed, draft openings, water level and steam pressure. A person in this position will also maintain meter logs, read gauges and record data.

These workers maintain and repair turbines, turbine auxiliaries, stationary steam boilers and boiler house auxiliaries, using hand tools and portable power tools. They clean or direct other workers to clean boilers and auxiliary equipment, using rakes, breaker bars, scrapers, wire brushes and cleaning solvent. In addition, they inspect and repair boiler fittings, such as safety valves, regulators and plates. Boiler repairers may remove and replace defective firebrick.

Work is typically performed indoors in an industrial setting.

COST OF PROGRAM

Standard tuition, student fees, textbooks and any cost related to becoming a journeyperson in the state of Oregon.

PROGRAM PREPARATION AND PREREQUISITES

To enroll in this program students must be an employee of a training agent registered with the local apprenticeship committee and be accepted into the state approved apprenticeship program or be a journeyperson in the field. Journeypersons who have completed their related training in a registered Oregon apprenticeship program outside of COCC may earn an AAS degree from COCC in this career pathway by submitting a college transcript or course syllabi for credit evaluation. To earn a degree under this pathway, a student must have 46 credits of trade-specific related training, complete all required general education classes and obtain 22 credits for on-the-job training, awarded after presenting a journeyperson’s card and all other degree requirements

have been met. Twenty-four of the general education or related training coursework credits must be completed at COCC.

MINIMUM GPA OR GRADE REQUIREMENTS

Graduates must complete the following coursework with a grade of "C" or better and have a valid journeyperson’s card.

REGISTRATION INFORMATION

To earn an AAS degree in this field a student must have completed or be concurrently enrolled in the related training courses required for this trade. This program is only open to journeypersons in the field or current employees of training agents registered with the local apprenticeship committee who have been accepted into the state-approved apprenticeship program. All new students to COCC are required to submit a \$25 nonrefundable application fee at the time of application. Applications will not be processed without this fee.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

At this time, no state licensing exam is required for boiler/turbine operator in the state of Oregon.

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

Boiler/turbine operator-related training

APR 121	Boiler Operator 1 – Stationary Engine Principles	4
APR 122	Boiler Operator 2 – Boiler Accessories	4
APR 221	Boiler Operator 3 – Boiler Operation	4
APR 222	Boiler Operator 4 – Steam Usage	4
APR 223	Turbine Operator 1 – Applied Mechanics	4
APR 224	Turbine Operator 2 – Instrumentation	4
APR 225	Turbine Operator 3 – Thermodynamics	4
APR 226	Turbine Operator 4 – Electrical Theory	4

Industry electives to bring trade-specific training to 46 credits

MFG 101	Blueprint Reading	2
MFG 115	Design Processes I	2
MFG 103	Welding Technology I	3
MFG 105	Welding Technology II	3
MFG 107	Welding Technology III	3
MFG 289	Material Handling - Fork Lift Safety	1

GENERAL EDUCATION REQUIREMENTS

Writing and Communication

(choose writing course and one speech course)

WR 121	English Composition	4
SP 111	Fundamentals of Public Speaking	3
SP 218	Interpersonal Communication	3

Mathematics

MTH 85	Technical Mathematics I	4
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Health

Choose any HHP class or combination of classes	3
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Human Relations

Choose one course from the approved Human Relations list,

see page 45	3
Additional elective credits	9

ON-THE-JOB EXPERIENCE

Upon completion of the required credits for this academic degree a student may present their journeyperson’s card to be awarded 22 credits in recognition of 8,000 hours of on-the-job training.

TOTALS: 94-99

LIMITED ELECTRICIAN APPRENTICESHIP TECHNOLOGIES

Certificate of Completion

16 credits

Apprenticeship is a structured training program combining on-the-job training and classroom coursework. COCC contracts with trade specific committees to provide classroom coursework for the trade listed above. For information on how to become an apprentice in these trades, contact Lou Long at 541-279-1543. Some of these programs are only open to employees of training agents registered with the local apprenticeship committee. For information about other Apprenticeship programs and jobs, phone the Bureau of Labor and Industries/Apprenticeship and Training at 971-673-0760 or visit its website at www.boli.state.or.us/.

Registered apprentice training at COCC is offered in accordance with Oregon Law and Plan of Apprenticeship and Training, U.S. Department of Labor and Oregon State Apprenticeship Council.

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Limited Maintenance Electrician

PROGRAM DESCRIPTION

The Limited Maintenance Electrician Apprenticeship program trains apprentices to maintain, repair and replace electrical installations on the premises of industrial plants where the individual is employed, or on electrical systems that are less than 600 volts phase to phase on the premises of commercial office buildings or buildings occupied by the state or a local government entity where the individual is employed.

This work can be dirty and strenuous, with considerable standing, bending and reaching. Tools used include electrical metering devices, cable pulling devices, electrical hand tools, soldering tools, hammers, drills and side cutters. Hazards include electric shock, burns, falls and falling objects.

COST OF PROGRAM

Standard tuition, student fees, textbooks and any cost related to becoming a licensed journey person in the State of Oregon.

PROGRAM PREPARATION AND PREREQUISITES

To enroll in this program students must be an employee of a training agent registered with the local apprenticeship committee and be accepted into the state-approved apprenticeship program.

MINIMUM GPA OR GRADE REQUIREMENTS

Graduates must complete the following coursework with a grade of "C" or better.

REGISTRATION INFORMATION

This program is only open to employees of training agents registered with the local apprenticeship committee who have been accepted into the state approved apprenticeship program. All new students to COCC are required to submit a \$25 nonrefundable application fee at the time of application. Applications will not be processed without this fee.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

Journey-level limited maintenance electricians must qualify for a state license by passing an exam given by the Oregon Building Codes Division.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

Related training:

APR 101	Electrical/Manufacturing Plant 1 – Basic Electrical Theory	4
APR 102	Electrical/Manufacturing Plant 2 – Basic Wiring	4
APR 103	Electrical/Manufacturing – Industrial Wiring	4
APR 104	Electrical/Manufacturing Plant 4 – Commercial Wiring	4

TOTAL RELATED TRAINING CREDITS: 16

LIMITED ELECTRICIAN APPRENTICESHIP TECHNOLOGIES

Associate of Applied Science (AAS) Degree
94-99 credits

Apprenticeship is a structured training program combining on-the-job training and classroom coursework. COCC contracts with trade specific committees to provide classroom coursework for the trade listed above. For information on how to become an apprentice in these trades, contact Lou Long at 541-279-1543. Some of these programs are only open to employees of training agents registered with the local apprenticeship committee. For information about other Apprenticeship programs and jobs, phone the Bureau of Labor and Industries/Apprenticeship and Training at 971-673-0760 or visit its website at www.boli.state.or.us/.

Registered apprentice training at COCC is offered in accordance with Oregon Law and Plan of Apprenticeship and Training, U.S. Department of Labor and Oregon State Apprenticeship Council.

DEGREE AS AWARDED ON TRANSCRIPT

Associated of Applied Science, Limited Maintenance Electrician

PROGRAM DESCRIPTION

Earning an AAS degree in Electrician Apprenticeship Technologies takes an apprentice above and beyond the standard related training classes that are required to become a journeyman in this field, giving the student a more well-rounded education in the trades with greater opportunity for advancement to a supervisory position.

The Limited Maintenance Electrician Apprenticeship program trains apprentices to maintain, repair and replace electrical installations on the premises of industrial plants where the individual is employed, or on electrical systems that are less than 600 volts phase to phase on the premises of commercial office buildings or buildings occupied by the state or a local government entity where the individual is employed. This work can be dirty and strenuous, with considerable standing, bending and reaching. Tools used include electrical metering devices, cable pulling devices, electrical hand tools, soldering tools, hammers, drills and side cutters. Hazards include electric shock, burns, falls and falling objects.

COST OF PROGRAM

Standard tuition, student fees, textbooks and any cost related to becoming a licensed journeyman in the State of Oregon.

PROGRAM PREPARATION AND PREREQUISITES

To enroll in this program students must be an employee of a training agent registered with the local apprenticeship committee and be accepted into the state-approved apprenticeship program or be a journeyman in the field. Journeymen who have completed their related training in a registered Oregon apprenticeship program outside of COCC may earn an AAS degree from COCC in this career pathway by submitting a college transcript or course syllabi for credit evaluation. To earn a degree under this pathway, a student must have 57 credits of trade-specific related training, complete all required general education classes and obtain 11 credits for on-the-job training, awarded after presenting a journeyman's card and all other degree requirements have been met. Twenty-four of the general education or related training coursework credits must be completed at COCC.

MINIMUM GPA OR GRADE REQUIREMENTS

Graduates must complete the following coursework with a grade of "C" or better and have a valid journeyman's card.

REGISTRATION INFORMATION

To earn an AAS degree in this field a student must have completed or be concurrently enrolled in the related training courses required for this trade. This program is only open to journeymen in the field or current employees of training agents registered with the local apprenticeship committee who have been accepted into the state-approved apprenticeship program. All new students to COCC are required to submit a \$25 nonrefundable application fee at the time of application. Applications will not be processed without this fee.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

Journey-level limited maintenance electricians must qualify for a state license by passing an exam given by the Oregon Building Codes Division.

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

Limited maintenance electrician related training:

APR 101	Electrical/Manufacturing Plant 1– Basic Electrical Theory	4
APR 102	Electrical/Manufacturing Plant 2 – Basic Wiring	4
APR 103	Electrical/Manufacturing – Industrial Wiring	4
APR 104	Electrical/Manufacturing Plant 4 – Commercial Wiring	4

Industry electives to bring trade-specific training to 57 credits:

MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 105	Welding Technology I	3
MFG 107	Welding Technology III	3
MFG 262	Welding Inspection/Quality Control	2
MFG 271	Shielded Metal Arc Welding I	2
MFG 272	Gas Metal Arc Welding I	2
MFG 281	Gas Tungsten Arc Welding I	2
MFG 282	Flux Core Arc Welding I	2
MFG 267	Oxygen-Fuel and Plasma Cutting	2
MFG 273	Shielded Metal Arc Welding II	2
MFG 274	Gas Metal Arc Welding II	2
MFG 283	Gas Tungsten Arc Welding II	2
MFG 284	Flux Core Arc Welding II	2
MFG 115	Design Processes I	2
MFG 110	Manufacturing Processes I	3
MFG 112	Manufacturing Processes II	3
MFG 114	Manufacturing Processes III	3
MFG 203	Layout	2
MFG 210	Vertical Milling	2
MFG 214	Lathe Operator I	2
MFG 205	Drill Press	2
MFG 216	Lathe Operator II	2
MFG 202	Metals Preparation	2

GENERAL EDUCATION REQUIREMENTS

Writing and Communication

(choose writing course and one speech course)

WR 121	English Composition	4
SP 111	Fundamentals of Public Speaking	3
SP 218	Interpersonal Communication	3

Mathematics

MTH 85	Technical Mathematics I	4
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Health

Choose any HHP class or combination of classes	3
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Human Relations

Choose one course from the approved Human Relations list, see page 45	3
Additional elective credits	9

ON-THE-JOB EXPERIENCE

Upon completion of the required credits for this academic degree a student may present their journeyman's card to be awarded 11 credits in recognition of 4,000 hours of on-the-job training.

TOTALS: 94-99

ELECTRICIAN APPRENTICESHIP TECHNOLOGIES – MANUFACTURING PLANT ELECTRICIAN PATHWAY

Certificate of Completion – 43 credits

Apprenticeship is a structured training program combining on-the-job training and classroom coursework. COCC contracts with trade specific committees to provide classroom coursework for the trade listed above. For information on how to become an apprentice in these trades, contact Lou Long at 541-279-1543. Some of these programs are only open to employees of training agents registered with the local apprenticeship committee. For information about other Apprenticeship programs and jobs, phone the Bureau of Labor and Industries/Apprenticeship and Training at 971-673-0760 or visit its website at www.boli.state.or.us/.

Registered apprentice training at COCC is offered in accordance with Oregon Law and Plan of Apprenticeship and Training, U.S. Department of Labor and Oregon State Apprenticeship Council.

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Manufacturing Plant Electrician

PROGRAM DESCRIPTION

The Manufacturing Plant Electrician Apprenticeship program prepares apprentices to provide basic electrical maintenance on existing equipment in factories and industrial manufacturing facilities. In addition, they learn how to install and wire electric motors and machinery of all sizes, perform preventive maintenance on production and facilities equipment, initiate and modify electrical designs, and update electrical drawings.

The work is done primarily indoors, but often requires climbing, working on ladders, and operating mechanical lifts. Hazards include electrical shocks and burns.

COST OF PROGRAM

Standard tuition, student fees, textbooks and any cost related to becoming a licensed journeyman in the State of Oregon.

PROGRAM PREPARATION AND PREREQUISITES

To enroll in this program students must be an employee of a training agent registered with the local apprenticeship committee and be accepted into the state-approved apprenticeship program.

MINIMUM GPA OR GRADE REQUIREMENTS

To earn a certificate, students must complete the following coursework with a grade of "C" or better.

REGISTRATION INFORMATION

This program is only open to employees of training agents registered with the local apprenticeship committee who have been accepted into the state-approved apprenticeship program. All new students to COCC are required to submit a \$25 nonrefundable application fee at the time of application. Applications will not be processed without this fee.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

Journey-level manufacturing plant electricians are required to obtain a state license by passing an exam given by the Oregon Building Codes Division.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

Manufacturing plant electrician related training:

APR 101	Electrical/Manufacturing Plant 1 – Basic Electrical Theory	4
APR 102	Electrical/Manufacturing Plant 2 – Basic Wiring	4
APR 103	Electrical/Manufacturing – Industrial Wiring	4
APR 104	Electrical/Manufacturing Plant 4 – Commercial Wiring	4
APR 201	Electrical/Manufacturing Plant 5 – Motor Controls	4
APR 202	Electrical/Manufacturing Plant 6 – Motor Controls/Circuits	4
APR 203	Electrical/Manufacturing Plant 7 – Motor Applications	4
APR 204	Electrical/Manufacturing Plant 8 – NEC Code	4

Total related training credits: 32

RELATED INSTRUCTION/GENERAL EDUCATION

Mathematics

MTH 85	Technical Mathematics I	4
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Communications

WR 121	English Composition	4
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Human Relations

PSY 101	Applied Psychology	3
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Total general education credits: 11

TOTAL PROGRAM CREDITS: 43

ELECTRICIAN APPRENTICESHIP TECHNOLOGIES – MANUFACTURING PLANT ELECTRICIAN PATHWAY

Associate of Applied Science (AAS) Degree – 94-99 credits

Apprenticeship is a structured training program combining on-the-job training and classroom coursework. COCC contracts with trade specific committees to provide classroom coursework for the trade listed above. For information on how to become an apprentice in these trades, contact Lou Long at 541-279-1543. Some of these programs are only open to employees of training agents registered with the local apprenticeship committee. For information about other Apprenticeship programs and jobs, phone the Bureau of Labor and Industries/Apprenticeship and Training at 971-673-0760 or visit its website at www.boli.state.or.us/.

Registered apprentice training at COCC is offered in accordance with Oregon Law and Plan of Apprenticeship and Training, U.S. Department of Labor and Oregon State Apprenticeship Council.

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Manufacturing Plant Electrician

PROGRAM DESCRIPTION

Earning an AAS degree in Electrician Apprenticeship Technologies takes an apprentice above and beyond the standard related training classes that are required to become a journeyman in this field, giving the student a more well rounded education in the trades with greater opportunity for advancement to a supervisory position.

The Manufacturing Plant Electrician Apprenticeship program prepares apprentices to provide basic electrical maintenance on existing equipment in factories and industrial manufacturing facilities. In addition, they learn how to install and wire electric motors and machinery of all sizes, perform preventive maintenance on production and facilities equipment, initiate and modify electrical designs, and update electrical drawings.

The work is done primarily indoors, but often requires climbing, working on ladders and operating mechanical lifts. Hazards include electrical shocks and burns.

COST OF PROGRAM

Standard tuition, student fees, textbooks and any cost related to becoming a licensed journeyman in the State of Oregon.

PROGRAM PREPARATION AND PREREQUISITES

To enroll in this program students must be an employee of a training agent registered with the local apprenticeship committee and be accepted into the state-approved apprenticeship program or be a journeyman in the field. Journeymen who have completed their related training in a registered Oregon apprenticeship program outside of COCC may earn an AAS degree from COCC in this career pathway by submitting a college transcript or course syllabi for credit evaluation. To earn a degree under this pathway, a student must have 46 credits of trade-specific related training, complete all required general education classes and obtain 22 credits for on-the-job training, awarded after presenting a journeyman's card and all other degree requirements have been met. Twenty-four of the general education or related training coursework credits must be completed at COCC.

MINIMUM GPA OR GRADE REQUIREMENTS

Graduates must complete the following coursework with a grade of "C" or better and have a valid journeyman's card.

REGISTRATION INFORMATION

To earn an AAS degree in this field a student must have completed or be concurrently enrolled in the related training courses required for this trade. This program is only open to journeymen in the field or current employees of training agents registered with the local apprenticeship committee who have been accepted into the state-approved apprenticeship program. All new students to COCC are required to submit a \$25 nonrefundable application fee at the time of application. Applications will not be processed without this fee.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

Journey-level manufacturing plant electricians are required to obtain a state license by taking an exam given by the Oregon Building Codes Division.

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

Manufacturing plant electrician related training:

APR 101	Electrical/Manufacturing Plant 1 – Basic Electrical Theory	4
APR 102	Electrical/Manufacturing Plant 2 – Basic Wiring	4
APR 103	Electrical/Manufacturing – Industrial Wiring	4
APR 104	Electrical/Manufacturing Plant 4 – Commercial Wiring	4
APR 201	Electrical/Manufacturing Plant 5 – Motor Controls	4
APR 202	Electrical/Manufacturing Plant 6 – Motor Controls/Circuits	4
APR 203	Electrical/Manufacturing Plant 7 – Motor Applications	4
APR 204	Electrical/Manufacturing Plant 8 - NEC Code	4

Industry Electives to bring trade specific related training to 46 credits:

MFG 101	Blueprint Reading	2
MFG 115	Design Processes I	2
MFG 103	Welding Technology I	3
MFG 105	Welding Technology II	3
MFG 107	Welding Technology III	3
MFG 289	Material Handling - Fork Lift Safety	1

GENERAL EDUCATION REQUIREMENTS

Writing and Communication

(choose writing course and one speech course)

WR 121	English Composition	4
SP 111	Fundamentals of Public Speaking	3
SP 218	Interpersonal Communication	3

Mathematics

MTH 85	Technical Mathematics I	4
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Health

Choose any HHP class or combination of classes	3
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Human Relations

Choose one course from the approved Human Relations list, see page 45

Additional elective credits	9
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ON-THE-JOB EXPERIENCE

Upon completion of the required credits for this academic degree a student may present their journeyman's card to be awarded 22 credits in recognition of 8,000 hours of on-the-job training. 22

TOTALS: 94-99

INDUSTRIAL MECHANICS AND MAINTENANCE TECHNOLOGIES – MILLWRIGHT PATHWAY

Certificate of Completion – 46 credits

Apprenticeship is a structured training program combining on-the-job training and classroom coursework. COCC contracts with trade specific committees to provide classroom coursework for the trade listed above. For information on how to become an apprentice in these trades, contact Lou Long at 541-279-1543. Some of these programs are only open to employees of training agents registered with the local apprenticeship committee. For information about other Apprenticeship programs and jobs, phone the Bureau of Labor and Industries/Apprenticeship and Training at 971-673-0760 or visit its website at www.boli.state.or.us/.

Registered apprentice training at COCC is offered in accordance with Oregon Law and Plan of Apprenticeship and Training, U.S. Department of Labor and Oregon State Apprenticeship Council.

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Millwright

PROGRAM DESCRIPTION

The Millwright Apprenticeship program prepares apprentices to install and maintain conveyor systems. Apprentices are also trained to maintain machinery in factories and carry out precision work in manufacturing plants.

Millwrights work indoors and outdoors with machine tools and precision instruments requiring a keen eye for a perfect fit. Millwrights sometimes work to specifications requiring tolerances to a thousandth of an inch. They work primarily in metal.

COST OF PROGRAM

Standard tuition, student fees, textbooks and any cost related to becoming a journey person in the State of Oregon.

PROGRAM PREPARATION AND PREREQUISITES

To enroll in this program students must be an employee of a training agent registered with the local apprenticeship committee and accepted into the state-approved apprenticeship program.

MINIMUM GPA OR GRADE REQUIREMENTS

To earn a certificate, students must complete the following coursework with a grade of "C" or better.

REGISTRATION INFORMATION

This program is only open to employees of training agents registered with the local apprenticeship committee who have been accepted into the state-approved apprenticeship program. All new students to COCC are required to submit a \$25 nonrefundable application fee at the time of application. Applications will not be processed without this fee.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

At this time, no state licensing exam is required for millwrights in the state of Oregon.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

Millwright apprentice related training:

MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 105	Welding Technology II	3
MFG 115	Design Processes I	2
MFG 110	Manufacturing Processes I	3
MFG 112	Manufacturing Processes II	3
MFG 210	Vertical Milling	2
MFG 214	Lathe Operator I	2
MFG 116	Manufacturing Electrical Systems	2
MFG 118	Fluid Power Systems I	2
MFG 202	Metal Preparation	2
MFG 271	Shielded Metal Arc Welding I	2
MFG 205	Drill Press	2

Plus 5 credits from the following courses:

MFG 107	Welding Technology III	3
MFG 120	Fluid Power Systems II	2
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
MFG 242	Programmable Logic Controllers I	2
MFG 243	Industrial Sensors	2
MFG 272	GMAW I, Gas Metal Arc Welding (MIG)	2
MFG 281	GTAW I, Gas Tungsten Arc Welding (TIG)	2
MFG 282	FCAW I, Flux Core Arc Welding	2
MFG 102	Blueprint Reading Sheet Metal	2
MFG 287	CNC Press Brake and Shearing	3
MFG 288	Industrial Fabrication	3
MFG 289	Material Handling - Fork Lift Safety	1

Total related training credits: 35

RELATED INSTRUCTION/GENERAL EDUCATION

Mathematics

MTH 85	Technical Mathematics I	4
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Communications

WR 121	English Composition	4
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Human Relations

PSY 101	Applied Psychology	3
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Total general education credits: 11

TOTAL CREDITS: 46

INDUSTRIAL MECHANICS AND MAINTENANCE TECHNOLOGIES-MILLWRIGHT – PATHWAY

Associate of Applied Science (AAS) Degree – 94-99 credits

Apprenticeship is a structured training program combining on-the-job training and classroom coursework. COCC contracts with trade specific committees to provide classroom coursework for the trade listed above. For information on how to become an apprentice in these trades, contact Lou Long at 541-279-1543. Some of these programs are only open to employees of training agents registered with the local apprenticeship committee. For information about other Apprenticeship programs and jobs, phone the Bureau of Labor and Industries/Apprenticeship and Training at 971-673-0760 or visit its website at www.boli.state.or.us/.

Registered apprentice training at COCC is offered in accordance with Oregon Law and Plan of Apprenticeship and Training, U.S. Department of Labor and Oregon State Apprenticeship Council.

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Millwright

PROGRAM DESCRIPTION

Earning an AAS degree in Industrial Mechanics and Maintenance Technology Apprenticeship takes an apprentice above and beyond the standard related training classes that are required to become a journeyman in this field, giving the student a more well-rounded education in the trades with greater opportunity for advancement to a supervisory position.

The Millwright Apprenticeship program prepares apprentices to install and maintain conveyor systems. Apprentices are also trained to maintain machinery in factories and carry out precision work in manufacturing plants.

Millwrights work indoors and outdoors with machine tools and precision instruments requiring a keen eye for a perfect fit. Millwrights sometimes work to specifications requiring tolerances to a thousandth of an inch. They work primarily in metal.

COST OF PROGRAM

Standard tuition, student fees, textbooks and any cost related to becoming a journeyman in the State of Oregon.

PROGRAM PREPARATION AND PREREQUISITES

To enroll in this program students must be an employee of a training agent registered with the local apprenticeship committee and be accepted into the state-approved apprenticeship program or be a journeyman in the field. Journeymen who have completed their related training in a registered Oregon apprenticeship program outside of COCC may earn an AAS degree from COCC in this career pathway by submitting a college transcript or course syllabi for credit evaluation. To earn a degree under this pathway, a student must have 46 credits of trade-specific related training, complete all required general education classes and obtain 22 credits for on-the-job training, awarded after presenting a journeyman's card and all other degree requirements have been met. Twenty-four of the general education or related training coursework credits must be completed at COCC.

MINIMUM GPA OR GRADE REQUIREMENTS

Graduates must complete the following coursework with a grade of "C" or better and have a valid journeyman's card.

REGISTRATION INFORMATION

To earn an AAS degree in this field a student must have completed or be concurrently enrolled in the related training courses required for this trade. This program is only open to journeymen in the field or current employees of training agents registered with the local apprenticeship committee who have been accepted into the state-approved apprenticeship program. All new students to COCC are required to submit a \$25 nonrefundable application fee at the time of application. Applications will not be processed without this fee.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

At this time, no state licensing exam is required for millwrights in the state of Oregon.

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

Millwright apprentice related training:

MFG 101	Blueprint Reading	2
MFG 103	Welding Technology I	3
MFG 105	Welding Technology II	3
MFG 115	Design Processes I	2
MFG 110	Manufacturing Processes I	3
MFG 112	Manufacturing Processes II	3
MFG 210	Vertical Milling	2
MFG 214	Lathe Operator I	2
MFG 116	Manufacturing Electrical Systems	2
MFG 118	Fluid Power Systems I	2
MFG 202	Metals Preparation	2
MFG 271	Shielded Metal Arc Weld I	2
MFG 205	Drill Press	2

Recommended electives to bring total related training to 35 credits:

MFG 107	Welding Technology III	3
MFG 120	Fluid Power Systems II	2
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
MFG 242	Programmable Logic Controllers I	2
MFG 243	Industrial Sensors	2
MFG 272	GMAW I, Gas Metal Arc Welding (Mig)	2
MFG 281	GTAW I, Gas Tungsten Arc Welding (Tig)	2
MFG 282	FCAW I, Flux Core Arc Welding	2
MFG 102	Blueprint Reading Sheet Metal	2
MFG 287	CNC Press Brake and Shearing	3
MFG 288	Industrial Fabrication	3
MFG 289	Material Handling - Forklift Safety	1

Industry electives to bring trade-specific related training to 46 credits:

MFG 114	Manufacturing Processes III	3
MFG 203	Layout	2
MFG 262	Welding Inspection/Quality Control	2
MFG 266	Manufacturing Cost Estimation	2
MFG 283	Gas Tungsten Arc Welding II	2
MFG 274	Gas Metal Arc Welding II	2
MFG 284	Flux Core Arc Welding II	2
MFG 290	Certification Test Preparation AWS I	1

GENERAL EDUCATION REQUIREMENTS

Writing and Communication

(choose writing course and one speech course)

WR 121	English Composition	4
SP 111	Fundamentals of Public Speaking	3
SP 218	Interpersonal Communication	3

Mathematics

MTH 85	Technical Mathematics I	4
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Health

Choose any HHP class or combination of classes	3
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Human Relations

Choose one course from the approved Human Relations list, see page 45

Additional elective credits	9
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ON-THE-JOB EXPERIENCE

Upon completion of the required credits for this academic degree a student may present their journeyman's card to be awarded 22 credits in recognition of 8,000 hours of on-the-job training. 22

TOTALS: 94-99

CONSTRUCTION TRADES, GENERAL APPRENTICESHIP

Certificate of Completion

54 credits

Apprenticeship is a structured training program combining on-the-job training and classroom coursework. COCC contracts with trade specific committees to provide classroom coursework for the trade listed above. For information on how to become an apprentice in these trades, contact Lou Long at 541-279-1543. Some of these programs are only open to employees of training agents registered with the local apprenticeship committee. For information about other Apprenticeship programs and jobs, phone the Bureau of Labor and Industries/Apprenticeship and Training at 971-673-0760 or visit its website at www.boli.state.or.us/.

Registered apprentice training at COCC is offered in accordance with Oregon Law and Plan of Apprenticeship and Training, U.S. Department of Labor and Oregon State Apprenticeship Council.

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Sheet Metal

PROGRAM DESCRIPTION

The Sheet Metal Apprenticeship program prepares apprentices to fabricate and install fittings and duct work used in construction or industry for heating, ventilation and air conditioning systems in residential, commercial and industrial applications. They also learn to set up and operate shears, hand brakes, bending rolls, welding machines and other equipment to cut, form and attach metal together for applications such as metal roofing and stainless steel work for restaurants, kitchens and hospitals. Apprentices learn to prepare shop and field drawings manually and with computer programs. Computer skills are becoming increasingly important for controlling industrial equipment.

The work is performed both indoors and out, using scaffolding, ladders and high lifts, and in awkward positions and cramped spaces. Sheet metal workers may work in shops performing fabrication work or on construction sites, doing installation.

COST OF PROGRAM

Standard tuition, student fees, textbooks and any cost related to becoming a journey person in the State of Oregon.

PROGRAM PREPARATION AND PREREQUISITES

To enroll in this program students must be an employee of a training agent registered with the local apprenticeship committee and be accepted into the state-approved apprenticeship program.

MINIMUM GPA OR GRADE REQUIREMENTS

To earn a certificate, students must complete the following coursework with a grade of "C" or better.

REGISTRATION INFORMATION

This program is only open to employees of training agents registered with the local apprenticeship committee who have been accepted into the state-approved apprenticeship program. All new students to COCC are required to submit a \$25 nonrefundable application fee at the time of application. Applications will not be processed without this fee.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

At this time, no state licensing exam is required for a sheet metal worker in the state of Oregon.

TRANSFER INFORMATION

This certificate is designed for students planning to enter their chosen career upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

Sheet metal apprentice related training

APR 141	Sheet Metal Core Curriculum	4
APR 142	Sheet Metal I	4
APR 143	Basic Layout	4
APR 144	Sheet Metal Math	4
APR 145	Blueprint Reading	4
APR 146	Architectural Sheet Metal	4
APR 241	Building Codes and Installation Manuals	4
APR 242	Duct Fabrication/Design	4
APR 243	General Fabrication	4
MFG 103	Welding Technology I	3
APR 244	Project Supervision	4

Total related training credits: 43

RELATED INSTRUCTION/GENERAL EDUCATION

Mathematics

MTH 85	Technical Mathematics I	4
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Communications

WR 121	English Composition	4
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Human Relations

PSY 101	Applied Psychology	3
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Total general education credits: 11

TOTAL CREDITS: 54

CONSTRUCTION TRADES, GENERAL APPRENTICESHIP

Associate of Applied Science (AAS) Degree
94-99 credits

Apprenticeship is a structured training program combining on-the-job training and classroom coursework. COCC contracts with trade specific committees to provide classroom coursework for the trade listed above. For information on how to become an apprentice in these trades, contact Lou Long at 541-279-1543. Some of these programs are only open to employees of training agents registered with the local apprenticeship committee. For information about other Apprenticeship programs and jobs, phone the Bureau of Labor and Industries/Apprenticeship and Training at 971-673-0760 or visit its website at www.boli.state.or.us/.

Registered apprentice training at COCC is offered in accordance with Oregon Law and Plan of Apprenticeship and Training, U.S. Department of Labor and Oregon State Apprenticeship Council.

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Sheet Metal

PROGRAM DESCRIPTION

Earning an AAS degree in Construction Trades, General Apprenticeship takes an apprentice above and beyond the standard related training classes that are required to become a journeyman in this field, giving the student a more well rounded education in the trades with greater opportunity for advancement to a supervisory position.

The Sheet Metal Apprenticeship program prepares apprentices to fabricate and install fittings and duct work used in construction or industry for heating, ventilation and air conditioning systems in residential, commercial and industrial applications. They also learn to set up and operate shears, hand brakes, bending rolls, welding machines and other equipment to cut, form and attach metal together for applications such as metal roofing and stainless steel work for restaurants, kitchens and hospitals. Apprentices learn to prepare shop and field drawings manually and with computer programs. Computer skills are becoming increasingly important for controlling industrial equipment.

The work is performed both indoors and out, using scaffolding, ladders and high lifts, and in awkward positions and cramped spaces. Sheet metal workers may work in shops performing fabrication work or on construction sites, doing installation.

COST OF PROGRAM

Standard tuition, student fees, textbooks and any cost related to becoming a journeyman in the State of Oregon.

PROGRAM PREPARATION AND PREREQUISITES

To enroll in this program students must be an employee of a training agent registered with the local apprenticeship committee and be accepted into the state-approved apprenticeship program or be a journeyman in the field. Journeymen who have completed their related training in a registered Oregon apprenticeship program outside of COCC may earn an AAS degree from COCC in this career pathway by submitting a college transcript or course syllabi for credit evaluation. To earn a degree under this pathway, a student must have 46 credits of trade-specific related training, complete all required general education classes and obtain 22 credits for on-the-job training, awarded after presenting a journeyman's card and all other degree requirements have been met. Twenty-four of the general education or related training coursework credits must be completed at COCC.

MINIMUM GPA OR GRADE REQUIREMENTS

Graduates must complete the following coursework with a grade of "C" or better and have a valid journeyman's card.

REGISTRATION INFORMATION

To earn an AAS degree in this field a student must have completed or be concurrently enrolled in the related training courses required for this trade. This program is only open to journeymen in the field or current employees of training agents registered with the local apprenticeship committee who have been accepted into the state-approved apprenticeship program. All new students to COCC are required to submit a \$25 nonrefundable application fee at the time of application. Applications will not be processed without this fee.

NATIONAL/STATE LEGAL ELIGIBILITY OR UNIQUE REQUIREMENTS FOR LICENSURE AND/OR ENTRY INTO OCCUPATION, OR ADVANCEMENT IN THE OCCUPATION

At this time, no state licensing exam is required for a sheet metal worker in the state of Oregon.

TRANSFER INFORMATION

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.

PROGRAM COURSE REQUIREMENTS

Sheet metal apprentice related training

APR 141	Sheet Metal Core Curriculum	4
APR 142	Sheet Metal I	4
APR 143	Basic Layout	4
APR 144	Sheet Metal Math	4
APR 145	Blueprint Reading	4
APR 146	Architectural Sheet Metal	4
APR 241	Building Codes and Installation Manuals	4
APR 242	Duct Fabrication/Design	4
APR 243	General Fabrication	4
MFG 103	Welding Technology I	3
APR 244	Project Supervision	4

Industry Electives to bring trade-specific training to 46 credits

MFG 105	Welding Technology II	3
MFG 110	Manufacturing Processes I	3

GENERAL EDUCATION REQUIREMENTS

Writing and Communication

(choose writing and one speech course)

WR 121	English Composition	4
SP 111	Fundamentals of Public Speaking	3
SP 218	Interpersonal Communication	3

Mathematics

MTH 85	Technical Mathematics I	4
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Health

Choose any HHP class or combination of classes	3
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Human Relations

Choose one course from the approved Human Relations list, see page 45

Additional elective credits	9
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ON-THE-JOB EXPERIENCE

Upon completion of the required credits for this academic degree a student may present their journeyman's card to be awarded 22 credits in recognition of 7,200 hours of on-the-job training. 22

TOTALS: 94-99

MILITARY SCIENCE

The Military Science program, in conjunction with Oregon State University ROTC, offers the best leadership program in America. This program of study is open to all students and is designed to give students instruction and experience in the art of organizing, motivating and leading others. The program focuses on leadership, goal setting and implementation, planning and plans execution. Classroom and practical exercises are designed to challenge students in all aspects. Study and classroom materials are provided for most classes. The ROTC program provides college-trained officers for the Army, Army Reserves and Army National Guard.

The Military Science program is divided into two phases which can be attained through coursework at COCC and OSU-Cascades (the Basic course and the Advanced course).

The Basic course takes place during the students' first two years in college, as elective courses. Students will learn basic military skills and the fundamentals of leadership, and will start the groundwork toward becoming an Army leader. Students can take Military Science Basic courses without a military commitment.

The Advanced course takes place during the students' last two years in college, as elective courses. It includes one class and lab each semester in addition to the requisite physical training and field-training exercises, plus a summer leadership camp. Students will learn advanced military tactics and gain experience in team organization, planning and decision making. To benefit from the leadership training in the Advanced course, all cadets must have completed either the Basic course, Basic Training, or have attended the Leader's Training Course. Entering the Advanced course requires a commitment to serve as an officer in the U.S. Army after a student graduates.

The Military Science program curriculum is designed to meet the Basic course requirements to ROTC. Students completing the Basic course requirements and earning two years of college credit toward a four-year degree (180 credit hours) can move on to the Advanced Course. Upon graduation with a bachelor's degree from an approved four-year college, students can compete to earn a commission as an Army officer. Merit scholarship opportunities exist for students in any approved academic discipline. It is required that students pursuing this program of study, work with a Military Science program advisor. For more information, contact the Military Science office at 541-318-3774.

YEAR ONE

Fall term

MS 111	Leadership and Personal Development	1
MS 180	Army Physical Fitness	1

Electives

Discipline Studies and Electives ¹	10-14
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Winter term

MS 112	Introduction to Tactical Leadership	1
MS 180	Army Physical Fitness	1

Electives

Discipline Studies and Electives ¹	10-14
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Spring term

MS 113	Orienteering and Land Navigation	1
MS 180	Army Physical Fitness	1

Electives

Discipline Studies and Electives ¹	10-14
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YEAR TWO

Fall term

MS 211	Foundations for Leadership	2
MS 180	Army Physical Fitness	1

Electives

Discipline Studies and Electives ¹	10-14
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Winter term

MS 212	Effective Team Building	2
MS 180	Army Physical Fitness	1

Electives

Discipline Studies and Electives ¹	10
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Spring term

MS 213	Fundamentals of Military Operations	2
MS 180	Army Physical Fitness	1

Electives

Discipline Studies and Electives ¹	10-14
Required before graduation	
MS 215 American Military History	3

FOOTNOTES

¹ See advisor for list of available courses. Selected coursework needs to lead to completion of a four-year degree.

TOTAL: 80 CREDITS AT OR ABOVE THE 100-LEVEL COURSES

COURSE DESCRIPTIONS

Central Oregon Community College has a diverse selection of transfer and Career and Technical Education (CTE) courses. Prerequisites are specified in many of the course descriptions. It is the student’s responsibility to meet the prerequisite conditions before enrolling in the course.

Not every class is offered every term. All of COCC’s current courses may not be included in this list because the College may add or subtract classes after the catalog is published. Consult the COCC credit class schedule online (www.cocc.edu) for information about where and when classes meet.

HOW TO READ A COURSE DESCRIPTION

COURSE LISTING

EXPLANATION

BI 212
BIOLOGY OF PLANTS II
 Surveys diversity of Monera, Protista, Fungi and plant kingdoms; examines living plants, their evolutionary interrelationships, morphology and physiology. Prerequisite: BI 211 or instructor’s permission.
Credits: 5 Lecture: 4 Lab: 3

Courses are grouped by area of study and listed alphabetically by letter prefix and course number. Courses numbered 100 and above are designed for transfer to other colleges for degree credit.

BIOLOGY OF PLANTS II. The **title of the course** is listed in all capital letters.

Surveys diversity of Monera, The **course description** briefly summarizes the course content.
 Protista, Fungi and plant

Prerequisites: BI 211. **Prerequisites**, if any, are listed by course number after the course description. It is important to note prerequisites prior to registering. A prerequisite is a course that should be completed with a “C” grade or higher prior to enrolling in the selected course. A **corequisite** is a course which should be completed prior to or while attending the selected course.

Credits: 5 Lecture: 4 Lab: 3 The number of hours per week in **lecture** and **labs** is noted, as is the number of **credits** earned by taking the course.

COURSE NUMBERING

Courses with subject names (e.g., MTH 111) and numbered **100-299** are designed to meet COCC certificate or degree requirements.

Courses with subject names (e.g., MTH 065) and numbered **below 100** do not normally transfer to four-year institutions.

Adult continuing education courses are non-transferable and are numbered through the digit-decimal system according to their type and purpose. A schedule of these courses, available through Community Learning, is published prior to each term. This schedule gives city and site locations for Community Learning classes throughout the College District.

ADDICTIONS STUDIES/HUMAN SERVICES

HS 100

ORIENTATION TO ADDICTIONS STUDIES/HUMAN SERVICES

This is an introduction to the human services profession. The goal of this course is to help students evaluate their fit within the Addictions Studies/ Human Services field. Emphasis is on self-understanding and individual compatibility with human services occupations.

Credits: 1 Lecture: 1

HS 161

ETHICS FOR HUMAN SERVICES

Course is designed for those desiring employment in the helping fields. A professional can expect to encounter complexities in keeping the client's needs as the primary concern. Students will explore how to set and maintain professional boundaries. The course will relate abstract ethical principles to tangible examples and will offer a practical framework for analyzing ethical issues. Required prerequisites: WR 121 or WR 122 or WR 227; MTH 31 or higher; and HS 100. No placement score equivalent, must complete an actual course.

Credits: 4 Lecture: 4

HS 162

EFFECTIVE HELPING SKILLS I

Introductory course for people interested in pursuing a career in the helping professions or who may be working in a helping role now. Students practice basic interviewing skills, learn to create a helping climate, and organize and conduct an informational interview. Introduces students to basic interaction, referral, interviewing and listening skills. Required prerequisites: WR 121 or WR 122 or WR 227; MTH 31 or higher; and HS 100. No placement score equivalent, must complete an actual course.

Credits: 4 Lecture: 4

HS 180

HIV, AIDS AND ADDICTIONS

Provides a thorough investigation of HIV/AIDS epidemic and expectations of professionals in dealing with it. Covers epidemiology, HIV/AIDS related policy, effects of chemical dependency and chemical use in promoting the spread of HIV infection, routes of exposure to the virus and the manner in which various populations are infected and treated. Guidelines and directives for counseling individuals who are HIV seropositive and those at high risk for HIV infection.

Credits: 2 Lecture: 2

HS 199

SELECTED TOPICS: HUMAN DEVELOPMENT

Credits: 1 to 4

HS 200

ADDICTIVE BEHAVIOR

Provides a broad overview of the field of addictions through a look at the issues and treatments involved. Includes history, prevention regarding alcohol, drugs, nicotine, eating disorders, depression and relapse prevention. Recommended preparation or recommended to be taken with: WR 121.

Credits: 3 Lecture: 3

HS 201

FAMILIES AND ADDICTIONS

Designed for people who are training to become chemical dependency counselors or current counselors who are seeking to increase their knowledge base. Focuses on basic theory, technique and experience in doing family therapy with families of addicts. Primary models of family therapy used will be systemic and structural. Recommended preparation or recommended to be taken with: WR 121.

Credits: 3 Lecture: 3

HS 205

YOUTH AND ADDICTIONS

Provides a beginning knowledge of child/adolescent development and results in an understanding of 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. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

HS 206

GROUP COUNSELING SKILLS FOR HUMAN SERVICES

Provides strategies from accepted and culturally appropriate models for facilitating group counseling with clients with a variety of disorders including substance abuse. Focuses on the ethical use of groups as an effective therapeutic intervention. Addresses leadership behaviors, group formation, group stages; common and difficult therapeutic problems also addressed. Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HS 208

MULTICULTURAL ISSUES IN HUMAN SERVICES

Highlights the impacts of cultural differences on both client and human service provider. Examines the major categories of diversity, heritage, biases, and stereotypes and how these might impact client treatment. Identifies cultural expectations that may lead to high risk for various chemical dependency problems. Examines how knowledge of diversity issues can be essential to the counselor in communications, treatment planning and implementation. Required prerequisites: WR 121 or WR 122 or WR 227; MTH 31 or higher; and HS 100. No placement score equivalent, must complete an actual course.

Credits: 4 Lecture: 4

HS 210

DUAL DIAGNOSIS

Introduces clinical presentation and management of dually diagnosed chemical abusers. The complex interplay of psychiatric illness and substance abuse in clients with depression, anxiety, schizophrenia, as well as other conditions, will be explored. Students will become familiar with diagnostic criteria as well as chemical dependency. Treatment strategies for addressing the needs of the dually diagnosed will be presented. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HS 223

DRUGS AND ADDICTION

This course covers the knowledge required to pass the pharmacology section of the Certified Alcohol and Drug Counselor (CADC) I 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).

Credits: 4 Lecture: 4

HS 250

PROCESS ADDICTIONS

Provides a broad overview of process addictions including a look at the issues and treatments involved. Process addictions are defined as addiction to certain mood-altering behaviors, actions or routine of actions such as gambling, eating, shopping, working or sexual activities. Recommended preparation or must be taken with: WR 121.

Credits: 4 Lecture: 4

HS 260

COUNSELING THEORIES

Introduces major counseling theories that have demonstrated effectiveness with a variety of mental health issues including substance

abuse disorders. Includes an overview of 10 specific theories (including affective, behavioral and cognitive approaches), their founders, key concepts, techniques and appropriate applications. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

HS 262

EFFECTIVE HELPING SKILLS II

Introduces students to intentional interviewing/motivational interviewing as a foundation for developing basic counseling skills. Focus will be on developing more intensive counseling skills with significant opportunity for hands-on practice. Videotaping is used extensively. Recommended preparation: HS 162 or instructor approval.

Credits: 4 Lecture: 4

HS 263

COUNSELING THE CHEMICALLY DEPENDENT CLIENT

Trains students in a systematic approach to screening, assessing and treatment planning. Goal is to determine the most appropriate course of action given the client's needs and characteristics and the available resources. This is a collaborative, ongoing process in which the counselor and the client develop desired treatment outcomes and identify strategies to achieve them.

Credits: 3 Lecture: 3

HS 266

CASE MANAGEMENT FOR THE CHEMICALLY DEPENDENT CLIENT

Provides foundation skills to successfully manage client cases in a treatment setting. Includes skills in client assessment, treatment planning, treatment plan review, writing of clinical progress notes, treatment summary and discharge planning and coordination with other agencies. Methods of instruction include role-play, lecture, class discussion, guest speakers, student presentations and review of students' videotaped assessment interviews. Recommended to be taken with WR 121.

Credits: 4 Lecture: 4

HS 290

INTRODUCTION TO PRACTICUM IN HUMAN SERVICES

This is an introduction to practicum and should be taken at least one term before the practicum. The goal of this course is to prepare students for a successful practicum. In this course, students will develop their resume, job search and job interviewing techniques and research possible internship sites.

Credits: 1 Lecture: 1

HS 291

PRACTICUM IN HUMAN SERVICES I

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. Addictions 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.

Credits: 4 Lecture: 1 Other: 9

HS 292

PRACTICUM IN HUMAN SERVICES II

This second-term practicum is more comprehensive and provides an opportunity to develop more advanced skills. Addictions 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.

Credits: 4 Lecture: 1 Other: 9

HS 293

PRACTICUM IN HUMAN SERVICES III

This third-term practicum is more comprehensive and provides an opportunity to develop more advanced skills. Addictions 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.

Credits: 4 Lecture: 1 Other: 9

HS 299

SELECTED TOPICS: HUMAN SERVICES

Credits: 1 to 6

ALLIED HEALTH

AH 100

INTRODUCTION TO HEALTH OCCUPATIONS

Introduces current issues in the health care professions, with an emphasis placed on those programs offered at COCC. Guest speakers from the Allied Health Programs will present an overview of their profession and give a sample lecture from a course within their discipline. Other topics may include human relations in health care, career development for the health professional, confidentiality and medical ethics.

Credits: 2 Lecture: 2

AH 111

MEDICAL TERMINOLOGY I

Covers terminology pertaining to medical term construction, body structure, integumentary, hematopoietic/lymph, cardiovascular, oncology, respiratory and musculoskeletal systems. Includes standard abbreviations, anatomic, diagnostic, symptomatic and operative terms related to these body systems. Students (online and face-to-face) must pass a face-to-face written final exam at 70% or higher to pass this class.

Credits: 3 Lecture: 3

AH 112

MEDICAL TERMINOLOGY II

Covers terminology pertaining to pharmacology, nervous system, mental health, special senses (eye and ear), reproductive (male and female), obstetrics, digestive, urinary and endocrine systems. Includes standard abbreviations, anatomic, diagnostic, symptomatic and operative terms related to these body systems. Prerequisite: AH 111. Students (online and face-to-face) must pass a face-to-face written final exam at 70% or higher to pass this class.

Credits: 3 Lecture: 3

AH 113

INTRODUCTION TO THE STUDY OF DISEASE

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. Fulfills program requirements for Health Information Technology and Medical Assisting. Recommended preparation: BI 122 or BI 233.

Credits: 5 Lecture: 5

AH 199

SPECIAL TOPICS: ALLIED HEALTH

Reserved for courses that cover topics of general interest in health occupations.

Credits: 1 to 3

AH 283**INTRODUCTION TO ALTERNATIVE MEDICINE**

Introduces the historical and sociopolitical context of biomedicine and "alternative" medical systems in the United States. A number of alternative medical practices will be examined as independent systems, and also as parts within the larger context of integration into the overall health care system in America. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

AH 299**SELECTED TOPICS: ALLIED HEALTH**

Credits: 1 to 4

PHL 205**MEDICAL ETHICS**

Explores the relation of traditional ethical precepts to current biomedical ethical controversies. Open to all students without prerequisites, but recommended primarily for students enrolled in, or planning to enroll in, programs in nursing or other health care professions. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

ANTHROPOLOGY

ANTH 102**ARCHAEOLOGY**

Provides an introduction to archaeological method and theory along with a survey of human world prehistory through the rise of great civilizations. Topics include archaeological concepts, survey, excavation, analysis and interpretation of data, dating techniques, research methods and theories of cultural change.

Credits: 4 Lecture: 4

ANTH 103**CULTURAL ANTHROPOLOGY**

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.

Credits: 4 Lecture: 4

ANTH 141**FILM & SOCIETY: RACE, GENDER AND CLASS**

Examines the representation of race, gender and social class 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, gender and class.

Credits: 2 Lecture: 1 Lab: 3

ANTH 142**FILM & SOCIETY: GLOBAL CULTURES**

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

Credits: 2 Lecture: 1 Lab: 3

ANTH 143**FILM & SOCIETY: CONTEMPORARY ISSUES**

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

Credits: 2 Lecture: 1 Lab: 3

ANTH 188**SPECIAL STUDIES: ANTHROPOLOGY**

Credits: 1 to 3

ANTH 199**SELECTED TOPICS: ANTHROPOLOGY**

Credits: 1 to 4

ANTH 202**ARCHAEOLOGY OF OREGON**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ANTH 212**ARCHAEOLOGY FIELD METHODS**

Provides an introduction to archaeological field methods as applied to the study of pre-history, including, but not limited to: field inventory, site recording, mapping, archaeological excavation and data/artifact collection, laboratory analysis and documentation/report preparation.

Credits: 4 Lecture: 2.75 Other: 22.5

ANTH 234**BIOLOGICAL ANTHROPOLOGY**

An introduction to biological anthropology. The goal of this course is to achieve the basic scientific literacy necessary to understand 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 mechanisms of evolution, cell biology and human genetics, human variation and adaptations, primate behavior, and the fossil evidence for human evolution.

Credits: 4 Lecture: 3 Lab: 3

ANTH 235**EVOLUTION OF HUMAN SEXUALITY**

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, as well as the non-reproductive aspects of human sexuality and the physiological and hormonal processes of sexuality. Recommended preparation: ANTH 234

Credits: 4 Lecture: 4

ANTH 237**FORENSIC ANTHROPOLOGY**

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. Recommended preparation: ANTH 234

Credits: 4 Lecture: 4

ANTH 240 LANGUAGE AND CULTURE

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. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

ANTH 250 FOOD AND CULTURE

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. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

ANTH 254 MAGIC, WITCHCRAFT, RELIGION

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. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

ANTH 283 INTRODUCTION TO MEDICAL ANTHROPOLOGY

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. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

ANTH 295 GENDER AND SEXUALITY IN AN ANTHROPOLOGICAL PERSPECTIVE

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. Recommended preparation: WR 121 and ANTH 103.
Credits: 4 Lecture: 4

ANTH 299 SELECTED TOPICS: ANTHROPOLOGY

Credits: 1 to 4

APPRENTICESHIP

APR 101 ELEC/MFG PLANT 1: BASIC ELECTRIC THEORY

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.
Credits: 4 Other: 8.4

APR 102 ELEC/MFG PLANT 2: BASIC WIRING

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.
Credits: 4 Other: 8.4

APR 103 ELEC/MFG PLANT 3: INDUSTRIAL WIRING

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.
Credits: 4 Other: 8.4

APR 104 ELEC/MFG PLANT 4: COMMERCIAL WIRING

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.
Credits: 4 Other: 8.4

APR 111M METERING BASICS

This course is an introduction to electrical trade theory for Meterperson 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.
Credits: 4 Other: 8.4

APR 118M TRANSFORMER CONNECTIONS

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.
Credits: 4 Other: 8.4

APR 121M METERING FUNDAMENTALS I

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.
Credits: 4 Other: 8.4

APR 122M
METERING FUNDAMENTALS II

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 an electrical service. Additionally they learn about instrument rated three phase metering and refining what they have already learned about self-contained three phase metering.

Credits: 4 Other: 8.4

APR 121
BOILER OPERATOR 1: STATIONARY ENGINE PRINCIPLES

The course will cover stationary engineering principles, boiler types and accessories, and trade math.

Credits: 4 Other: 8.4

APR 122
BOILER OPERATOR 2: BOILER ACCESSORIES

The course content will cover boiler accessories, fuel burning equipment, combustion and draft controls.

Credits: 4 Other: 8.4

APR 141
SHEET METAL CORE CURRICULUM

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.

Credits: 4 Other: 8

APR 142
SHEET METAL I

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.

Credits: 4 Other: 8

APR 143
BASIC LAYOUT

Introduction to trade, terminology, trade math, tools, shop safety, shop equipment, basic layout of duct work and fittings.

Credits: 4 Other: 8

APR 144
SHEET METAL MATH

Covers fractions and decimals, geometric shapes, equation solutions, ratios and proportions, perimeters, areas, 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.

Credits: 4 Other: 8

APR 145
BLUEPRINT READING

Introduction to blueprint reading, drafting blueprints, scaling existing buildings and drafting mechanical systems.

Credits: 4 Other: 8

APR 146
ARCHITECTURAL SHEET METAL

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.

Credits: 4 Other: 8

APR 201
ELEC/MFG PLANT 5: MOTOR CONTROLS

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.

Credits: 4 Other: 8.4

APR 202
ELEC/MFG PLANT 6: MOTOR CONTROLS/CIRCUITS

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.

Credits: 4 Other: 8.4

APR 203
ELEC/MFG PLANT 7: MOTOR APPLICATIONS

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.

Credits: 4 Other: 8.4

APR 204
ELEC/MFG PLANT 8: NEC CODE

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.

Credits: 4 Other: 8.4

APR 221
BOILER OPERATOR 3: BOILER OPERATION

The course content will include boiler operation, maintenance, water treatment, and boiler room safety.

Credits: 4 Other: 8.4

APR 222
BOILER OPERATOR 4: STEAM USAGE

The course content includes steam usage and management, basic electricity principles and basic knowledge of steam turbines.

Credits: 4 Other: 8.4

APR 223
TURBINE OPERATOR 1: APPLIED MECHANICS

The course content will include mathematics, mensuration, applied mechanics, thermodynamics, steam and internal combustion engines, steam and gas turbines, refrigeration, air compression, and lubrication.

Credits: 4 Other: 8.4

APR 224
TURBINE OPERATOR 2: INSTRUMENTATION

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.

Credits: 4 Other: 8.4

APR 225**TURBINE OPERATOR 3: THERMODYNAMICS**

The course content will include internal combustion engines, lubrication, thermodynamics, heat engines, steam engines, and steam and gas turbines.

Credits: 4 Other: 8.4

APR 226**TURBINE OPERATOR 4: ELECTRICAL THEORY**

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.

Credits: 4 Other: 8.4

APR 231M**METERING ADVANCED I**

This course is designed to instruct third-year Meterperson 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.

Credits: 4 Other: 8.4

APR 232M**METERING ADVANCED II**

This course is designed to instruct third-year Meterperson Apprentices on the subject of advanced 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.

Credits: 4 Other: 8.4

APR 241**BUILDING CODES AND INSTALLATION MANUALS**

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.

Credits: 4 Other: 8

APR 242**DUCT FABRICATION/DESIGN**

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.

Credits: 4 Other: 8

APR 243**GENERAL FABRICATION**

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.

Credits: 4 Other: 8

APR 244**PROJECT SUPERVISION**

Introduction to construction management skills as they apply to project supervision.

Credits: 4 Other: 8

ART**ARH 188****SPECIAL STUDIES: ART HISTORY**

Credits: 1 to 4

ARH 199**SELECTED TOPICS: ART HISTORY**

Credits: 1 to 4

ARH 201**INTRODUCTION TO ART HISTORY**

Surveys the major periods of visual arts in the West. Introduces students to the concepts of art and surveys the development of art in historical context from Paleolithic cave paintings up through early Christians. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them. Need not be taken in sequence.

Credits: 4 Lecture: 4

ARH 202**INTRODUCTION TO ART HISTORY**

Surveys the major periods of visual arts in the West. Introduces students to the concepts of art and surveys the development of art in historical context from early Medieval up through the Mannerists. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them. Need not be taken in sequence.

Credits: 4 Lecture: 4

ARH 203**INTRODUCTION TO ART HISTORY**

Surveys the major periods of visual arts in the West. Introduces students to the concepts of art and surveys the development of art in historical context from Baroque through Modern. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them. Need not be taken in sequence.

Credits: 4 Lecture: 4

ARH 206**MODERN ART HISTORY**

Survey of modern art from mid-19th century impressionism through the "isms" of the 20th century emphasizing painting, sculpture, architecture and photography. Not offered every year.

Credits: 4 Lecture: 4

ARH 207**NATIVE AMERICAN ART HISTORY**

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

Credits: 4 Lecture: 4

ART 101**INTRODUCTION TO THE VISUAL ARTS**

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.

Credits: 4 Lecture: 4

ART 115**BASIC DESIGN: 2-D**

Introduction to theory and studio practice using the elements of line, value, shape and texture with the principles of organization to articulate visual ideas in black and white.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 116**BASIC DESIGN: COLOR**

Introduction to color theory and studio practice using value, hue and intensity with the elements of line, shape, texture and the principles of organization to articulate visual ideas with two-dimensional color design problems.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 117**BASIC DESIGN: 3-D**

Explores elements and principles of design using hands-on experience to make three-dimensional constructions using inexpensive materials. Recommended preparation: WR 121.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 131**DRAWING I**

Emphasis on observing and developing fundamental drawing and composition skills. Still life material used extensively. Recommended preparation: ART 115.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 132**DRAWING II**

Concepts and skills developed in ART 131 will be applied to introduction to drawing the figure and portraits. Recommended preparation: ART 131.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 133**DRAWING III**

Emphasis on landscape drawing and creative expression working with a broader range of media. Recommended preparation: ART 131.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 154**CERAMICS I**

Hand-building skills in Ceramics I include developing designs for both functional and nonfunctional work, texturing, and glaze application. Development of imaginative ideas for expression in clay media is expected. Should be taken in sequence.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 155**CERAMICS II**

Improve hand-building skills with more complex designs and learn wheel throwing. Includes developing designs for both functional and nonfunctional work. Development of imaginative ideas for expression in clay media is expected. Should be taken in sequence.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 156**CERAMICS III**

Ceramics III includes developing designs for both functional and nonfunctional work, mastering hand-building and throwing skills, and glaze application. Development of imaginative ideas for expression in clay media is expected. Should be taken in sequence. Recommended preparation: ART 155, ART 117 and ART 131.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 157**METALCRAFT I**

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. Recommended preparation: MTH 60. Not offered every term.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 157A1**METALWORK & JEWELRY - HOT FABRICATION I**

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. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 157A2**METALWORK & JEWELRY - HOT FABRICATION II**

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. Recommended preparation: ART 157A1. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 157B1**METALWORK & JEWELRY - COLD FABRICATION I**

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. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 157B2**METALWORK & JEWELRY - COLD FABRICATION II**

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. Recommended preparation: ART 157B1. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 157C1**JEWELRY - PRECIOUS METAL CLAY I**

An introduction to working with Precious Metal Clay (PMC) to make fine silver jewelry. The course will include designing projects, making a texture stamp, manipulation and joining techniques for both soft and unfired PMC, kiln firing and finishing techniques. Not offered every term.

Credits: 1 Other: 2

ART 157C2**JEWELRY - PRECIOUS METAL CLAY II**

Builds on the skills learned in ART 157C1. It will include making hollow and three-dimensional forms, making molds and multiples, setting stones, torch firing, fusing gold and simple soldering. Recommended preparation: ART 157C1. Not offered every term.

Credits: 1 Other: 2

ART 158A1**METALWORK & JEWELRY - SURFACES I**

Includes a number of methods used to change the surface of non-ferrous metals. The techniques used for projects may include reticulation, keum-boo, patinas, embossing, overlay and fusing. Recommended preparation: Either ART 157A1 or ART 157B1. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 158A2**METALWORK & JEWELRY - SURFACES II**

Builds on the skills learned in ART 158A1. It may include marrying metal, granulation, inlay, electro-plating, using acrylic paint and colored pencils on metal. Recommended preparation: ART 158A1 and ART 157A1. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 158B1**JEWELRY - CASTING & CHAIN MAKING I**

An introduction to centrifugal lost wax casting process. Additive and subtractive methods will be used to sculpt small-scale wax models which will be sprued, invested and cast. Fusing links to weave simple chains and finishing techniques will be included. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 158B2**JEWELRY - CASTING & CHAIN MAKING II**

Builds on the skills learned in ART 158B1. It will include centrifugal, vacuum, cuttlebone casting and sand casting. The use of molds to duplicate textures to transfer onto wax, creating stone settings in wax, controlling the wax burn-out and weaving complex linked chains will be included. Recommended preparation: ART 158B1 and ART 157A1. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 158C1**JEWELRY - ENAMELING I**

Basic introduction to enameling on copper and fine silver. Techniques for texturing, using stencils, sifting and wet-packing enamel, adding foils, kiln firing, cold connecting and finishing techniques will be included. Not offered every term.

Credits: 1 Other: 2

ART 158C2**JEWELRY - ENAMELING II**

Builds on the skills learned in ART 158C1. Techniques of champleve, cloisonne, image transfer and fusing the enamel with a torch will be included. Recommended preparation: ART 158C1 and ART 157A1. Not offered every term.

Credits: 1 Other: 2

ART 159A1**METALWORK & JEWELRY - FORMING I**

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 repoussé, or other metalworking techniques used to form sheet metal. Projects may include the use of hot and/or cold connections and non-metal materials. Recommended preparation: ART 157A1. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 159A2**METALWORK & JEWELRY - FORMING II**

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. Recommended preparation: ART 157A1 and ART 159A1. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 159B1**METALWORK & JEWELRY - ETCHING & HYDRAULIC PRESS I**

Includes using PNP paper, nail polish and tapes as resists for etching copper to create textures. Embossing and non-conforming silhouette dies will be made to form the etched metal using the hydraulic press. The use of patinas will also be covered. Recommended preparation: Either ART 157A1 or ART 157B1. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 159B2**METALWORK & JEWELRY - ETCHING & HYDRAULIC PRESS II**

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. Recommended preparation: ART 159B1 and either ART 157A1 or ART 157B1. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 159C1**JEWELRY - PRECIOUS METAL CLAY & ENAMELING I**

Focuses on improving designs for fine silver precious metal clay. The fired projects will be enhanced with enamel to add color and then fired again to fuse the enamel. Recommended preparation: ART 157C1. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 159C2**JEWELRY - PRECIOUS METAL CLAY & ENAMELING II**

Focuses on designing projects to create recesses in the precious metal clay. After firing the PMC, enamel is placed in the depressions. The project is fired again to fuse the enamel. Cold connections and adding gold will also be covered. Recommended preparation: ART 159C1. Not offered every term.

Credits: 2 Lecture: 1 Lab: 3

ART 161**PHOTOGRAPHY I**

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. Recommended preparation: ART 115.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 162**PHOTOGRAPHY II**

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. Recommended preparation: ART 161.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 163**PHOTOGRAPHY III**

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. Recommended preparation: ART 161.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 181**PAINTING I**

Introduction to materials and techniques using alkyd oil, acrylic and/or water-soluble oil paints, building canvas supports, stretching canvas and preparing painting grounds. Studio experience using still life, self-portrait, landscape and the figure. Recommended preparation: ART 115, ART 131 or instructor approval.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 182**PAINTING II**

Introduction to color theory and personal expression. Studio experience using still life, portrait, figure and landscape. Application of compositional principles using the grid, sequential imagery and continuous field. Recommended preparation: ART 131 and ART 181 or instructor approval.

Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 183
PAINTING III**

Exploration of personal iconography. Studio experience using still life, landscape, figure in context, abstract spatial and abstract geometric. Recommended preparation: ART 131 and ART 182 or instructor approval.
Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 184
WATERCOLOR I**

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.
Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 185
WATERCOLOR II**

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence. Recommended preparation: ART 131 and ART 184 or instructor approval.
Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 186
WATERCOLOR III**

Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence. Recommended preparation: ART 131 and ART 185 or instructor approval.
Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 188
SPECIAL STUDIES: ART**
Credits: 1 to 3**ART 190
FIGURATIVE CLAY SCULPTURE**

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. Not offered every term. Recommended preparation: ART 131 and ART 154.
Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 191
SCULPTURE**

Studio introduction to articulation of visual ideas in three dimensions using additive, subtractive and construction processes. Recommended preparation: ART 117 and ART 131. Not offered every year.
Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 197
ART PORTFOLIO CREATION**

Art Portfolio Creation prepares students for the business and professional art world. Students will create both digital and hard-copy portfolios while learning about public relations, marketing, promoting, business guidelines, time management, contracts, presentations, goal setting, long-term inspiration and commitment to their craft, as well as exhibition hanging, timelines and reception set-ups. Students will review art school requirements and learn how to fill out applications for art schools, residencies, grants and art scholarships. This course also includes practical experience in art exhibitions in the Pence Gallery at Pinckney Center.
Credits: 2 Lecture: 2

**ART 199
SELECTED TOPICS: ART**
Credits: 1 to 3**ART 234
FIGURE DRAWING I**

Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media. Recommended preparation: ART 131 or instructor approval.
Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 235
FIGURE DRAWING II**

Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media. Recommended preparation: ART 234 or instructor approval.
Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 236
FIGURE DRAWING III**

Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media. Recommended preparation: ART 235 or instructor approval.
Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 254
CERAMICS IV**

Ceramics classes include developing designs for both functional and nonfunctional work, mastering hand building, advanced throwing skills and glaze application. Development of imaginative ideas for expression in clay media is expected. Should be taken in sequence. Recommended preparation: ART 117 and ART 131.
Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 255
CERAMICS V**

Ceramics classes include developing designs for both functional and nonfunctional work, mastering hand-building, advanced throwing skills and glaze application. Glaze formulation and the firing process may be included. Development of imaginative ideas for expression in clay media is expected. Should be taken in sequence. Recommended preparation: ART 117 and ART 131.
Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 256
CERAMICS VI**

Ceramics classes include developing designs for both functional and nonfunctional work, mastering hand-building, advanced throwing skills and glaze application. Glaze formulation and the firing process will be included in the upper-level classes. Development of imaginative ideas for expression in clay media is expected. Should be taken in sequence. Recommended preparation: ART 117 and ART 131.
Credits: 3 Lecture: 1.5 Lab: 4.5

**ART 261
DARKROOM PHOTOGRAPHY**

This course is an application of darkroom photography. Students must have prior knowledge of traditional black and white film photography including: camera operation, film processing and darkroom printing. Emphasis is on creative problem solving and understanding the photographic concepts used to create good visual communication. Requirements include outside-of-class shooting, and independent in-lab processing and printing. In-class photo critiques of work and a hanging of work are a major part of this course. Recommended preparation: ART 161.
Credits: 3 Lecture: 2 Lab: 3

**ART 265
DIGITAL PHOTOGRAPHY**

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. Students must own a digital camera.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 266**RAKU-SPECIAL TOPICS**

Short course focusing on the raku firing process. Recommended preparation: ART 154. Usually offered fall and spring terms.

Credits: 2 Lecture: 1 Lab: 3

ART 267**DIGITAL PHOTOGRAPHY II**

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. Recommended preparation: ART 265.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 270**PRINTMAKING**

Students will practice printmaking, including relief, intaglio process on an individual project basis. Processes and materials are presented for students to complete four to five hand-pulled prints. All projects serve as an introduction to various printmaking methods and reproduction printing techniques. Recommended preparation: ART 131.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 281**PAINTING IV**

Introduction to materials and techniques using alkyd oil, oil and/or water-soluble oil paints and mediums. Studio emphasis on exploration, self expression and nontraditional supports. Recommended preparation: ART 131 and ART 183 or instructor approval.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 282**PAINTING V**

Emphasis on individual exploration of color, visual concepts, critical doubling, the diptych and scale. Recommended preparation: ART 131 and ART 281 or instructor approval.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 283**PAINTING VI**

Emphasis on independent projects, the triptych, exploration of contemporary problems in painting, statement of a thesis, painting the proposition through a series of interrelated works and the professional documentation and exhibition of the paintings. Recommended preparation: ART 131 and ART 282 or instructor approval.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 291**MOLD MAKING FOR CERAMICS AND SCULPTURE**

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. Recommended preparation: ART 117 and/or ART 191.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 292**INSTALLATION ART**

Intermediate studio course designed to acquaint students with the possibilities of using non-traditional means such as site, time, and interaction to communicate ideas. The Pinckney Gallery serves as both classroom and studio in this unique term-long endeavor. Through a process of research and collaboration, students create interactive

sculptural artworks on-site. Culminates with a public exhibition of individual and group projects. Recommended preparation: ART 117 and ART 191.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 293**PUBLIC/ECO SCULPTURE**

Intermediate project-based sculpture course in which students explore the meaning and varieties of art created in and for public places, especially concentrating on work that addresses environmental and social issues. Each student artist will generate several proposals, informed by research and readings, and will create a work of public art as the primary goal. Recommended preparation: ART 117 and ART 191.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 299**SELECTED TOPICS: ART**

Credits: 1 to 3

AUTOMOTIVE TECHNOLOGY

AUT 101**BASIC ELECTRICITY FOR AUTOMOTIVE**

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. Recommended preparation: MTH 10.

Credits: 2 Lab: 6

AUT 102**AUTOMOTIVE ELECTRIC I**

Studies disassembly, testing and rebuilding of various electrical equipment. Stresses troubleshooting and using various test equipment common to the automotive trade. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110.

Credits: 4 Lecture: 2 Lab: 6

AUT 103**AUTOMOTIVE ELECTRIC II**

Studies disassembly, testing and rebuilding of various electrical equipment. Stresses troubleshooting and using various test equipment common to the automotive trade. Recommended preparation: AUT 101, AUT 102, AUT 106, AUT 107, AUT 109, AUT 110.

Credits: 2 Lecture: 1 Lab: 3

AUT 104**AUTOMOTIVE ELECTRIC III**

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. Recommended preparation: AUT 101, AUT 102, AUT 103, AUT 106, AUT 107, AUT 109, AUT 110.

Credits: 2 Lecture: 1 Lab: 3

AUT 105**DIESEL PERFORMANCE I**

Introduces principles of diesel systems and basic diagnosis. Includes engine analysis, cooling and exhaust systems, fuel management systems and diesel engines. Recommended preparation: AUT 101, AUT 102, AUT 106, AUT 107, AUT 109, AUT 110.

Credits: 2 Lecture: 1 Lab: 3

AUT 106**AUTOMOTIVE PROGRAM ORIENTATION**

Introduction to the Automotive program. Provides an understanding of the fundamental principles of automotive shop safety and tool

care. Instruction given to the self-paced course program. This course is required prior to taking any automotive course. This is a three-day, intensive course that is taught only at the beginning of each term. Permissible to be taken in a term along with other automotive courses.
Credits: 1 Lecture: 1

AUT 107 MECHANICAL SYSTEMS I

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. Recommended preparation: AUT 106 or corequisite of AUT 106. Corequisites: AUT 101, AUT 106, AUT 109, AUT 110.
Credits: 3 Lab: 9

AUT 109 MECHANICAL SYSTEMS II

This course will provide a good understanding of the fundamental principles of hand tool names and usage through catalog identification, scan tool introduction and function, based on the Snap-On SolusPro menu and Parameter Identification. Application and resume writing is included to prepare the new student for a job interview in the automotive industry. A self-paced course. Recommended preparation: AUT 106. Corequisites: AUT 101, AUT 106, AUT 110.
Credits: 1 Lab: 3

AUT 110 SMALL GAS ENGINES

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. Recommended preparation: Completion of AUT 106 or corequisite of AUT 106. Corequisites: AUT 101, AUT 106 and MTH 10.
Credits: 3 Lab: 9

AUT 111 COMPUTERIZED ENGINE CONTROLS

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. Recommended preparation: AUT 101, AUT 102, AUT 103, AUT 106, AUT 107, AUT 109, AUT 110, AUT 205 and MTH 20.
Credits: 5 Lecture: 3.5 Lab: 4.5

AUT 112 BASIC ENGINE PERFORMANCE I

This course is 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. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110.
Credits: 1 Lab: 2

AUT 113 BASIC ENGINE PERFORMANCE II

Course is designed to continue the study and apply the theory presented in AUT 112. This course will continue with the operation, diagnoses, and repair of the carburetion system as it was used in vehicles of the past.
Credits: 1 Other: 2

AUT 114 WELDING FOR THE AUTOMOTIVE TRADE

Provide a good understanding of the fundamental principles of automotive fabrication. Includes safety topics. This course is designed to introduce the student to focused areas that are often required when replacing components on vehicles that will require a light level of fabrication. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110.
Credits: 3 Lab: 9

AUT 199 SELECTED TOPICS: AUTOMOTIVE

Credits: 1 to 4

AUT 201 AUTOMOTIVE ENGINES

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. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110 and MTH 10.
Credits: 4 Lecture: 2 Lab: 6

AUT 202 MANUAL DRIVE TRAINS I

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. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110.
Credits: 3 Lab: 9

AUT 203 MANUAL DRIVE TRAINS II

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. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110.
Credits: 3 Lecture: 1.5 Lab: 4.5

AUT 204 STEERING AND SUSPENSION

Designed to study and apply the theory, operation, diagnoses and repair of the modern suspension and steering systems. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110, AUT 208 and MTH 10.
Credits: 3 Lecture: 1.5 Lab: 4.5

AUT 205 ENGINE PERFORMANCE I

Studies the diagnosis of drivability problems. Covers engine analysis, cooling and exhaust systems, ignition and fuel management systems. Recommended preparation: AUT 101, AUT 103, AUT 106, AUT 107, AUT 109 and AUT 110.
Credits: 2 Lecture: 1 Lab: 3

AUT 206 ENGINE PERFORMANCE II

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. Recommended preparation: AUT 101, AUT 102, AUT 103, AUT 104, AUT 106, AUT 107, AUT 109, AUT 110, AUT 111 and AUT 205.
Credits: 2 Lecture: 1 Lab: 3

AUT 208**AUTOMOTIVE BRAKES**

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. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110 and MTH 10.

Credits: 3 Lecture: 1.5 Lab: 4.5

AUT 211**ASE TEST PREP I**

This self-paced, program-specific course allows the student to study in preparation for the ASE A1-A5 areas. Recommended preparation: completion of two terms of Automotive Technology curriculum and WR 60.

Credits: 1 Lab: 3

AUT 212**ASE TEST PREP II**

This self-paced, program-specific course allows the student to study in preparation for the ASE A6-A8 areas. Recommended preparation: completion of two terms of Automotive Technology curriculum and WR 60.

Credits: 1 Lab: 3

AUT 216A**CWE AUTOMOTIVE A**

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. Prerequisite: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110. Instructor approval required. Recommended preparation: an additional 24 credits of automotive courses, 4 credits per section (144 hours).

Credits: 4

AUT 216B**CWE AUTOMOTIVE B**

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. Prerequisite: AUT 106, AUT 101, AUT 107, AUT 109, AUT 110. Instructor approval required. Recommended preparation: an additional 24 credits of automotive courses, 4 credits per section (144 hours).

Credits: 4

AUT 251**AUTOMATIC TRANSMISSIONS I**

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. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110 and MTH 20.

Credits: 3 Lab: 9

AUT 253**AUTOMOTIVE AIR CONDITIONING**

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. Recommended preparation: AUT 101, AUT 102, AUT 106, AUT 107, AUT 109, AUT 110 and MTH 20.

Credits: 3 Lecture: 1.5 Lab: 4.5

AUT 256**AUTO TRANSMISSIONS II**

This is the second part of an automatic transmission sequence. This course will continue principles and theory of planetary gear sets, torque converters, and hydraulic controls as applied to automatic transmissions. Includes emphasis on diagnosis, service, and procedures to conform to current service manuals. The student will also be introduced to Constant Velocity Transmissions/Hybrid Electric Vehicles/Electric Vehicle type transmissions. Prerequisites: AUT 106, AUT 101, AUT 107, AUT 109, AUT 110, instructor approval is required.

Credits: 2 Lecture: 1 Lab: 3

AUT 260**DIESEL PERFORMANCE II**

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. Prerequisites: AUT 106, AUT 101, AUT 107, AUT 109, AUT 110, instructor approval is required.

Credits: 4 Lecture: 2 Lab: 6

AUT 270**AUTOMOTIVE CONTROLLER SYSTEMS I**

Technological advancements in modern vehicles have changed how we perform diagnoses. 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 advance applications. Prerequisites: AUT 106, AUT 101, AUT 107, AUT 109, AUT 110, instructor approval is required.

Credits: 4 Lecture: 2 Lab: 6

AUT 271**AUTOMOTIVE CONTROLLER SYSTEMS II**

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. Prerequisites: AUT 106, AUT 101, AUT 107, AUT 109, AUT 110, instructor approval is required.

Credits: 4 Lecture: 2 Lab: 6

AUT 280**HYBRID ELECTRIC VEHICLES I**

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. Prerequisites: AUT 106, AUT 101, AUT 107, AUT 109, AUT 110, instructor approval is required.

Credits: 4 Lecture: 2 Lab: 6

AUT 281**HYBRID ELECTRIC VEHICLES II**

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. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110, instructor approval is required.

Credits: 4 Lecture: 2 Lab: 6

AVIATION - PROFESSIONAL PILOT

AV 101**INTRODUCTION TO AVIATION**

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.

Credits: 3 Lecture: 3

AV 104**INTRODUCTION TO AIRCRAFT SYSTEMS**

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.

Credits: 4 Lecture: 4

AV 108**METEOROLOGY I**

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.

Credits: 4 Lecture: 4

AV 110**PRIVATE PILOT: AIRPLANE**

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 in aviation, and crew resource management. Comprehensive course that prepares student for the FAA Private Pilot Airman knowledge written exam. Recommended preparation: MTH 20.

Credits: 5 Lecture: 5

AV 112**TECHNICALLY ADVANCED AIRCRAFT**

The course covers the differences in design, handling characteristics, capability, and operation of complex avionics packages in today's modern aircraft. Course will concentrate on the Garmin 430, Garmin 1000, and Avidyne glass cockpit systems.

Credits: 1 Lecture: 1

AV 112A**TECHNICALLY ADVANCED AIRCRAFT LAB**

The lab course provides one-on-one hands-on training in a simulator using the (FAA) -Industry Training Standards (FITS) program that emphasizes the importance of aerial world training exercises in the form of scenario training. Students will learn to program and utilize advance automated flight decks.

Credits: 1 Lab: 3.2

AV 115**PRIVATE PILOT: HELICOPTER**

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. Recommended preparation: MTH 20. Corequisites: AV 117.

Credits: 5 Lecture: 5

AV 117**HELICOPTER FUNDAMENTALS**

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. Recommended preparation: MTH 20. Corequisites: AV 115.

Credits: 3 Lecture: 3

AV 150**AERODYNAMICS**

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. Recommended preparation: MTH 85.

Credits: 4 Lecture: 4

AV 188**SPECIAL STUDIES: AVIATION**

Credits: 1 to 5

AV 199**SELECTED TOPICS: AVIATION**

Credits: 1 to 8

AV 200**AVIATION LAW**

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.

Credits: 3 Lecture: 3

AV 201**AIRPORT MANAGEMENT**

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.

Credits: 3 Lecture: 3

AV 204**ADVANCED AIRCRAFT SYSTEMS**

Encompasses a detailed study of aircraft systems and structures and enables the students 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. Recommended preparation: AV 104.

Credits: 4 Lecture: 4

**AV 208
METEOROLOGY II**

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. Recommended preparation: AV 108 or instructor approval.

Credits: 4 Lecture: 4

**AV 210
INSTRUMENT: AIRPLANE**

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. Recommended preparation: AV 110 and/or Private Pilot Certificate.

Credits: 5 Lecture: 5

**AV 215
INSTRUMENT: HELICOPTER**

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. Recommended preparation: AV 115 and/or FAA Private Pilot Certificate.

Credits: 5 Lecture: 5

**AV 220
COMMERCIAL PILOT: AIRPLANE**

Ground instruction of aeronautical skills and knowledge applicable to the FAA Commercial Pilot Certification portion of the Professional Pilot training syllabus. Covers night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance, complex aircraft operations, advanced airplane systems, commercial operations and FAA Regulations for commercial pilots and noncommercial flight operations, with emphasis on human factors, crew resource management, and decision-making. Recommended preparation: AV 110 and/or FAA Private Pilot Certificate.

Credits: 4 Lecture: 4

**AV 222A – 222N
AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator, and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane-certified flight instructors (CFI) with ratings for single engine land, multiengine land, and instrument airplane. Flight, ground, and simulator training fees apply. See Aviation Program director for current fee schedule. Instructor approval required.

Credits: 1 Lab: 3.2

**AV 225
COMMERCIAL PILOT: HELICOPTER**

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. Recommended preparation: AV 115 and/or FAA Private Pilot Certificate.

Credits: 4 Lecture: 4

**AV 227A – 227N
HELICOPTER FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator, and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating. Professional Pilot students will be prepared to become certified flight instructors (CFI) with the instrument (CFII) helicopter rating. Flight, ground, and simulator training fees apply. See Aviation Program director for current fee schedule and lab scheduling. Instructor approval required.

Credits: 1 Lab: 3.2

**AV 230
MULTIENGINE PILOT**

Ground instruction of aeronautical skills and knowledge applicable to the private multiengine pilot certification in light twins. The course may also be taken by those pilots who have a commercial single engine rating to obtain an additional rating for commercial multiengine. Emphasis is on engine failure, multiengine aerodynamics, minimum controllable airspeed, propeller feathering, V-speeds, flight planning, decision-making, human factors, and crew resource management. Recommended preparation: AV 110 and/or FAA Private Pilot Certificate.

Credits: 2 Lecture: 2

**AV 235
HUMAN FACTORS**

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.

Credits: 4 Lecture: 4

**AV 245
ADVANCED HELICOPTER OPERATIONS**

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. NVG course licensing fee applies. See aviation program director for current course fee.

Credits: 4 Lecture: 4

**AV 246
AVIATION SAFETY**

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 and analysis of accident reports.

Credits: 3 Lecture: 3

**AV 250
CERTIFIED FLIGHT INSTRUCTOR: AIRPLANE**

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. Recommended preparation: AV 220 or FAA Commercial Pilot Certificate and Instrument Rating.

Credits: 5 Lecture: 5

AV 255**CERTIFIED FLIGHT INSTRUCTOR-HELICOPTER**

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. Recommended preparation: AV 225 and/or FAA Commercial Pilot Certificate.

Credits: 5 Lecture: 5

AV 271**INTRODUCTION TO UNMANNED AERIAL SYSTEMS**

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.

Credits: 3 Lecture: 3

AV 272**UNMANNED AERIAL SYSTEMS OPERATIONS**

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 non-combatative environment. Recommended preparation: AV 271.

Credits: 5 Lecture/Lab: 5

AV 273**ADVANCED UNMANNED AERIAL SYSTEMS (UAS), MISSION PLANNING AND OPERATION**

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. Recommended preparation: AV 271. Prerequisite: AV 272.

Credits: 5 Lecture/Lab: 5

AV 288**SPECIAL STUDIES: AVIATION**

Credits: 1 to 5

AV 299**SELECTED TOPICS: AVIATION**

Credits: 1 to 8

BIOLOGY**BI 101****GENERAL BIOLOGY: CELLS & GENES**

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 (morphology and physiology), genetics and development. Need not be taken in sequence. Lab meets first week of classes.

Credits: 4 Lecture: 3 Lab: 3

BI 102**GENERAL BIOLOGY: EVOLUTION**

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.

Credits: 4 Lecture: 3 Lab: 3

BI 103**GENERAL BIOLOGY: ECOLOGY**

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.

Credits: 4 Lecture: 3 Lab: 3

BI 121**ANATOMY AND FUNCTION I**

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.

Credits: 4 Lecture: 3 Lab: 3

BI 122**ANATOMY AND FUNCTION II**

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.

Recommended preparation: BI 121.

Credits: 4 Lecture: 3 Lab: 3

BI 188**SPECIAL STUDIES: BIOLOGY**

Credits: 1 to 6

BI 200**TROPICAL FIELD ECOLOGY**

Offered as a required course in the Costa Rica study abroad program. Broad overview of the geography, terrestrial ecosystems, and aquatic ecosystems of Costa Rica. Ecosystem concepts and processes will be emphasized, including human interactions in ecosystems.

Recommended preparation: WR 121 and BI 101.

Credits: 4 Lecture: 1 Lab: 6

BI 205**SCIENTIFIC TERMINOLOGY: LATIN AND GREEK ROOTS**

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

Credits: 3 Lecture: 3

BI 211**PRINCIPLES OF BIOLOGY I**

Introduces basic principles common to all living organisms. Emphasizes chemistry and evolution of life, cellular morphology and genetics. Designed for majors in the life sciences and should be taken in sequence.

Recommended preparation: CH 221.

Credits: 5 Lecture: 4 Lab: 3

BI 212**BIOLOGY OF PLANTS II**

Surveys bacteria, kingdoms of protists, fungi and plants; examines evolutionary and ecological interrelationships and emphasizes aspects of plant morphology and physiology. Designed for majors in life sciences as well as those pursuing botany, and should be taken in sequence.

Prerequisite: BI 211 with a "C" or better. Field Trips may be required.

Credits: 5 Lecture: 4 Lab: 3

BI 213**BIOLOGY OF ANIMALS III**

Examines diversity and evolution of living animals, their interrelationships, morphology and physiology. Designed for majors in life sciences and should be taken in sequence. Prerequisite: BI 211 with a "C" or better.

Field Trips may be required.

Credits: 5 Lecture: 4 Lab: 3

BI 214**BIOCHEMISTRY AND GENETICS**

Through a combination of lectures, problem solving and laboratory exercises this course explores amino acid chemistry, the structures and functions of proteins, basic metabolism and energy conservation, the genetics of biochemical pathways, assortment and linkage of genes, the structure and replication of DNA, mutation and repair; gene mapping, complementation and the structure and regulation of genes. Recommended preparation: BI 211 or CH 223 or equivalent.

Credits: 4 Lecture: 3 Lab: 3

BI 231**HUMAN ANATOMY AND PHYSIOLOGY I**

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. Prerequisite: WR 65 or WR 95 with a "C" or better, or Reading or Writing placement test scores that place the student into WR 121.

Credits: 4 Lecture: 3 Lab: 3

BI 232**HUMAN ANATOMY AND PHYSIOLOGY II**

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. Prerequisite: BI 231 with a grade of "C" or better.

Credits: 4 Lecture: 3 Lab: 3

BI 233**HUMAN ANATOMY AND PHYSIOLOGY III**

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. Prerequisite: BI 232 with a "C" or better.

Credits: 4 Lecture: 3 Lab: 3

BI 234**MICROBIOLOGY**

This course is designed for students to learn the characteristics and disease-causing features of microorganisms, especially the bacteria and viruses that cause serious infectious diseases in humans. It 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. The course also covers some of the historically-common human infections and diseases. This course is designed especially for students in nursing, pre-pharmacy and other pre-professional health programs. Prerequisite: Completion of WR 65 or higher with a "C" or better or placement testing in WR 95 or higher.

Credits: 4 Lecture: 3 Lab: 3

BI 280**CO-OP WORK EXPERIENCE BIOLOGY**

Credits: 1 to 4

BI 288**SPECIAL STUDIES: BIOLOGY**

Credits: 1 to 4

BI 299**SELECTED TOPICS: BIOLOGY**

Credits: 1 to 5

BOT 203**GENERAL BOTANY**

Surveys flowering plant families by identification of local flora and the use of taxonomic keys. Studies floral morphology, history and development of classification, and systematics. Recommended preparation: BI 103 or BI 212.

Credits: 4 Lecture: 3 Lab: 3

BUSINESS ADMINISTRATION**BA 080****WORKING INTERNSHIP**

Provides college credit for student employment in fields pertaining to business curriculum. Credit is given based upon a total workload of 35 hours and completion of learning objectives. Learning experience coordinated with student's supervisor and instructor. This course is designed for students entering the workforce or a particular industry. May not be repeated for credit. Instructor approval required.

Credits: 1 Other: 3

BA 101**INTRODUCTION TO BUSINESS**

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

Credits: 4 Lecture: 4

BA 104**BUSINESS MATH**

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. Prerequisite: "C" or better in MTH 60, MTH 60 equivalency met, or appropriate placement exam score.

Credits: 3 Lecture: 3

BA 111**APPLIED ACCOUNTING I**

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. Prerequisite: MTH 60.

Credits: 3 Lecture: 3

BA 112**APPLIED ACCOUNTING II**

Continuation of Applied Accounting I. It provides a detailed study of the mechanical and theoretical aspects of the bookkeeping and accounting process as it relates to a merchandising business. Prerequisite: BA 111.

Credits: 3 Lecture: 3

BA 113**APPLIED ACCOUNTING III**

Continuation of Applied Accounting II. It provides students with an in-depth, more detailed background of specific areas of accounting so that they will be able to effectively deal with most accounting situations as they relate to all business forms. Prerequisite: BA 112.

Credits: 3 Lecture: 3

BA 156**BUSINESS ECONOMICS**

Examines principles involved with and dependent upon the American economic system. Covers laws of supply and demand, pricing policy, differences between economic systems and business organizations, money and monetary policy, Keynesian vs. supply-side economics and global economics.

Credits: 3 Lecture: 3

BA 177**PAYROLL ACCOUNTING**

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. Recommended preparation or recommended to be taken with: BA 112 or BA 212.

Credits: 3 Lecture: 3

BA 178**CUSTOMER SERVICE**

Introduces concepts of basic customer service. Covers how to develop and establish a customer service vision. Examines how to understand customer expectations before, during and after service delivery. Reviews tenets of developing, managing and evaluating service strategies.

Credits: 3 Lecture: 3

BA 180**CO-OP WORK EXPERIENCE**

Cooperative work experience is a learning strategy designed to enhance a student's knowledge, personal development, professional development, and professional preparation by integrating academic study with practical experience. Student completes on-the-job training in an office environment. BA 180 is designed for Level I and Level II students participating in AAS Business or Office Administration Certificate.

Emphasis will be placed on management, marketing, accounting, and operational concepts covered in Introduction to Business and/or Level II classes. Recommended preparation or recommended to be taken with: BA 101 or instructor approval.

Credits: 1 to 3

BA 188**SPECIAL STUDIES: BUSINESS**

Engages students with projects from local businesses in the areas of accounting, marketing, management and operations. Recommended preparation: completion of most Level I and Level II classes from the AAS degree. Instructor approval required.

Credits: 1 to 3

BA 199**SELECTED TOPICS: BUSINESS**

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. Instructor approval required.

Credits: 1 to 5

BA 203**GLOBAL BUSINESS**

Prepares students for better understanding of many facets of dealing with foreign entities. Surveys institutions, environments, forces and problems involved with the conduct of global trade. Examines trade organizations,

monetary systems, government relations, language and custom barriers, and future trends. Recommended preparation: BA 223.

Credits: 3 Lecture: 3

BA 206**MANAGEMENT FUNDAMENTALS I**

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. Recommended preparation: BA 101.

Credits: 4 Lecture: 4

BA 207**MANAGEMENT FUNDAMENTALS II**

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. Recommended preparation: BA 206.

Credits: 4 Lecture: 4

BA 209**BUSINESS ETHICS**

Explores current issues in business ethics from the owner, employee and consumer viewpoints. Ethical theories are reviewed and cases are used to evaluate conflicts existing between business profits, the legal environment and morality. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

BA 211**FINANCIAL ACCOUNTING I**

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, BA 112, and BA 113 are required for AAS accounting specialization. Recommended preparation: MTH 60.

Credits: 4 Lecture: 4

BA 212**FINANCIAL ACCOUNTING II**

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 flow. Recommended preparation: BA 211.

Credits: 4 Lecture: 4

BA 213**MANAGERIAL ACCOUNTING**

Introduces managerial accounting theory, including cost-volume-profit analysis, product costing, budgeting, capital investing, and cost management in manufacturing and service organizations. Recommended preparation: BA 212.

Credits: 4 Lecture: 4

BA 217**ACCOUNTING FUNDAMENTALS**

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. Recommended preparation: MTH 60.

Credits: 4 Lecture: 4

BA 218**PERSONAL FINANCE**

Designed to provide students the necessary skills in basic money management. Investigates spending habits, personal, and family financial budgets. Focuses on dealing with financial institutions, applying for loans, and establishing personal credit. Develops understanding of managing major household expenses. Develops skill in renting, buying and selling residential property. Examines buying and leasing transportation, personal income taxes and different types of insurance. Covers scope and planning of investments and retirement planning, including mutual funds, stock market, real estate as an investment and Social Security. Wills and trusts are also addressed in addition to non-text materials.

Credits: 3 Lecture: 3

BA 220**BUSINESS ANALYSIS AND BUDGETING**

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. Prerequisites: BA 104, CIS 131, BA 112. Recommended preparation: CIS 125E.

Credits: 4 Lecture: 3 Other: 2

BA 222**BUSINESS FINANCE**

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. Prerequisites: BA 104 and either BA 113 or BA 212.

Credits: 3 Lecture: 3

BA 223**MARKETING PRINCIPLES I**

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. Recommended preparation: BA 101.

Credits: 4 Lecture: 4

BA 224**HUMAN RESOURCES MANAGEMENT**

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. Recommended preparation: BA 206.

Credits: 4 Lecture: 4

BA 226**BUSINESS LAW I**

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. Recommended preparation: sophomore standing, WR 121 and BA 101.

Credits: 4 Lecture: 4

BA 228**COMPUTER ACCOUNTING APPLICATIONS**

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. Recommended preparation: CIS 131 and either BA 111 or BA 211.

Credits: 3 Lecture: 2 Other: 2

BA 229**QUICKBOOKS**

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. Recommended preparation: CIS 131 and either BA 111 or BA 211.

Credits: 3 Lecture: 2 Lab: 2

BA 232**BRANDING**

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. Prerequisite: BA 223.

Credits: 4 Lecture: 4

BA 233**INTERNET MARKETING**

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. Prerequisite: BA 223.

Credits: 4 Lecture: 4

BA 238**SELLING AND NEGOTIATION**

Covers the role of personal selling in the firm's marketing mix. Emphasizes creating value and the techniques used for building buyer relationships during the selling process. Also emphasizes customer service, handling complaints and sales force management techniques. Recommended preparation: BA 223.

Credits: 4 Lecture: 4

BA 239**ADVERTISING**

Develops understanding of the principles and techniques necessary to develop 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. Prerequisite: BA 223.

Credits: 4 Lecture: 4

BA 249**RETAILING**

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. Recommended preparation: BA 223.

Credits: 4 Lecture: 4

BA 250**ENTREPRENEURSHIP**

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. Recommended preparation: BA 101 and BA 212.

Credits: 4 Lecture: 4

BA 261**CONSUMER BEHAVIOR**

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. Prerequisite: BA 223.

Credits: 4 Lecture: 4

BA 280**CO-OP WORK EXPERIENCE BUSINESS**

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. May be repeated once. Instructor approval required.

Credits: 1 to 3

BA 285**BUSINESS HUMAN RELATIONS**

Examines the sociological and psychological aspects of the workplace with practical applications. Based on the premise that the practice of sound human relations is essential to success in any context. Group exercises, discussion, and lecture are the pedagogies used, in that order of importance. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

BA 286**MANAGING BUSINESS PROCESSES**

Introductory course in understanding and managing business processes. Develops understanding of general concepts and principles of process management. Includes implementation procedures and specific tools used in analyzing processes, uncovering problems and finding solutions to those problems. Recommended preparation: BA 101 and BA 206.

Credits: 4 Lecture: 4

BA 289**MARKETING CAPSTONE PROJECT**

This is the capstone course for the Marketing Communication Certificate. It is an opportunity for the student to demonstrate all they have learned in the areas of marketing communication, including branding, consumer behavior, internet marketing, social media, and advertising. It also allows for the opportunity to demonstrate communication and technology skills. The end result will be a portfolio of work that may be used in seeking employment or advancement. This is a hands-on, skills oriented course focused on applied experiential learning. Prerequisite: instructor approval is required for registration.

Credits: 4 Lecture: 4

BA 290**BUSINESS SEMINAR**

BA 290 is the capstone course for all specializations in the Associate of Applied Science degree in Business. It is an opportunity for the student to demonstrate all they have learned in the areas of accounting, management, finance, marketing and operations. It also allows for the opportunity to demonstrate one's 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. Prerequisites: BA 113, BA 206, BA 220 and BA 223.

Credits: 3 Lecture: 3

CCI: BAKING AND PASTRY ARTS**BAK 100****WANT TO BE A PASTRY CHEF?**

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 students taking courses to enhance their 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.

Credits: 2 Other: 4

BAK 110**BAKING AND PASTRY FOUNDATIONS I**

In this introductory course to the pastry arts, students will be presented with an overview of the Cascade Culinary Institute Baking and Pastry program. Students will have the opportunity to learn basic principles guiding professional introductory baking techniques. Lecture and lab topics will include: Servsafe Safety and sanitation certification; the history of the baking industry; career opportunities in baking; trends in baking and pastry; standards of professionalism; ingredient and equipment identification/selection; the functions of ingredients; the use of a standardized recipe; fruit desserts; cookies; meringues; pate a choux and basic custards. Key components of the course include discussion of chef tools, knife skills, commercial equipment and its intended uses; basic baking science principles, ratio and techniques. Emphasis in this course will be given to Tuckman's Group Development Model on the "forming" stage. Students will complete the National Restaurant Association Educational Foundation (NRAEF) ServSafe examination certification as part of this course. Prerequisites: MTH 20 with "C" grade or above or placement exam score that places the student in MTH 60 or above; WR 65 or WR 95 with "C" grade or above or a placement exam score that places the student in WR 121 or above.

Credits: 4 Other: 8

BAK 140**BAKING AND PASTRY FOUNDATIONS II**

In this baking foundations class, students will have the opportunity to learn basic principles and techniques involved in the production of breads and yeast risen doughs, laminate doughs and pies and tarts. Lecture and lab topics will include: the 12 stages of yeast dough production; continuing discussion on product identification and selection; wheat based flours; baker percentages; gluten development; lean straight doughs; soft crusted breads; basic laminate doughs. Students will have opportunities for hands-on learning in all of these topics. Emphasis in this course will be given to Tuckman's Group Development Model on the "storming" stage. Prerequisites: RMGT 90, BAK 110, RMGT 120, WR 121.

Credits: 4 Other: 8

BAK 160**APPLIED BASIC CULINARY ARTS PRINCIPLES**

This introductory-level course covers 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. Prerequisites: RMGT 90, BAK 110, RMGT 120, WR 121.

Credits: 4 Other: 8

BAK 170

BAKING AND PASTRY FOUNDATIONS III

In this Baking Foundations class, students will have the opportunity to learn basic principles and techniques involved in the production of quick breads and dessert foundation sauces; mixing and baking cake layers and assembling classic cakes. Students will obtain a first aid/CPR certification. Lecture topics will include menu planning with consideration of food and labor cost as well as balancing flavors and textures in desserts. Emphasis in this course will be given to Tuckman's Group Development Model on the "norming" stage. Prerequisites: NUTR 230, BAK 140, RMGT 150, RMGT 210.

Credits: 4 Other: 8

BAK 180

CONTEMPORARY CUSTARDS, FROZEN DESSERTS AND TARTS

Exercise techniques and production skills for a variety of custards, puddings, Bavarians and mousses; still-frozen and churn-frozen desserts, ice creams, granitas, sorbet and sherbet production and presentations; basic pastry dough production including pate brisee, pate sable, and pie doughs used in the production of a variety of pies, tarts and turnovers. Preparation techniques for various types of fruits from fresh seasonal to commercially prepared when preparing deserts, pies and tarts. Prerequisites: NUTR 230, BAK 140, RMGT 150, RMGT 210.

Credits: 4 Other: 8

BAK 188

SPECIAL STUDIES: BAKING AND PASTRY ARTS

Special studies in Baking and Pastry Arts.

Credits: 1 to 9

BAK 195

BAKING AND PASTRY ARTS PRACTICAL AND WRITTEN EXAMINATION I

In the baking practical exam, students will be tested on the fundamentals of baking: doughs, batters, cakes, Danish and puff pastry. They will also draw an assignment and prepare three items. Emphasis in this course will be given to Tuckman's Group Development Model on the "forming" stage. Prerequisites: NUTR 230, BAK 140, RMGT 150, RMGT 210.

Credits: 1 Other: .13

BAK 199

SELECTED TOPICS: BAKING AND PASTRY ARTS

Provides opportunity for students with exceptional background or need to continue beyond normal Baking and Pastry Arts program content. Content and credit(s) earned are established by mutual agreement between instructor and student and detailed in written agreement at the start of the term.

Credits: 1 to 6

BAK 210

MODERN SUGAR AND CHOCOLATE DECOR

Engage with a variety of chocolate and sugar decorations and sculpting techniques to produce decorations that can embellish other desserts or artistic showpieces for display. They will learn techniques such as applying chocolate colors with a spray gun, use of various types of molds, making cut-out decorations, and silk screens, that will be applied to showpieces. Students are introduced to various sugar techniques such as pastillage, saturated sugar, pulled sugar such as ribbons and flowers, blown sugar to create three-dimensional shapes, spun, piped, bubble, straw, and poured sugar, and airbrushing techniques to create a variety of showpieces. Students will use a given theme upon which they must design and build a sugar as well as a chocolate showpiece. Prerequisites: BAK 170, BAK 180, RMGT 190, BAK 195.

Credits: 4 Other: 8

BAK 220

WEDDING CELEBRATION AND SPECIALTY CAKES

In this course, students learn the history of celebration cakes, such as the wedding cake, and how to make British and American-style celebration cakes, including baking, decoration and assembly work. Students will bake sponge cakes, create buttercream fillings, make gumpaste flowers, royal icing piped decorations, and rolled fondant. Students will then produce wedding and celebration cakes incorporating all these elements, from design, baking and assembly to covering and decorating. Students will also make the classic French wedding cake, the Croquenbouche. Emphasis in this course will be given to Tuckman's Group Development Model on the "forming" stage. Prerequisites: BAK 170, BAK 180, RMGT 190, BAK 195.

Credits: 4 Other: 8

BAK 235S

CLASSICAL FRENCH PASTRIES

In this course, students learn to produce a wide variety of classic and modern French cakes or "entremets" suitable for large or small-scale productions using the latest assembling techniques and cost-effective production methods. These cakes will be highlighted with decorations such as silk screens, printed logos and chocolate and sugar decorations. Students will utilize updated methods of traditional French recipes using fresh ingredients. Student's cakes in this course will represent a variety of textures and flavors. Also taught will be classic French tarts, giving further practice to different elements in pastry such as different types of crusts, doughs and fillings, and present new opportunities for combining those elements in cakes and tarts. Emphasis in this course will be given to Tuckman's Group Development Model on the "forming" stage. Prerequisites: RMGT 200, BAK 210, BAK 220, RMGT 130.

Credits: 4 Other: 8

BAK 240

THE CRAFT OF ARTISAN BREADS

Enhance foundation skills and learn the principles and techniques of preparing multigrain breads, sourdoughs, bagels, pretzels, holiday or seasonal breads and flat breads. Special emphasis will be placed on regional breads and breads of the world; handling grains (such as soakers) for specialty breads; mixing, shaping, and finishing specialty breads; and learning innovative baking methods. Prerequisites: RMGT 200, BAK 210 and BAK 220.

Credits: 4 Other: 8

BAK 245S

ADVANCED SUGAR DECOR AND CHOCOLATE SCULPTING

In this course students are taught a variety of chocolate and sugar decorations and sculpting techniques to produce decorations that can embellish other desserts or artistic showpieces for display. They will learn techniques such as applying chocolate colors with a spray gun, use of various types of molds, making cut-out decorations and silk screens, that will be applied to showpieces. Students are introduced to various sugar techniques such as pastillage, saturated sugar, pulled sugar such as ribbons and flowers, blown sugar to create three-dimensional shapes, spun, piped, bubble, straw, and poured sugar, and airbrushing techniques to create a variety of showpieces. Students will use a given theme upon which they must design and build a sugar as well as a chocolate showpiece. Emphasis in this course will be given to Tuckman's Group Development Model on the "forming" stage. Prerequisites: RMGT 200, BAK 210, BAK 220, RMGT 130.

Credits: 4 Other: 8

BAK 250

PETIT FOURS, CANDIES AND CLASSICAL MIGNARDISE

Develop skills and prepare individual mini French pastries and petits fours such as the traditional éclair, fruit and lemon tartlets, macarons and madeines. This course will allow students to practice many different types of elements used in French pastry such as pastry cream, buttercream, glazes, cream-based fillings, fruit-based fillings, chocolate-based fillings and doughs. Students will also learn how to present a beautiful display of their petits fours. Students learn how to make

sugar confectioneries, such as pate de fruit (fruit pastes) in a variety of flavors, guimauve (marshmallow), praline, caramels with salted butter, chocolate caramels, nougats, lollipops and gummies. Students will also learn how to properly package their candies and how to display them. Prerequisites: RMGT 200, BAK 210 and BAK 220.

Credits: 4 Other: 8

BAK 255S

ADVANCED ARTISAN BREADS AND SHOWPIECES

During this course students will learn a variety of specialty breads such as multigrain, 80% rye, flax seed rye, organic baguette and organic spelt. Students will make products with a large amount of rye flour, gaining an understanding of the technology and how to manipulate and work with these very specific types of doughs. This course will also focus on the production of a large variety of breads. Different analyses of the flour will be addressed, as well as the technology of making organic breads and the health and nutritional benefits of these recipes. Emphasis in this course will be given to Tuckman's Group Development Model on the "forming stage." Prerequisites: RMGT 200, BAK 210, BAK 220, RMGT 130.

Credits: 4 Other: 8

BAK 268P

RESEARCH AND DEVELOPMENT OF MODERN PETIT FOURS AND CANDIES

Serves as a specialization course for either Culinary Arts or Baking & Pastry Arts students; and regional industry professionals are also invited to attend this course with no prerequisites. Within this short-course, students will conduct research and development in the areas of advanced chocolate truffle, petit four and candy preparation. Advanced creativity and design will take place where students will first draft the concept, conduct an experimental phase, and then apply what they learned to produce the final product.

Credits: 1 Other: 2

BAK 269P

ADVANCED DESSERT PLATING, AIRBRUSH AND SILICONE MOLD CASTING

Serves as a specialization course for either Culinary Arts or Baking & Pastry Arts students; and regional industry professionals are also invited to attend this course with no prerequisites. Within this short-course, students will conduct an extensive research and development relative to plated dessert design as it relates to flavor, seasonality, texture, color and final composition. Students will experiment with a diversity of plating techniques, and will utilize an airbrush and chocolate gun as a finishing tool; and will also develop and produce silicone molds for both dessert and savory preparations.

Credits: 1 Other: 2

BAK 275

BAKING AND PASTRY ARTS PRACTICAL AND WRITTEN EXAMINATION II

In the baking practical examination, students are required to produce plated desserts from a mystery basket, demonstrate an understanding of baking and pastry production, and perform at an advanced level. Emphasis in this course will be given to Tuckman's Group Development Model on the "forming" stage. Prerequisites: BAK 240, BAK 250, RMGT 260.

Credits: 1 Other: 2

BAK 280

BAKING AND PASTRY ARTS INDUSTRY INTERNSHIP

Serves as a supervised work experience designed to expand career knowledge and experiential confidence while increasing knowledge, speed, timing, organization and the ability to execute industry skills on a repetitive basis. Students will receive a diverse work experience 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 Baking and Pastry Arts. Prerequisites: CUL 270 and BAK 275.

Credits: 6 Other: 20

CCI: CULINARY ARTS

CUL 100

WANT TO BE A CHEF?

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.

Credits: 2 Other: 4

CUL 110

CULINARY FOUNDATIONS I

In this introductory Culinary Arts course, students will have the opportunity to learn the basic principles that relate to the following: history of the restaurant industry, culinary nomenclature, equipment orientation, kitchen operations, food safety and sanitation, basic knife skills and a cooking technique overview. Students will also learn the understanding of ratios and technique in contrast to recipe usage. An introduction to stock, sauce and soup cookery will also be covered. This course will serve as the foundation for future skill development; hence, much of the course will be lecture and demonstration in orientation. Hands-on application of basic knife skills will take place at an individual level, while an introduction to classical and emulsion sauces will also be executed in teams. Emphasis in this course will be given to Tuckman's Group Development Model on the "forming" stage. Students will complete the NRAEF ServSafe examination certification as part of this course. Prerequisites: MTH 20 with a "C" grade or above or placement exam score that places the student in MTH 60 or above; WR 65 or WR 95 with a "C" grade or above or a placement exam score that places the student in WR 121 or above.

Credits: 4 Other: 8

CUL 140

CULINARY FOUNDATIONS II

This course is intended to serve as a transition from the introductory skill and theory development that took place in Culinary Foundations I. Students will execute classical knife cuts at an accelerated rate with increased accuracy. Exposure to advanced terminology, flavor profiling and development, and ratio usage will serve as themes within this course. Emphasis will be placed upon food science principles and how they relate with the systematic process of the primary cooking techniques. Proper use of commercial equipment and understanding of ingredients, measurement, formulas and building individual confidence within a professional kitchen will aid in constructing a sound foundation of basic skills. Competency-based learning activities include the preparation of stocks, soups, mother sauces, contemporary sauces, vegetables, grains and eggs. Sanitation and safety, professionalism, organization and the competency-based learning activities serve as the primary function of the student's educational experience. Emphasis in this course will be given to Tuckman's Group Development Model on the "storming" stage. Prerequisites: Passing grade ("C" or above) in RMGT 90, CUL 110, RMGT 120, WR 121.

Credits: 4 Other: 8

CUL 170

CULINARY FOUNDATIONS III

This course builds on the techniques and principles demonstrated in both the Culinary Foundations I and II courses. Basic knife skills will continue to be exercised as an integrated learning activity within each competency. Within this course, knife skills and cooking techniques at a repetitive level are designed to build student confidence and skill via repetition. Utilization of a sound step-by-step process as it relates to the primary techniques will be highly emphasized within this course. Flavor profiling and pairing are further discussed and applied. Students will have the opportunity to develop skills in the identification, butchery and fabrication used in the cooking of a variety of meats, poultry and seafood.

products. Small sauce production and the preparation of vegetables, grains, legumes and pastas are emphasized within this course. Students will apply modern composition and presentation techniques utilized in the restaurant industry. Emphasis in this course will be given to Tuckman's Group Development Model on the "norming" stage. Prerequisites: Passing grade ("C" or above) in NUTR 230, CUL 140, RMGT 150 and RMGT 210.

Credits: 4 Other: 8

CUL 180

MODERN GARDE MANGER

Modern garde manger can refer to different things in the professional kitchen. In many restaurants it is a station which is generally an entry-level cooking position within a restaurant as it often involves preparing salads or other smaller plates which can be heated and quickly plated without significant experience. In other high-profile classically influenced restaurants and hotels, the position pertains to classical cold food preparations. Within the context of this course, garde manger represents an introduction to the cold kitchen. Students will learn how to prepare canapes, hot and cold hors d'oeuvres, appetizers, salads, sandwiches, and a diversity of forcemeats; the role of garnishes, food preservation and ice sculpture centerpiece skill development. Students will also learn contemporary styles of presenting food for a buffet setting. Prerequisites: Passing grade ("C" or above) in NUTR 230, CUL 140, RMGT 150 and RMGT 210.

Credits: 4 Other: 8

CUL 195

CULINARY ARTS PRACTICAL AND WRITTEN EXAMINATION I

This culinary examination tests knowledge and proficiency in the primary cooking techniques and predefined fundamental cooking methods (roasting, sauteing, frying, stewing, poaching, braising, and broiling). Students will be given an assignment (which includes a soup, protein, vegetable, and starch) to prepare, present, taste and explain. Prerequisites: Passing grade ("C" or above) in NUTR 230, CUL 140, RMGT 150 and RMGT 210.

Credits: 1 Other: 2

CUL 199

SELECTED TOPICS: CULINARY ARTS

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.

Credits: 1 to 6

CUL 220

INTERNATIONAL CUISINE AND GLOBAL FLAVOR PROFILING

This hands-on lab course traces common global ingredients used in many regional dishes. It combines lecture, demonstration, production and presentation as the means to explore other cultures through the understanding of global culinary heritages. The attitudes and tastes of the more global and knowledgeable customers sets a greater expectation of balance in a professional culinarian's repertoire. Students examine food in the context of culture, geography, history and influences that cuisines have had on each other. Prerequisites: Passing grade ("C" or above) in CUL 170, CUL 180, RMGT 190 and CUL 195.

Credits: 4 Other: 8

CUL 240

THE ART OF BUTCHERY AND CHARCUTERIE

In this course students learn skeletal and muscular composition of animals raised for consumption and how they are fabricated into primal and sub primal cuts. An overview of quality and grading along with terminology, availability and commonly used industry cuts. Class will include small carcass breakdown and fabrication for the charcuterie portion combined with a discussion of locally available products. Students will prepare a variety of charcuterie products from fresh sausage to dry cured salamis, brined to smoked poultry and seafood. Traditional

galantines, terrines and pates will be discussed and prepared with a modern approach. Prerequisites: RMGT 200, RMGT 160 and CUL 220.

Credits: 4 Other: 8

CUL 245S

MODERNIST CUISINE AND THE EVOLUTION OF COOKING

This course introduces students to the scientific investigation of cooking from the ground-breaking work of Nicholas Kurti through today's leading proponents, Grant Achatz, Ferran Adria and Heston Blumenthal. Techniques of specification, thermal immersion, liquid nitrogen for flash freezing, hydrocolloids for thickening and gelling will be applied in the kitchen to a variety of foods. Food pairing methods will be reviewed with the goal of inspiring new food combinations which are theoretically sound on a basis of their flavor. Prerequisites: Passing grade ("C" or above) in RMGT 200, RMGT 160, CUL 220 and RMGT 130.

Credits: 4 Other: 8

CUL 250

APPLIED BASIC BAKING AND PASTRY PRINCIPLES

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. Prerequisites: Passing grade ("C" or above) in RMGT 200, RMGT 160 and CUL 220.

Credits: 4 Other: 8

CUL 255S

EVENT PLANNING AND EXECUTION WITH MODERN BANQUET COOKERY

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 public restaurants. Prerequisites: Passing grade ("C" or above) in RMGT 200, RMGT 160, CUL 220 and RMGT 130.

Credits: 4 Other: 8

CUL 265S

ADVANCED SKILL DEVELOPMENT AND CULINARY COMPETITION MASTERY

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. Prerequisites: Passing grade ("C" or above) in RMGT 200, RMGT 160, CUL 220 and RMGT 130.

Credits: 4 Other: 8

CUL 270

CULINARY ARTS CAPSTONE INTERNSHIP - ELEVATION RESTAURANT DINING

Culinary Arts and Baking & Pastry Arts AAS students facilitate the food production and service of the student-operated restaurant, Elevation. The food items are prepared using techniques and knowledge learned in all classes taken during their culinary education within both disciplines. Students are evaluated on the skills needed to support all operational aspects of a fine dining full-service restaurant. Assessment measures student knowledge and skills in the following areas: food safety and

sanitation, organization, professionalism, and the applied learning competencies that they experienced within both the Culinary Arts and Baking & Pastry Arts curriculum. This final capstone course is designed to serve as a compilation of the entire curricular experience and to provide a last opportunity for assessment and instructor evaluation of student skill sets prior to graduation. Students will experience a full rotation of all of the appropriate stations in both the kitchen and dining room alike in order to experience the entire restaurant operation, while gaining the advantage of repetition and confidence building as an outcome. Students will also experience station rotation assignments that will enable them to synthesize, evaluate and alter the restaurant operation from a food preparation, management, guest service experience, food costing, marketing, and financial perspective. Emphasis in this course will be given to Tuckman's Group Development Model on the "performing" stage. Prerequisites: Passing grade ("C" or above) in CUL 240, CUL 250 and RMGT 260.

Credits: 6 Other: 18

CUL 270P

ADVANCED MENU RESEARCH AND DEVELOPMENT

Serves as a specialization course for either Culinary Arts or Baking & Pastry Arts students; and regional industry professionals are also invited to attend this course with no prerequisites. Within this short-course, students will conduct an extensive Elevation sales mix and contribution margin analysis of appetizers, entrees and dessert offerings at the conclusion of the fourth week of the term. Students will then conduct research on current culinary trends and food preparation technologies and develop special and replacement menu items for Elevation, the student operated restaurant at Cascade Culinary Institute. This course will serve to enhance creative development and advanced skill proficiency.

Credit: 1 Other: 2

CUL271P

ADVANCED FOOD STYLING AND PRESENTATION, PHOTOGRAPHY AND BLOGGING

Serves as a specialization course for either Culinary Arts or Baking & Pastry Arts students; and regional industry professionals are also invited to attend this course with no prerequisites. Within this short-course, students will have the opportunity to support the Elevation marketing plan with the application of live food styling and photography sessions and blogging of guest feedback and personal dining experiences in Elevation. Students will have opportunities to practice active social media engagement and blogging via postings to the www.elevationbend.com and www.cascadeculinary.com webpages and CCI social media sites; in preparation for their future as perspective business owners within the hospitality industry. This course will serve to enhance creative development and advanced skill proficiency relative to the use of technology for marketing and brand advancement.

Credit: 1 Other: 2

CUL 272P

ARTISAN PASTA TECHNIQUES & CONTEMPORARY SAUCE/ SOUP PREPARATION

Serves as a specialization course for either Culinary Arts or Baking & Pastry Arts students; and regional industry professionals are also invited to attend this course with no prerequisites. Within this short-course, students will have the opportunity to conduct research and development of a diversity of pasta and modern sauce/soup preparations that can support Elevation and COCC campus retail sales. Students will prepare both fresh and dried pasta and fresh sauces/soups. This course will serve to enhance creative development and advanced skill proficiency.

Credit: 1 Other: 2

CUL 273P

KNOWLEDGE BOWL COMPETITION MASTERY

Serves as a specialization course for either Culinary Arts or Baking & Pastry Arts students; recent graduates and regional industry professionals are also invited to attend this course. Within this course, students will have the opportunity to prepare for participation in the American Culinary Federation (ACF) Western Regional Conference Knowledge

Bowl Competition. Students will study in teams and experience practice competition sessions in a timed jeopardy-style format. Based upon the student teamwork and preparation level, they will then represent Cascade Culinary Institute at the ACF competition.

Credit: 1 Other: 2

CUL 274P

ADVANCED ARTISAN CHEESE MAKING, SPECIALTY CHARCUTERIE AND FERMENTATION

Serves as a specialization course for either Culinary Arts or Baking & Pastry Arts students; and regional industry professionals are also invited to attend this course with no prerequisites. Within this short-course, students will have the opportunity to conduct research and development and preparation of artisan cheese and charcuterie items that can support Elevation and COCC campus retail sales. A primary objective of this course will be to create items that leverage the use of seasonal and regional ingredients that feature flavors of the greater Pacific Northwest. This course will serve to enhance creative development and advanced skill proficiency.

Credit: 1 Other: 2

CUL 275

CULINARY ARTS PRACTICAL AND WRITTEN EXAMINATION II

This culinary examination tests students' understanding of culinary principles and more advanced proficiency in the principles of cooking. Students will be given a food selection tray and will construct a menu from it which will include a soup, vegetable, starch, and animal protein. They are also tested on station setup, preparation skills, product presentation and flavor, and ability to answer a range of questions posed by the faculty member.

Credits: 1 Other: 2

CUL 275S

FOOD IN THE MEDIA - THE BLOGOSPHERE, PHOTOGRAPHY AND SOCIAL MEDIA

This course will provide students an overview of food writing that is specific to the restaurant industry. An analysis of the use of blogs within the restaurant industry will take place, along with an applied learning activity that relates to the development of an active blog for both Cascade Culinary Institute and Elevation Restaurant. Students will blog about their dining experience in Elevation Restaurant throughout the term, while telling the story of their learning experience within an assigned lab course. They will support the blogosphere experience with the integration of photography and social media usage on the CCI Facebook and Web page and Elevation Web page. Students will blend the outcomes in blogging and food writing, food photography and the use of a diversity of social media mediums to enhance their personal marketing for future career advancement as an outcome of this course. Prerequisites: Passing grade ("C" or above) in RMGT 200, RMGT 160, CUL 220 and RMGT 130.

Credits: 4 Other: 8

CUL 280

CULINARY ARTS INDUSTRY INTERNSHIP

This course serves as a supervised work experience 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 Culinary Arts. Prerequisites: Passing grade ("C" or above) in CUL 270 and CUL 275.

Credits: 6 Other: 20



CCI: NUTRITION AND DIETARY MANAGEMENT

NUTR 100

NUTRITION THERAPY AND CLINICAL MANAGEMENT

In-depth study of common diseases and the specific diets used in their treatment. Class format is based on case studies, with nutrition assessment including review of laboratory data, developing care plans and discussion of recommended diet modifications. This course also covers an introduction to nutrition concepts that relate with the discipline of Medical Nutrition Therapy. Collection of nutrition data and providing client nutrition education with support of regulatory agency surveys serves as a focus of course content. Prerequisites: Minimum placement scores resulting in WR 121 placement or completion of WR 65/95 ("C" or better). Minimum placement scores resulting in MTH 60 placement (equivalent to RMGT 90) or completion of MTH 20 ("C" or better).

Credits: 3 Lecture: 3

NUTR 130S

MODERN VEGETARIAN AND SPECIAL DIETARY CULINARY TECHNIQUES

This course serves as an introduction to viewing vegetarian and special dietary needs through the lens of food and cooking. Emphasis will be placed upon gaining mastery of the basic cooking techniques for a wide variety of health-supportive foods. Develop the ability to identify a broad spectrum of natural ingredients, as well as expertise in their selection and handling. Learn whole grain baking techniques, including the basic principles of baking, as well as converting recipes from traditional to natural and vegan ingredients. Develop familiarity with numerous approaches to diet and health, along with a thorough comprehension of the criteria for quality food selection. Prerequisites: RMGT 90, NUTR 100, CUL 110, RMGT 120.

Credits: 4 Other: 8

NUTR 230

CULINARY NUTRITION AND APPLIED TECHNIQUES OF HEALTHY COOKING

This course serves as an introduction to viewing nutrition through the lens of food and cooking. Emphasis will be placed upon the relationship between the preparation of flavorful food and its impact upon the body. Current dietary guidelines, along with the function of nutrients within the body, will be discussed. Modern healthy cooking techniques will be executed in the lab portion of this course with the intent to expose students to meeting the nutritional needs and requests of health conscious diners. Exposure to menu and recipe design will be covered, as students will learn how to reengineer classical recipes and present

healthful and flavorful alternatives. Instruction will be provided by a Registered Dietician in cooperation with a Chef Instructor. Prerequisites: CUL 170, CUL 180, RMGT 190, CUL 195.

Credits: 4 Other: 8

NUTR 270

DIETARY MANAGEMENT CERTIFICATION EXAMINATION PREPARATION

This course is designed to provide a collaborative learning opportunity for students in the Nutrition and Dietary Management Certificate Program to learn how they can successfully prepare for the Association of Nutrition and Foodservice Professionals (ANFP) Certified Dietary Manager Examination. Study guide materials are available at the Barber Library and information about registering for the examination can be reviewed at: www.anfponline.org/Training/credentialing_exam.shtml/.

Credit: 1 Lecture: 1

NUTR 280

NUTRITION AND DIETARY MANAGEMENT INDUSTRY INTERNSHIP

Serves as a supervised work experience within the farming and agriculture 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 on the farm working with both plant and animal life through the range of planting to harvesting. 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. Prerequisites: NUTR 230, RMGT 150, RMGT 130, RMGT 260, RMGT 290.

Credits: 6 Other: 18

CCI: SUSTAINABLE FOOD SYSTEMS

SUST 100S

SUSTAINABLE FOOD PRODUCTION SYSTEMS OVERVIEW AND OPERATIONAL

Expose students to the landscape of issues and interpretations of sustainability and how they directly relate with their careers within the restaurant and foodservice industry. The historical context of food distribution, culture and economics will be discussed. Students will then learn about the variables that influence cost and sustainable farm practices that relate with American culture, economics and the final influence upon the environment. Interactions with regional family farms will serve to provide both context and understanding as to how to develop partnerships that will support sustainable farming initiatives. Through the use of the National Restaurant Association ConServe Solutions for Sustainability Program, the American Culinary Federation Sustainability Video Series, and the Green Restaurant Association students will learn best practices and develop individual and group skills to assess such practices within a local restaurant or foodservice establishment. They will learn sustainable practices that relate with environmental issues, disposable product management, chemical usage, food and beverage selection, energy and water conservation, building construction, and waste management.

Credits: 3 Lecture: 3

SUST 150S

APPLIED GROWING AND RAISING OF FARM PLANTS AND ANIMALS

Provide students with an overview of sustainable farm operations and maintenance as it relates with raising plants and animals. Students will learn the principles of running a sustainable farm, while also experience practice on the farm on a weekly basis that will enable hands-on exposure to caring for crops and animals. Students will apply sustainable farm management practices, while learning the difference between conventional and sustainable farm practices. Students will

gain an understanding of the value of high quality soil in the raising of healthy crops, and will learn the value of seed banks and soil analysis in the process of raising healthy food. Students will also learn about the variations of raising livestock in conventional venues with hormones and antibiotics. Lastly, students will work on a final project where they design and present a model of a sustainable farm concept.

Credits: 4 Other: 8

SUST 180S

APPLIED HARVESTING AND FOOD PRESERVATION PRINCIPLES

Serve 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 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.

Credits: 4 Other: 8

SUST 190S

FARM-TO-TABLE AND SUSTAINABLE CUISINE PRACTICES

Students gain valuable insight into the most significant trend in the culinary world today. Students discover the benefits of using locally produced crops and products at their peak of freshness through hands-on experience at a working farm. Students learn relevant techniques - from sourcing sustainable local ingredients to preparing them - and the short- and long-term advantages of this vital practice. Students will understand small-scale farming and food production - from local farms to farmers' markets to the kitchen. There will be field trips during the course. A permission slip will be required if under the age of 18. Students provide their own transportation or arrange carpooling with fellow classmates. Prerequisites: Passing grade ("C" or above) in RMGT 200, RMGT 160, CUL 220 and RMGT 130.

Credits: 4 Other: 8

SUST 275P

MODERN TECHNIQUES OF CANNING AND FOOD PRESERVATION

Serves as a specialization course for either Culinary Arts or Baking & Pastry Arts students; and regional industry professionals are also invited to attend this course with no prerequisites. Within this short-course, students will experience utilizing local, regional and seasonal ingredients that are in the peak of harvest, students will learn how to process and preserve a diversity of produce and meat items. Students will be exposed to a diversity of classical and modern preservation techniques with consideration of flavor development, extending shelf life while maintaining proper food safety standards. This course will serve to enhance creative development and advanced skill proficiency relative to food preservation processes.

Credits: 1 Other: 2

SUST 280

FARMING AND REGIONAL AGRICULTURE INTERNSHIP

This course serves as a supervised work experience designed to expand career knowledge and experiential confidence while increasing knowledge, speed, timing, organization, and ability to execute industry farm management and operational skills on a repetitive basis. Students will receive a diverse work experience that is designed on a systematic rotation of different stations on the farm. Based upon the Sustainable Food Systems for Culinary Arts Certificate curriculum design.

Credits: 6 Other: 18

CCI: RESTAURANT MANAGEMENT AND SYSTEMS

RMGT 90

APPLIED MATH FOR CULINARY ARTS

In this course, students will learn mathematics critical to the discipline of Culinary Arts and Baking and Pastry Arts. The list of topics to be covered includes the following: metric system of measurement, unit conversion, yield testing and percentages, calculating food and beverage costs, recipe scale and conversions, and kitchen ratios. Also this course will include basic algebraic concepts with culinary applications, basic statistics and graphing, and graphing in a rectangular coordinate system. Most of the material within this course will be sourced from the course textbook; however, some material will be introduced in class in the form of labs and interactive learning activities that relate directly to the discipline. Instruction will be provided by the Mathematics department in cooperation with a Cascade Culinary Institute chef instructor.

Credits: 4 Lecture: 4

RMGT 120

STUDENT ACADEMIC SUCCESS AND RESTAURANT INDUSTRY CAREER PREPARATION

The focus of this course is to promote student success in both the formal and informal learning opportunities at the Cascade Culinary Institute. Students will learn how to successfully prepare for their coursework while being exposed to work habit characteristics and professionalism standards that will lead to success within the restaurant industry. Guest speakers will present on a diversity of career path opportunities which will serve as a catalyst for students to begin researching career goals to join the workforce. Students will also begin the process of designing their personal e-portfolio, which is a web-based system utilized to celebrate student learning and success throughout their educational career. The e-portfolio is a documentation medium that will serve as a personal marketing tool to support students during their final post-graduation employment search process. An overview of presenting in the discipline, group dynamics and applied leadership development in the discipline and reading and writing in the discipline will also be covered. Lastly, students will be exposed to the philosophy of service learning and how it will influence their experientially-based learning activities throughout their academic career at Cascade Culinary Institute. Prerequisites: MTH 20 with a "C" grade or above or placement exam score that places the student in MTH 60 or above; WR 65 or WR 95 with a "C" grade or above or a placement exam score that places the student in WR 121 or above.

Credits: 1 Lecture: 1

RMGT 130

HOSPITALITY INDUSTRY SUPERVISION AND PRINCIPLES OF LEADERSHIP

This course introduces the student to the skills needed to be an effective leader within the hospitality industry. Class topics will include communicating effectively, planning, organizing, goal setting, supervising teams, decision-making, employee training and development. Students will also analyze cases, and role-play and become familiar with solving problems that relate to the industry. Students will examine the skills needed for effective leadership, the ethical dilemmas of leadership, the foundation and context of moral choice, the moral implication of decision making, and the impact upon staff morale, personal integrity, and citizenship. The purpose of the course is to develop an understanding of the student's own leadership style and how that will influence the student's transition into the workforce and future career goals. Lastly students will combine the two aspects of organizational behavior- the research and its applications- to understand how they improve the functioning of organizations and the satisfaction of the people who work within them.

Credits: 3 Lecture: 3

RMGT 150 PROCUREMENT, INGREDIENT IDENTIFICATION AND FOOD COST CONTROL

This course provides students an overview to the principles of cost control, product yield tests, vendor relations and procurement, and an introduction to ingredient identification and tasting. Lectures focus on the design and implementation of cost control measures and effective purchasing procedures. Students will be exposed to a basic understanding of profit and loss statements and how to track cost as it relates to the flow of food. In the lab portion of this course, students will also have the opportunity to place, receive and store food orders, conduct quality assurance on all food items, and execute an electronic end-of-month inventory utilizing advanced scanning technology. As an applied learning activity, students will be directly involved in the issuing of all course ingredient and supply requisitions. Lastly this course will serve as an opportunity for industry vendors to speak with students, conduct ingredient tastings, and provide updates regarding modern industry practices. Prerequisites: Passing grade ("C" or above) in RMGT 90, BAK 110, RMGT 120 and WR 121.

Credits: 3 Lecture: 1 Lab: 6

RMGT 160 WINE AND SPECIALTY BEVERAGE MANAGEMENT AND SERVICE

This course incorporates theoretical and practical information about the organization of a beverage program within the overall operation of a hospitality business. Topics to be covered include the legal and moral responsibilities that come with the sale of alcoholic beverages, purchasing and marketing. Information on distillation, brewing, mixology and non-alcoholic beverage service will also be presented. Emphasis will be placed on cost control measures for beverages, inventory, and sanitation laws and practices. Students will develop the skills to prepare and serve spirits, beer, coffee and tea. Prerequisites: Passing grade ("C" or above) in CUL 170, CUL 180, RMGT 190 and CUL 195.

Credits: 3 Lecture: 3

RMGT 190 CONTEMPORARY DINING ROOM SERVICE OPERATIONS

This course is designed to expose students to the importance of service, sanitation and appearance in a real-life dining room setting. The students will experience styles of service including a la carte, reception, banquet and deluxe buffet. Other topics include covering the primary guidelines for service, guest relations, etiquette, and phone and opentable.com reservation system management. Students will also learn about the different dining room staff positions and how they relate with the overall restaurant operation and guest experience. Proper management of tabletop flatware, china, and glassware combined with table set-up will also be covered. Students will also create service experience assignments analyzing the difference between good and bad service. Students will also have the opportunity to receive training and be awarded the OLCC Alcohol Service Permit. Prerequisites: Passing grade ("C" or above) in NUTR 230, CUL 140, RMGT 150 and RMGT 210.

Credits: 5 Lecture: 3 Lab: 6

RMGT 200 COMPREHENSIVE KITCHEN OPERATIONS FOR THE RESTAURANT INDUSTRY

Students will learn to prepare modern and seasonal dishes in a restaurant setting and put previously learned skills into practice in the College's dining room. This course will emphasize 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. Prerequisites: Passing grade ("C" or above) in CUL 170, CUL 180, RMGT 190 and CUL 195.

Credits: 4 Lecture: 2 Lab: 6

RMGT 210 MENU COMPOSITION AND ANALYSIS

Within this course students will conduct an analysis of menu design and effectiveness for a diversity of local restaurant establishments. Topics to be covered include standardized recipes and cost cards, understanding the income statement and profit and loss statements, nutritional aspects of menu planning and design, and menu configuration. Students will analyze and critique industry menus and create menus from the perspective of concept, clarity, cost, price, and efficiency. Students will also 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 conduct presentations to the Elevation staff as to how to make perspective design and offering improvements. Prerequisites: Passing grade ("C" or above) in RMGT 90, BAK 110, RMGT 120 and WR 121.

Credits: 3 Lecture: 3

RMGT 260 RESTAURANT INDUSTRY CAREER SUCCESS AND INTERNSHIP PREP

Continued instruction in the process of securing one's externship position, including review and critique of a strong resume and cover letter. Interviewing techniques are discussed. Securing the position is reviewed along with the training agreement, the follow-up process and continued discussion of career networking and career planning. Prerequisites: Passing grade ("C" or above) in RMGT 200, RMGT 160 and CUL 220.

Credits: 1 Lecture: 1

RMGT 280 RESTAURANT MANAGEMENT INDUSTRY INTERNSHIP

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 supervisors evaluation.

Credit: 1 Lecture: 1

RMGT 290 SERVICE LEARNING AND E-FOLIO PRESENTATION

This course serves as a culmination of the student's academic career at Cascade Culinary Institute and COCC. The goal of this course is to empower students as they transition across the threshold from academia to either a four-year institution to continue their education or to the hospitality industry workforce. Emphasis in this course will also be given to Tuckman's Group Development Model on the "adjourning" stage, as this content will aid students as they transition from college to the workforce, while also serving to set up a formal network for support and resources for their post graduation experience. Students will also learn at this time about the CCI Alumni Association, CCI graduation celebration and dinner, and how to stay involved with CCI as industry leaders after graduation. Students will design a self-marketing promotional video or presentation that will be integrated with their personal e-portfolio, in which they will elaborate on their academic career and service learning activities while enrolled at CCI. The goal is to celebrate student success, while also empowering students as they are on the verge of graduation. Discusses ACF Certified Culinarian and Certified Pastry Culinarian certifications. Prerequisites: Passing grade ("C" or above) in CUL 270 and CUL 275.

Credits: 1 Lecture: 1

RMGT 295S RESTAURANT INDUSTRY ENTREPRENEURSHIP AND CONCEPT DEVELOPMENT

This course introduces students to the process of food service outlet concept development and general operations. Examples of design

concepts can include full-service, quick service, mobile food outlets, pop-ups and micro outlets. Class topics include facility design and planning, equipment selection process, menu design and analysis, budgeting and controls, staffing and leadership skill development, technology integration and organizational marketing. Students will have the opportunity to partner with a regional industry mentor as it relates to restaurant concept development and operations of an actual local restaurant. Students will then work in teams to develop a "real" restaurant concept that will be presented to a panel of regional industry professionals and CCI faculty/staff at the conclusion of the term. A restaurant design simulation program will support the student learning outcomes in this course. Prerequisites: RMGT 200, RMGT 160, CUL 220, RMGT 130.

Credits: 3 Other: 6

CAREER/LIFE PLANNING

HD 109

EFFECTIVE JOB SEARCH STRATEGIES

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.

Credits: 2 Lecture: 2

HD 110

CAREER PLANNING

Career Planning is a lifelong process that strengthens academic and career decisions. The process of self-awareness includes clarifying values, exploring preferences, defining interests, identifying skills and strengths, and developing strategies to support and use personal preferences. Personal knowledge is merged with current labor market information to begin the lifelong process of career decision-making.

Credits: 3 Lecture: 3

HD 114

LIFE PLAN FOR WOMEN

Credits: 2 Lecture: 2

HD 188

SPECIAL STUDIES: HUMAN DEVELOPMENT

Credits: 1 to 3

HD 190

OLI LEADERSHIP SKILLS I

HD 190 is the first in a three-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. Instructor approval required.

Credits: 1 Other: 2

HD 191

OLI LEADERSHIP SKILLS II

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. Instructor approval required.

Credits: 1 Other: 2

HD 192

OLI LEADERSHIP SKILLS III

HD 192 is the third in a three-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. Instructor approval required.

Credits: 1 Other: 2

HD 193

OLI MIDDLE SCHOOL MENTORING I

HD 193 is the first in a three-term series. This first term provides the foundation for developing skills in mentoring Latino middle school students. Students explore the concepts of leadership, mentoring, teamwork, conflict resolution, intercultural communication and public speaking. This program fosters cultural pride and appreciation for the value of continuing education. Recommended preparation: HD 190, HD 191 and HD 192 or instructor approval.

Credits: 1 Lecture: 1

HD 194

OLI MIDDLE SCHOOL MENTORING II

HD 194 is the second in a three-term series. This second term builds on the foundation of the previous term to develop skills in mentoring Latino middle school students. Students continue in the exploration of the concepts of leadership, mentoring, teamwork, conflict resolution, intercultural communication and public speaking. This program fosters cultural pride and appreciation for the value of continuing education. Recommended preparation: HD 193 or instructor approval.

Credits: 1 Lecture: 1

HD 195

OLI MIDDLE SCHOOL MENTORING III

HD 195 is the third in a three-term series. This third term builds on the foundation of the previous two terms to develop skills in mentoring Latino middle school students. Students continue in the exploration of the concepts of leadership, mentoring, teamwork, conflict resolution, intercultural communication and public speaking. This program fosters cultural pride and appreciation for the value of continuing education. Recommended preparation: HD 194 or instructor approval.

Credits: 1 Lecture: 1

HD 211

MENTORING FOR OLI INSTITUTE I

HD 211 is the first course in the three-term mentoring course sequence. It provides a theoretical and practical framework for exploring the mentoring process as well as intercultural skills and effective communication strategies. College mentors learn and practice skills necessary to promote lifelong learning and leadership. They demonstrate and share these skills with high school students, who are primarily of Latino descent, in the tri-county area at nine intensive day-long sessions one Saturday per month. The mentoring relationship requires a three-term commitment. Recommended preparation: HD 100CS or instructor approval.

Credits: 3 Lecture: 2 Other: 2

HD 212

MENTORING FOR OLI INSTITUTE II

HD 212 is the second course in the three-term series. Students will build on the skills required to promote lifelong learning and leadership, and to apply these skills to their own lives as well as to convey them to high school student mentees, who are primarily of Latino descent. Practice of the mentoring process, team building, communication and presentation skills are covered in class and demonstrated with OLI mentees at day-long sessions one Saturday per month. Recommended preparation: HD 211 or instructor approval.

Credits: 3 Lecture: 2 Other: 2

HD 213 MENTORING FOR OLI III

HD 213 is the third course in the three-term series. Students will build on the skills required to promote lifelong learning and leadership, and to apply these skills to their own lives as well as to convey them to high school student mentees, who are primarily of Latino descent. Practice of the mentoring process, team building, communication and presentation skills are covered in class and demonstrated with OLI mentees at day-long sessions one Saturday per month. Recommended preparation: HD 212 or instructor approval.

Credits: 3 Lecture: 2 Other: 2



CHEMISTRY

CH 104 INTRODUCTION TO CHEMISTRY I

Introduces basic principles of general chemistry, including atomic theory, chemical formulas and equations, bonding, stoichiometry, acid/base chemistry, and solutions. Supporting laboratory work included. Prerequisite: MTH 95 or higher. Not designed for science majors.

Credits: 5 Lecture: 4 Lab: 3

CH 105 INTRODUCTION TO CHEMISTRY II

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. Prerequisite: CH 104 or equivalent, passed with a "C" or better. Not designed for science majors.

Credits: 5 Lecture: 4 Lab: 3

CH 106 INTRODUCTION TO CHEMISTRY III

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. Prerequisite: CH 105 or equivalent, completed with a "C" or better. Not designed for science majors.

Credits: 5 Lecture: 4 Lab: 3

CH 188 SPECIAL STUDIES: CHEMISTRY

Credits: 1 to 4

CH 221 GENERAL CHEMISTRY I

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. Prerequisite: MTH 111 or higher or math placement test score that places the student above MTH 111.

Credits: 5 Lecture: 4 Lab: 3

CH 222 GENERAL CHEMISTRY II

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. Prerequisite: CH 221 with a "C" or better.

Credits: 5 Lecture: 4 Lab: 3

CH 223 GENERAL CHEMISTRY III

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. Prerequisite: CH 222 with a "C" or better.

Credits: 5 Lecture: 4 Lab: 3

CH 288 SPECIAL STUDIES: CHEMISTRY

Credits: 1 to 4

COMPUTER & INFORMATION SYSTEMS

CIS 010 COMPUTER KEYBOARDING

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. Pass/No pass grading.

Credits: 1 Other: 2

CIS 070 INTRODUCTION TO COMPUTERS: WINDOWS

Students will gain confidence in the use of personal computers and the Windows operating system. Topics include fundamental computer terminology, introductory use of a graphic user interface including mouse usage, windows, menus, icons and dialog boxes. Also included are file management and an introduction to word processing, Web browsing and email. Pass/No pass grading.

Credits: 2 Lecture: 1 Other: 2

CIS 085 INTRODUCTION TO AUTOCAD

An introductory course in AutoCAD designed for the non-CAD user. Students will be exposed to basic AutoCAD fundamentals focusing on drawing. Students will gain confidence in the use of AutoCAD through short lectures and practical hands on experience. Topics include navigating the AutoCAD system, drawing, viewing and printing.

Credits: 2 Lecture: 2

CIS 099 SELECTED TOPICS: COMPUTER AND INFORMATION SYSTEMS

Credits: 1 to 4

CIS 120**COMPUTER CONCEPTS**

Follows the Internet and Computing Core Certificate (IC3) national standard for digital literacy used at numerous colleges and universities across the country as well as industry. The course objectives are broken down into three modules: Computer Fundamentals, Key Applications, and Living Online. This class provides students with the knowledge and skills needed to use computers successfully at the college level. Recommended preparation: Keyboarding, CIS 070 or equivalent computer skills.

Credits: 4 Lecture: 3 Other: 2

CIS 122**INTRODUCTION TO PROGRAMMING**

Introduction to computer programming for those with little or no programming experience. Provides a strong, fundamental understanding of Visual Basic.Net. 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. Recommended preparation: CIS 120 and CIS 131.

Credits: 4 Lecture: 3 Other: 2

CIS 125A**ACCESS**

Introduction to the most popular desktop database software, Microsoft Access. This course will help students prepare for the latest Microsoft certification for Access (#77-885) which helps students validate the skills industries require. The course teaches users how to create and modify database tables, forms, queries and reports. The focus is on optimizing the databases for efficient data entry and generating comprehensive reports. Database design issues are discussed but not emphasized in this course. Recommended preparation: CIS 131.

Credits: 4 Lecture: 3 Other: 2

CIS 125A1**AUTOCAD I**

First course in a two-term sequence introducing AutoCAD software as a drafting tool. Instruction will be given in file handling, basic command function, drafting techniques, presentation and plotting. Architectural and mechanical applications will be used in lab exercises to demonstrate AutoCAD commands. Work will be completed with AutoCAD. Recommended preparation or recommended to be taken with: CIS 120.

Credits: 4 Lecture: 3 Other: 2

CIS 125A2**AUTOCAD II**

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. Recommended preparation: CIS 125A1.

Credits: 4 Lecture: 3 Other: 2

CIS 125DW**INTRODUCTION TO DREAMWEAVER**

Explores the skills necessary to become an Adobe Certified Associate (ACA) in Web communication using Adobe Dreamweaver. Outcomes include an overall understanding of Dreamweaver as well as setting project requirements and identifying, building, and evaluating rich communication elements. Recommended preparation: CIS 120 or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 125E**EXCEL**

Covers intermediate and advanced features of Excel 2010 such as lists, pivot tables, working with multiple worksheets, templates, what-if-

analysis, data tables, advanced formulas and functions, goal seek, solver, consolidating and importing data. Students will apply these Excel features to create and revise business worksheets. Recommended preparation: CIS 120 and CIS 131.

Credits: 4 Lecture: 3 Other: 2

CIS 125FL**INTRODUCTION TO FLASH**

Explores the skills necessary to become an Adobe Certified Associate (ACA) in rich media communication using Adobe Flash. Outcomes include an overall understanding of Flash as well as setting project requirements and identifying, building, and evaluating rich media elements. Recommended preparation: CIS 120 or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 125G**PHOTOSHOP**

This class will provide an introduction to using Adobe Photoshop for the purpose of working with digital images. Students will explore restoring photographs, creating web and print graphics, while adhering to basic composition rules to create well-balanced images. Recommended preparation: CIS 120 or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 125I**ADOBE ILLUSTRATOR**

This class will provide instruction in drawing, editing, and layout techniques using Adobe Illustrator. Students are introduced to the basic illustrator tools, composition rules, and complete vector-based projects such as simple illustrations, logotype, posters, and postcards. Recommended preparation: CIS 120 or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 125V**VISIO**

This course is an introduction to Microsoft Visio, a vector-based illustration tool. Students will learn fundamental skills while creating several types of basic diagrams including workflows, flowcharts, organizational charts, directional maps, network and floor plans. Recommended preparation: CIS 120.

Credits: 4 Lecture: 3 Other: 2

CIS 125WA**WEB ANIMATION**

Explores the tools and technologies used to create vector and bitmap web animations, as well as how to create 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. The course will also cover the principles of two dimension animation and its uses on the web. Students will make effective computer animations that can be marketed and delivered through the web. Recommended preparation: CIS 120 or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 131**SOFTWARE APPLICATIONS**

Outcomes focus on learning Word and Excel competencies as defined by the industry standard Microsoft Office Specialist (MOS) certification. Prerequisite: CIS 120, COCC Computer Competency or instructor permission. Recommended preparation: MTH 060/085 or BA 104.

Credits: 4 Lecture: 3 Other: 2

CIS 133JS**INTRODUCTION TO JAVASCRIPT**

Expands on existing Web development skills by introducing JavaScript for client-side scripting. Students will learn JavaScript language/syntax, functions, objects, arrays and event handling as they are used for dynamic page content-form validation, user interaction and navigation

menus. Prerequisite: CIS 122 or instructor approval. Recommended preparation: CIS 195.

Credits: 4 Lecture: 3 Other: 2

CIS 133P

INTRODUCTION TO PHP

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. Prerequisite: CIS 122 or instructor approval. Recommended preparation: CIS 195.

Credits: 4 Lecture: 3 Other: 2

CIS 135A1

AUTODESK REVIT I

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. Recommended preparation: CIS 125A1.

Credits: 4 Lecture: 3 Other: 2

CIS 135A2

AUTODESK REVIT II

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. Recommended preparation: CIS 135A1.

Credits: 4 Lecture: 3 Other: 2

CIS 135C1

AUTOCAD CIVIL 3D

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. Recommended preparation: CIS 125A2.

Credits: 4 Lecture: 3 Other: 2

CIS 135DB

DATABASE THEORY/SQL

An introductory course of database concepts. This course includes discussion of the parts of a database and database management systems. Other topics include database design theory, the concept of normalization, and understanding data models. Introduces SQL. Students will be introduced to several of the most popular database management systems such as Access, Microsoft SQL Server and MySQL. Recommended preparation: CIS 120 or IC3 certification, CIS 131.

Credits: 4 Lecture: 3 Other: 2

CIS 135S1

SOLIDWORKS I

This course is an introduction to engineering graphics as used for the communication of concepts in design and manufacturing. Practical applications using solid modeling software will be used to capture design intent and to generate engineering drawings. Adherence to industrial standards and formats will be maintained.

Credits: 4 Lecture: 3 Other: 2

CIS 135S2

SOLIDWORKS II

This course continues the discussion of engineering graphics as used for the communication of concepts in design and manufacturing. Practical applications using solid modeling software will be used in comprehensive assemblies, working drawing sets, sheet metal modeling, weldments, content reuse, functional design and assembly simulation. Adherence to industrial standards and formats will be maintained.

Credits: 4 Lecture: 3 Other: 2

CIS 140

A+ ESSENTIALS I

A+ Essentials is the starting point for a career in IT. The course outcomes cover the fundamentals of computer technology, installation and configuration of PCs, laptops and related hardware, and basic networking concepts. The course also prepares students to pass the vendor neutral CompTIA A+ Essentials certification exam (220-801). Recommended preparation: CIS 120 and CIS 178. Recommended to be taken with: CIS 145.

Credits: 4 Lecture: 3 Other: 2

CIS 145

A+ ESSENTIALS II

The course prepares students with the skills and knowledge associated with the CompTIAs A+ 220-802 outcomes. The curriculum 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. Recommended preparation: CIS 120 and CIS 178. Recommended to be taken with: CIS 140.

Credits: 4 Lecture: 3 Other: 2

CIS 151C

CISCO INTERNETWORKING

First 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. Prerequisite: CIS 179, CompTia Network+ certification or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 152C

CISCO ROUTING AND SWITCHING

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, IPv4 and IPv6 static and dynamic routing, OSPFv2 and OSPFv3, DHCP and DNS for IPv4 and IPv6, NAT, and access-lists for IPv4 and IPv6. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term. Prerequisite: CIS 151C or instructor permission.

Credits: 4 Lecture: 3 Other: 2

CIS 154C

CISCO SCALING AND CONNECTING NETWORKS

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 curriculum, CCNA 5.0, Scaling Networks and Connecting Networks. Students explore WAN technologies such as Frame Relay, 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. Prerequisite: CIS 152C or instructor permission.

Credits: 4 Lecture: 3 Other: 2

CIS 178

INTERNET IN DEPTH

Introduces the concepts and technologies of the Internet. The course explores a wide variety of Internet protocols and examines the history and infrastructure of the Internet. Students will 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. Recommended preparation: Keyboarding, CIS 070 or equivalent computer skills

Credits: 4 Lecture: 3 Other: 2

CIS 179 NETWORKING ESSENTIALS

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. Prerequisites: CIS 140 and CIS 145.

Credits: 4 Lecture: 3 Other: 2

CIS 195 WEB DEVELOPMENT I

Explores the use of development tools, HTML and CSS to create valid websites for a variety of topics. Students will practice site planning, design, navigation, usability and publishing. Recommended preparation: CIS 120 or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 197 CONTENT MANAGEMENT SYSTEMS

Examines the basics of database-driven websites created using a content management system (CMS), an extremely flexible and scalable technology used for making websites that need database functionality and constant content updates. The students learn through hands-on projects how to install, configure, and manage databases connected to a CMS. Students will learn how to create rich content for websites that offer both functionality and scalability using a CMS. Recommended preparation: CIS 195.

Credits: 4 Lecture: 3 Other: 2

CIS 198 COMPUTER AND INFORMATION SYSTEMS PROJECTS

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. Recommended preparation: CIS 120 and CIS 131 or instructor approval.

Credits: 3 Other: 9

CIS 199 SELECTED TOPICS: COMPUTER AND INFORMATION SYSTEMS

Reserved for courses that cover topics of general interest, projects in computer science and experimental courses. Instructor approval required.

Credits: 1 to 7

CIS 233P WEB PROGRAMMING

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. Recommended preparation: CIS 133JS. Prerequisite: CIS 133P or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 235 IT IN BUSINESS

Uses advanced software features in Word, Excel, PowerPoint and Access to solve and analyze business problems using integration of the

applications in a business environment. Recommended preparation: CIS 120 and CIS 131.

Credits: 4 Lecture: 3 Other: 2

CIS 244 INFORMATION SYSTEMS ANALYSIS

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. Recommended preparation: CIS 120 and CIS 131.

Credits: 4 Lecture: 3 Other: 2

CIS 275 INTRODUCTION TO DATABASE MANAGEMENT AND DESIGN

Introduces students to the design, uses, and terminology of a database management system. Identifies entity-relationship and object data modeling techniques, the importance of normalizing data models and methods to implement the models into a database schema. Introduces students to Structured Query Language. Recommended preparation: CIS 135DB or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 276 ADVANCED SQL

Focuses on design, development and implementation of SQL programming for all types of relational database applications including client/server and Internet databases. The course introduces students to the procedural language used to extend SQL in a programmatic manner. Students will learn to write complicated interactive and embedded SQL statements. Emphasis will be on using Microsoft SQL server. Recommended preparation: CIS 122 and CIS 135DB or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 279L LINUX+

This course introduces the Unix operating system using Linux. It follows the CompTIA Linux+ exam outcomes and competencies and is therefore 'vendor neutral'. It is designed as an introductory course to the Linux operating system but previous experience with other PC operating systems is expected. The class teaches the basics of the Unix operating system from a command-line perspective including installation, management, configuration, security, documentation and hardware. Recommended preparation: CIS 120 or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 279SC WINDOWS SERVER CONFIGURATION

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. Prerequisite: CIS 179, Comptia Network+ certification or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 279SE SECURITY+

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. Prerequisite: CIS 179.

Credits: 4 Lecture: 3 Other: 2

CIS 279SM**WINDOWS SERVER MANAGEMENT**

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. Required Prerequisite: CIS 279SC Windows Server Configuration or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 279SP**MICROSOFT SHAREPOINT CONFIGURATION**

Introduces students to Microsoft SharePoint Server and prepares them to plan, configure, and administer an SharePoint Environment. Provides the information necessary to pass the Microsoft Certified Technology Specialist on SharePoint Configuration. Recommended preparation: CIS 179 or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 279SS**WINDOWS SERVER SERVICES**

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. Required Prerequisite: CIS 279SM Windows Server Management or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 279WC**WINDOWS CLIENT**

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. Recommended preparation: CIS 179 or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 280**CO-OP WORK EXPERIENCE CIS**

A learning strategy designed to enhance a student's knowledge, personal development, professional development and professional preparation by integrating academic study with practical experience. Student completes on-the-job training in a computer environment. Students complete a minimum of 33 clock hours of work for each credit hour earned. Instructor approval required.

Credits: 1 to 3

CIS 284**CISCO CCNA SECURITY**

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. Prerequisite: CIS 154C, CCNA certification or instructor permission.

Credits: 4 Lecture: 3 Other: 2

CIS 295**WEB DEVELOPMENT II**

Expands on existing HTML/CSS skills and explores the process of making websites, particularly e-commerce sites for clients. Students will practice site planning, development, content management and client relations as they create, document and present a single website project. Topics include search engine optimization, usability testing, server-side scripting (PHP) and content management systems (CMS). Recommended preparation: CIS 195 or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CIS 299**SELECTED TOPICS: COMPUTER & INFORMATION SYSTEMS**

Credits: 1 to 7

COMPUTER SCIENCE**CS 160****COMPUTER SCIENCE ORIENTATION**

Gives a broad overview of the discipline of computer science. Students learn about the foundations of computer science such as problem solving and algorithms, programming concepts, and computer hardware. Students also research careers available in computer science, research pathways to computer careers, and reflect on some of the influences computers have had and continue to have on society. Students also write programs in a variety of programming languages. Recommended preparation: CIS 120 and MTH 095 or instructor approval.

Credits: 4 Lecture: 3 Other: 2

CS 161**COMPUTER SCIENCE I**

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. Appropriate for computer science/math/science. Prerequisites: MTH 112 or MTH 251. Recommended preparation: CS 160.

Credits: 4 Lecture: 3 Other: 2

CS 162**COMPUTER SCIENCE II**

CS 162 emphasizes the development of data structures, algorithm analysis, recursion, and sorting. However we will also explore/review several basic programming constructs, Inheritance, Interfaces, Exceptions, and Files/Streams. A strict emphasis will be placed on software engineering methods; proper program development and attention to program planning and documentation. Prerequisite: CS 161. Corequisite: MTH 231.

Credits: 4 Lecture: 3 Other: 2

CRIMINAL JUSTICE**CJ 100****SURVEY OF THE CRIMINAL JUSTICE SYSTEM**

Introductory survey of the functional components of the U.S. criminal justice system. Includes law enforcement, the courts and corrections.

Credits: 3 Lecture: 3

CJ 101**INTRODUCTION TO CRIMINOLOGY**

Interdisciplinary approach to theoretical perspectives on the causes, treatment and prevention of crime.

Credits: 4 Lecture: 4

CJ 110**LAW ENFORCEMENT**

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.

Credits: 3 Lecture: 3

CJ 120**JUDICIAL PROCESS**

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.

Credits: 3 Lecture: 3

CJ 123**SPANISH FOR LAW ENFORCEMENT PERSONNEL**

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. Recommended preparation: SPAN 101.

Credits: 2 Lecture: 2

CJ 153**ETHICAL ISSUES IN CRIMINAL JUSTICE**

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.

Credits: 3 Lecture: 3

CJ 188**SPECIAL STUDIES: CRIMINAL JUSTICE**

Instructor approval required.

Credits: 1 to 12

CJ 199**SPECIAL TOPICS: CRIMINAL JUSTICE**

Presents selected topics of study in criminal justice offered on a temporary or experimental basis.

Credits: 1 to 4

CJ 201**INTRODUCTION TO JUVENILE JUSTICE**

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.

Credits: 3 Lecture: 3

CJ 204**CONTROVERSIES IN CRIMINAL JUSTICE**

This course defines, describes and evaluates the crises and conflicts which face law enforcement agencies today. Topics include: use of force, police pursuits, recruitment and the death penalty.

Credits: 3 Lecture: 3

CJ 207**SEMINAR IN CRIMINAL JUSTICE**

Examines current controversial issues, questions and procedures within the criminal justice system.

Credits: 3 Lecture: 3

CJ 210**CRIMINAL INVESTIGATION I**

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.

Credits: 3 Lecture: 3

CJ 211**CRIMINAL INVESTIGATION II**

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.

Credits: 3 Lecture: 3

CJ 220**INTRODUCTION TO SUBSTANTIVE LAW**

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.

Credits: 3 Lecture: 3

CJ 222**SEARCH AND SEIZURE**

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.

Credits: 3 Lecture: 3

CJ 230**JUVENILE CORRECTIONS**

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.

Credits: 3 Lecture: 3

CJ 243**DRUGS AND CRIME IN SOCIETY**

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.

Credits: 3 Lecture: 3

CJ 253**CORRECTIONS**

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.

Credits: 4 Lecture: 4

CJ 280**CO-OP WORK EXPERIENCE CRIMINAL JUSTICE**

Provides an opportunity to work for a local agency in a field of criminal justice applying classroom theory with on-the-job experience. Credit given based on total workload of 60 hours per term. Learning experience will be coordinated with student's supervisor. Permission of Co-op Work Experience coordinator required prior to registration. Students must pass a criminal history background check. Recommended preparation: sophomore standing and a minimum of 12 credit hours completed in criminal justice courses and instructor approval.

Credits: 1 to 3

CJ 281**CWE CRIMINAL JUSTICE II**

CJ 281 provides a continuing opportunity to work for a local agency in a field of criminal justice with on the job experience. (See description of CJ 280) Instructor approval only. Prerequisite: CJ 280.

Credits: 2

CJ 282**CWE CRIMINAL JUSTICE III**

CJ 282 provides a continuing opportunity to work for a local agency in a field of criminal justice with on the job experience. (see description of CJ 280) Instructor approval only. Prerequisites: CJ 280 and CJ 281.

Credits: 2

DENTAL ASSISTING

DA 110

BASIC DENTAL ASSISTING

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. Prerequisite: entrance into the Dental Assisting program. Corequisites: DA 115, DA 125, DA 134, DA 145.

Credits: 4 Lecture: 2 Other: 4

DA 115

DENTAL SCIENCE

Introduces the student to the following areas of study: basic anatomy and physiology, basic head and neck anatomy, dental embryology, oral histology, anatomy of the face and oral cavity, and tooth morphology. Also includes an introduction to the study of oral pathology. Prerequisite: entrance into the Dental Assisting program. Corequisites: DA 110, DA 125, DA 134, DA 145.

Credits: 4 Lecture: 4

DA 120

ADVANCED DENTAL ASSISTING

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 the expanded functions of coronal polishing, suture removal and pit and fissure sealants as mandated by the Oregon Board of Dentistry. Prerequisite: DA 110. Corequisites: DA 131, DA 160, DA 182, DA 191.

Credits: 4 Lecture: 2 Lab: 2

DA 125

DENTAL INFECTION CONTROL

Covers the principles of infection control related to the dental office, including an introduction to microbiology, cross-contamination and hazard control. Also covers OSHA standards of hazard communication and blood-borne pathogens. The management of material safety data sheets and labeling of hazardous material will be implemented. After successful completion of this course, the student will be eligible to take the Dental Assisting National Board (DANB) Infection Control Exam (ICE). Prerequisite: entrance into the Dental Assisting program. Corequisites: DA 110, DA 115, DA 134, DA 145.

Credits: 3 Other: 6

DA 130

DENTAL MATERIALS I

Covers lecture and laboratory experience in alginate impression materials, impressions and impression trays, diagnostic casts, pouring study models, trimming diagnostic casts, occlusal bite registrations and bleach tray fabrication on a vacuum former. Also covers tofflemire matrix placement, the armamentarium for amalgam and composite, and assisting with the placement of amalgam and composite on dexter. Prerequisite: entrance into the Dental Assisting program. Corequisites: DA 135, DA 150, DA 151, DA 181, DA 190.

Credits: 4 Lecture: 2 Lab: 6

DA 131

DENTAL MATERIALS II

Provides a fundamental knowledge of the materials commonly used in dental practice. Lectures cover physical, chemical and manipulative characteristics of final impression materials, cements, bases, cavity liners, cavity varnishes, waxes, composites, metals and resins. Additionally explores the indications and contraindications of each. Laboratory portion prepares students to correctly manipulate all of these materials. Students will acquire the skills necessary to fabricate custom impression trays on preliminary casts which will be used for final impressions for crowns, bridges and dentures; to clean and polish removable appliances and prostheses; and to fabricate acrylic, polycarbonate and preformed aluminum provisional restorations. Various types of laboratory-fabricated, fixed prosthodontics, their indications and contraindications will be covered. Prerequisite: DA 130. Corequisites: DA 120, DA 160, DA 182, DA 191.

Credits: 4 Lecture: 2 Lab: 6

DA 134

DENTAL RADIOLOGY I

Introduces Dental Radiology for the dental auxiliary. Includes 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. Prerequisites: Entrance into the Dental Assisting Program or instructor approval. Corequisites: DA 110, DA 115, DA 125, DA 145.

Credits: 3 Lecture: 3

DA 135

DENTAL RADIOLOGY II

Continuation of DA 134. Furthers the student's knowledge of dental radiology. Covers the relationship of dental anatomy and facial structure to the exposure of dental films. Includes instruction in the various types of film available to the dental professional. The student will perform exposure and processing techniques to a determined level of competency on manikins and then to a determined level of competency on patients. Prerequisites: DA 134. Corequisites: DA 130, DA 151, DA 181, DA 190.

Credits: 4 Lecture: 2 Lab: 4

DA 145

PREVENTIVE DENTISTRY

Covers the components of preventive dentistry including oral hygiene education, plaque control, fluoride and dietary considerations for the dental patient. Includes ergonomics, dentistry for the special patient and the dental specialties of pediatric dentistry and orthodontics. Also includes the exploration of dental public health programs. Prerequisite: entrance into the Dental Assisting program. Corequisites: DA 110, DA 115, DA 125, DA 134.

Credits: 3 Other: 6

DA 150

INTRO TO DENTAL OFFICE MANAGEMENT

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. Prerequisite: entrance into the Dental Assisting program. Corequisites: DA 130, DA 135, DA 151, DA 181, DA 190.

Credits: 3 Lecture: 3

DA 151

DENTAL COMPUTING

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. Prerequisite: entrance into the Dental Assisting program. Corequisites: DA 130, DA 135, DA 150, DA 181, DA 190.

Credits: 1 Lecture: 1

DA 160 ORAL MEDICINE

Introduces students to diagnosis, treatment and pharmacology used in the practice of dentistry. Also includes additional information on oral pathology and the dental assistant's role in dealing with dental emergencies in the dental office. Students completing this course will be capable of recognizing, reacting to, and treating the most common medical emergencies in the dental practice. Emphasis will be placed on prevention of such emergencies. Prerequisite: entrance into the Dental Assisting program. Corequisites: DA 120, DA 131, DA 182, DA 191.

Credits: 3 Lecture: 3

DA 181 DENTAL SEMINAR I

Seminar discussions on various aspects of winter term practicums in local dental offices. Guest speakers representing dental specialties and alternative dental employment possibilities will also be scheduled. Students will share work-related experiences with the instructor and their peers. Addresses employment opportunities, completing job applications, and interviewing skills. Prerequisite: entrance into the Dental Assisting program. Corequisites: DA 130, DA 135, DA 150, DA 151, DA 190.

Credits: 1 Lecture: 1

DA 182 DENTAL SEMINAR II

Seminar discussions on various aspects of spring term practicums in local dental offices. Guest speakers representing dental specialties and alternative dental employment possibilities will also 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. Prerequisite: entrance into the Dental Assisting program.

Credits: 1 Lecture: 1

DA 190 DENTAL ASSISTING PRACTICUM I

A supervised, unpaid learning experience which takes place on site at a prearranged clinical facility. 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. Prerequisite: entrance into the Dental Assisting program and DA 110, DA 115, DA 125. Corequisites: DA 130, DA 135, DA 150, DA 151, DA 181.

Credits: 1 to 5

DA 191 DENTAL ASSISTING PRACTICUM II

A supervised, unpaid learning experience which takes place on site at a prearranged clinical facility. 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. Prerequisite: entrance into the Dental Assisting program and DA 190.

Credits: 5 Other: 15

DA 199 SELECTED TOPICS: DENTAL ASSISTING

Credits: 4

DA 999 DENTAL ASSISTING PROGRAM

Credits: 17 Lecture: 15 Other: 4

EARLY CHILDHOOD EDUCATION

ED 112 CHILDREN'S LITERATURE & CURRICULUM

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, goals, and objectives.

Credits: 3 Lecture: 3

ED 140 INTRODUCTION TO EARLY CHILDHOOD EDUCATION

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.

Credits: 4 Lecture: 3 Other: 3

ED 150 ENVIRONMENTS & CURRICULUM IN EARLY CHILDHOOD EDUCATION

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. Recommended preparation: ED 140.

Credits: 4 Lecture: 3 Other: 3

ED 151 OBSERVATION & GUIDANCE IN EARLY CHILDHOOD EDUCATION LEARNING

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. Recommended preparation: ED 140.

Credits: 4 Lecture: 3 Other: 3

ED 152 FAMILY, SCHOOL AND COMMUNITY RELATIONSHIPS IN EARLY CHILDHOOD EDUCATION

Introduces communication skills needed to enhance partnerships between families, schools and communities in early childhood education. Three hours of supervised weekly field placement required.

Credits: 3 Lecture: 2 Other: 3

ED 172 LANGUAGE AND LITERACY IN EARLY CHILDHOOD EDUCATION

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. Recommended preparation: ED 140.

Credits: 3 Lecture: 2 Other: 3

ED 173 MOVEMENT, MUSIC AND THE ARTS IN EARLY CHILDHOOD EDUCATION

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. Recommended preparation: ED 140.

Credits: 3 Lecture: 2 Other: 3

ED 174

MATH, SCIENCE, AND TECHNOLOGY IN EARLY CHILDHOOD EDUCATION

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. Recommended preparation: ED 140.

Credits: 3 Lecture: 2 Other: 3

ED 188

SPECIAL STUDIES: PRACTICUM

Credits: 1 to 3

ED 199

SELECTED TOPICS: EARLY CHILDHOOD EDUCATION

Credits: 1 to 4

ED 250

ADVANCED CURRICULUM DEVELOPMENT & TEACHING METHODS IN EARLY

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. Recommended preparation: WR 121, ED 140, ED 150, ED 151.

Credits: 4 Lecture: 3 Other: 3

ED 261

EARLY CHILDHOOD EDUCATION PRACTICUM I

Students participate in a weekly 50-minute seminar and six hours of practicum work in an ECE setting, outside of student's workplace. Students select, with their COCC practicum supervisor, an appropriate pre-kindergarten or early primary (K-3) practicum placement. All ECE courses required for an Early Childhood Education AAS degree need to be successfully completed before taking ED 261.

Credits: 3 Other: 9

ED 262

EARLY CHILDHOOD EDUCATION PRACTICUM II

Students participate in a weekly 50-minute seminar and six hours of practicum work in an ECE setting, outside of the student's workplace. Students select, with their COCC practicum supervisor, an appropriate pre-kindergarten or early primary (K-3) practicum placement. Recommended preparation: ED 261.

Credits: 3 Other: 9

ED 265

CHILDREN AT RISK

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.

Credits: 3 Lecture: 3

ED 269

EXCEPTIONAL CHILDREN IN EARLY CHILDHOOD EDUCATION

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. Recommended preparation: ED 140, ED 151.

Credits: 3 Lecture: 2 Other: 3

ED 290

ENGLISH LANGUAGE DEVELOPMENT IN THE PRIMARY CLASSROOM

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.

Credits: 3 Lecture: 3

ED 299

SELECTED TOPICS: EARLY CHILDHOOD EDUCATION

Credits: 1 to 4

ECONOMICS

EC 101

CONTEMPORARY ECONOMIC ISSUES

Introduction to contemporary public policy using basic economic principles. Topics may include poverty, income distribution, environmental policy, anti-trust, government budget, unemployment, international trade and economic development.

Credits: 4 Lecture: 4

EC 188

SPECIAL STUDIES: ECONOMICS

Credits: 1 to 3

EC 199

SELECTED TOPICS: ECONOMICS

Credits: 4

EC 201

MICROECONOMICS

Presents theoretical analysis of the market system in capitalism and analyzes how the market operates under various degrees of competition. Studies supply, demand, price determination, production, monopoly power, allocation of resources, distribution of income and environmental economics. Recommended preparation or recommended to be taken with: WR 121 and MTH 65.

Credits: 4 Lecture: 4

EC 202

MACROECONOMICS

Analyzes our national economy as whole and basic subdivisions of the economy: business, households and government. Also looks at the international economy. Studies unemployment, inflation, economic growth, fiscal, monetary and growth policies, money, banking and international economics. Recommended preparation or recommended to be taken with: WR 121 and MTH 65.

Credits: 4 Lecture: 4

EDUCATION

ED 200

INTRODUCTION TO EDUCATION

Survey of the field and foundations of education, especially the teaching profession and the role of education in society. Explores philosophical, economic, legal, ethical, historical, psychological and social foundations of teaching and learning, and includes an overview of educational methods and approaches. Specializations within the field and training requirements for prospective teachers will also be addressed. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

ED 210

PRACTICUM IN TEACHING

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. Recommended preparation: WR 121 and ED 200 or instructor approval.

Credits: 3 Lecture: 1 Other: 6

ED 216

PURPOSE, STRUCTURE AND FUNCTION OF EDUCATION IN A DEMOCRACY

Analyzes the system of education in a democratic society. This course introduces the historical, social, philosophical, political, legal and economic foundations of education to provide a framework from which to analyze contemporary educational issues. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

ED 219

MULTICULTURAL ISSUES IN EDUCATION SETTINGS

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. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

ED 253

LEARNING ACROSS THE LIFESPAN

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. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

EMERGENCY MEDICAL SERVICES

EMT 151

EMERGENCY MEDICAL TECHNICIAN PART A

Prepares the EMT 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 EMTs, anatomy and physiology, medical emergencies, trauma, special considerations for working in the prehospital setting, and providing patient transportation. Prerequisites: must meet requirement of enrollment regarding entrance testing, pass a background check, current HealthCare provider CPR card and vaccination records. Completion of WR 060 or higher or a placement testing score of 66 or higher. Completion of MTH 020 or higher or placement score of 75 or higher. Only students who successfully complete Part A will proceed into EMT 152 Part B of program.

Credits: 5 Other: 10

EMT 152

EMERGENCY MEDICAL TECHNICIAN PART B

Prepares the EMT 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 EMTs, anatomy and physiology, medical emergencies, trauma, special considerations for working in the prehospital setting, and providing patient transportation. Prerequisites: current HealthCare provider CPR card and vaccination records, only students who successfully completed EMT 151 Part A at COCC within the current or previous academic year with a "C+" or better will proceed into EMT 152 Part B of program.

Credits: 5 Other: 10

EMT 163

ADVANCED EMT PART I

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. 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.

Credits: 5 Other: 10

EMT 164

ADVANCED EMT PART II

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. 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. Successfully complete EMT 163 with a "C+" or better within the current or previous academic year at COCC.

Credits: 5 Other: 10

EMT 170

EMERGENCY RESPONSE COMMUNICATION/ DOCUMENTATION

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.

Credits: 2 Lecture: 2

EMT 171

EMERGENCY RESPONSE PATIENT TRANSPORT

This is a mandatory introductory course for all students seeking to enter the EMS degree program. This course is also very helpful for those students wishing to have a successful career in emergency services. This will offer tools that are essential in the daily activity as a firefighter, law enforcement officer or EMT. This course includes a broad-based overview of the elements that make up a safe and successful emergency response.

Credits: 2 Other: 4

EMT 175

INTRODUCTION TO EMERGENCY SERVICES

Provides an overview of fire protection and EMS; career opportunities within and related fields; philosophy and history of fire and EMS; fire loss analysis; organization and function of public and private fire and EMS services; fire department as part of local government; laws

and regulations affecting the fire service; fire and emergency service nomenclature; specific fire protection functions.

Credits: 3 Lecture: 3

EMT 188
SPECIAL STUDIES: EMERGENCY MEDICAL TECHNICIAN
Credits: 5

EMT 195
CRISIS INTERVENTION

Prepares the student to deal with situations facing both the patient and caregiver. Included are all facets of crisis intervention techniques and recent advances in critical incident stress debriefing intervention.

Credits: 3 Lecture: 3

EMT 280
PARAMEDIC CO-OP WORK EXPERIENCE

This course will provide 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 learned theory and practical skills while under the direct observation and guidance of a preceptor. Student must have successfully completed all paramedic lecture/lab and clinical requirements in order to register. Student must have passed terminal competency test-out on course cumulative written and practical exams.

Credits: 8

EMT 290
PARAMEDIC PART I

Offers first term of a three-term course, which includes 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. Applies didactic knowledge to campus-based laboratory skills practice and clinical patient care in the hospital setting. Corequisite: EMT 291. Prerequisite: current immunizations, current Oregon EMT-B or higher certification, current CPR for the health care provider and acceptance into the Paramedic program.

Credits: 8 Other: 16

EMT 291
PARAMEDIC CLINICAL PART I

Introduces students to a competency-based clinical experience, emphasizing 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. Corequisites: EMT 290.

Credits: 2 Other: 7.2

EMT 292
PARAMEDIC PART II

Offers second part 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 presentation; genitourinary care; and trauma care. Applies didactic knowledge to campus-based laboratory skills practice and clinical patient care in the hospital setting's. Corequisite: EMT 293. Prerequisites: successful completion of EMT 290, EMT 291, current immunizations, current Oregon EMT-B or higher certification, current CPR for the health care provider, and acceptance into the Paramedic program.

Credits: 8 Other: 16

EMT 293
PARAMEDIC CLINICAL PART II

Introduces students to a competency-based clinical experience, emphasizing 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. Prerequisites: Student must have completed EMT 290 with a "C+" or better and EMT 291 with a "P". Corequisites: EMT 292.

Credits: 3 Other: 9.8

EMT 294
PARAMEDIC PART III

Offers third part 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 presentation; genitourinary care; and trauma care. Applies didactic knowledge to campus-based laboratory skills practice and clinical patient care in the hospital setting. Corequisite: EMT 295. Prerequisite: current immunizations, current Oregon EMT-B or higher certification, current CPR for the health care provider, acceptance into the Paramedic program and completion of EMT 290, EMT 291, EMT 292, EMT 293.

Credits: 7 Other: 14

EMT 295
PARAMEDIC CLINICAL PART III

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 and final clinical setting for a paramedic student. Student must have successfully completed EMT 290, EMT 291, EMT 292 and EMT 293 to be allowed into this class. Corequisites: EMT 294.

Credits: 4 Other: 14.4

EMT 299
SELECTED TOPICS: EMERGENCY MEDICAL TECHNICIAN
Credits: 5

ENGINEERING & ENGINEERING TECH

ENGR 188
SPECIAL STUDIES: ENGINEERING

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.

Credits: 1 to 6

ENGR 199
SELECTED TOPICS: ENGINEERING

Credits: 1 to 6

ENGR 201
ELECTRICAL FUNDAMENTALS

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. Recommended preparation: PH 202/212 and MTH 251/252.

Credits: 4 Lecture: 3 Lab: 3

ENGR 202
ELECTRICAL FUNDAMENTALS II

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. Recommended preparation: ENGR 201 and MTH 251/252.

Credits: 4 Lecture: 3 Lab: 3

**ENGR 211
STATICS**

Analyzes forces induced in structures and machines by various types of loading. Recommended preparation: MTH 251 and PH 201/211.

Credits: 4 Lecture: 3 Lab: 2

**ENGR 212
DYNAMICS**

Studies kinematics, Newton's law of motion, and work-energy and impulse-momentum relationships as applied to engineering systems. Recommended preparation: ENGR 211 and MTH 252.

Credits: 4 Lecture: 3 Lab: 2

**ENGR 213
STRENGTH OF MATERIAL**

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. Recommended preparation: MTH 252, ENGR 211.

Credits: 4 Lecture: 3 Lab: 2

**GE 101
ENGINEERING ORIENTATION**

Introduces students to many different engineering fields through guest lectures, field trips, and hands-on engineering projects and problem-solving exercises. Develops understanding of similarities and differences between the engineering fields. Discusses professional engineering testing and licensing requirements.

Credits: 3 Lecture: 2 Lab: 2

**GE 102
ENGINEERING PROBLEM SOLVING AND TECHNOLOGY**

Introduces the use of Microsoft Excel for the solution of engineering problems and familiarizes students with the decision making and report preparation process in engineering design. Development of spreadsheets for analyzing engineering problems and preparation of final design reports that outline in detail design evaluation, recommendation and implementation. Recommended preparation: MTH 112.

Credits: 3 Lecture: 2 Lab: 2

**ENTREPRENEURIAL EXCELLENCE****CEED 201
BUSINESS MODELING**

Students explore their own small business ideas. From brainstorming and ideation through business model generation, business planning and feasibility studies. This class is hands-on and production-oriented utilizing an assortment of tools and methodologies to isolate key success and risk factors. Topics are explored through the filters of design thinking, innovation and rapid prototyping. Other topics include legal structure and form, finding mentors, advisors and the resources available to support new business development.

Credits: 2 Lecture: 2

**CEED 202
BUSINESS INTELLIGENCE**

Thorough research is critical to small business success. During this course, students will perform a comprehensive environmental scan including macro and micro economic factors, industry analysis, SWOT analysis and the collection of competitive intelligence. Competitive profiles will be produced for their top three competitors utilizing various research methodologies. Students will isolate the core competence of their business and inherent strategic and competitive advantage.

Credits: 2 Lecture: 2

**CEED 203
STRATEGIC MARKETING**

Students will participate in the exploration of various marketing strategies. Students will focus on the market research necessary to segment the market, isolate target market(s) and formulate the appropriate marketing mix (product, price, placement and promotion) and positioning to address these market(s). Students will complete a strategic marketing plan.

Credits: 2 Lecture: 2

**CEED 204
STRATEGIC MANAGEMENT**

Fundamental to small business success is establishing the appropriate infrastructure, focus and talent necessary to endure and navigate the hurdles and pitfalls that face new ventures. This course will explore and apply tested strategies to build a successful endeavor. Topics include business strategy, organizational structure, recruiting talent, operations and logistics, value chain management, critical path management, and leveraging core competencies. Students will produce a comprehensive strategic management plan.

Credits: 2 Lecture: 2

**CEED 205
ENTREPRENEURIAL FINANCE**

"Cash is king." This course will lay the groundwork for understanding and establishing the fundamentals of entrepreneurial accounting and finance. Students will learn how to read a financial report and manage profits and cash flow. Topics include start-up costs, raising capital, investment and growth decisions, access to capital and forecasting and budgeting. Students will produce pro-forma (forecasted) financial statements and learn the nuances of presenting them to investors.

Credits: 2 Lecture: 2

**CEED 206
PRESENTING TO WIN**

The capstone of the New Venture Creation curriculum, Presenting to Win will assist students in the packaging, branding and formatting of a professional business plan. Students will learn how to write a compelling executive summary and create a slide-driven presentation. In-class exercises will assist the student in gaining mastery of the elevator pitch, the 20-minute business presentation and objection and defense strategies.

Credits: 2 Lecture: 2

CEED 213**MARKETING RESEARCH**

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, wants, demands and desires, 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 provides the critical and essential input for crafting a strategy and developing a business model. Recommended preparation: WR 121, SP 111, BA 223.

Credits: 4 Lecture: 4

ETHNIC STUDIES**ES 199****SELECTED TOPICS: ETHNIC STUDIES**

Selected topics in Ethnic Studies.

Credits: 1 to 4

ES 213**INTRODUCTION TO CHICANO/LATINO STUDIES**

This course examines the 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 Chicano/Latino communities. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ES 299**SELECTED TOPICS: ETHNIC STUDIES**

Selected topics in Ethnic Studies.

Credits: 1 to 4

FOREIGN LANGUAGES**CHN 101****FIRST YEAR MANDARIN CHINESE I**

The first course of a three-course sequence in introductory Mandarin Chinese language and culture class, with a well-balanced emphasis on effective communicative skills in both the written and spoken language and an understanding of the practices and products of native Chinese culture. Helps the early beginning learners to acquire language proficiency as well as cultural awareness and understanding.

Credits: 4 Lecture: 4

CHN 102**FIRST YEAR MANDARIN CHINESE II**

The second course of a three-course sequence in introductory Mandarin Chinese language and culture class, with the expansion on effective communicative skills in both the written and spoken language and an understanding of the practices and products of native Chinese culture. Expands beginning learners' language proficiency as well as cultural awareness and understanding. Recommended preparation: CHN 101 or instructor approval.

Credits: 4 Lecture: 4

CHN 103**FIRST YEAR MANDARIN CHINESE III**

The third course of three-course sequence in introductory Mandarin Chinese language and culture class, expanding on effective communicative skills in both the written and spoken language and understanding the practices and products of native Chinese culture. Expands beginning learners' language proficiency as well as cultural awareness and understanding. Recommended preparation: CHN 102 or instructor approval.

Credits: 4 Lecture: 4

CHN 110**CHINESE CHARACTERS**

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. Recommended preparation: CHN 101.

Credits: 4 Lecture: 4

CHN 201**SECOND YEAR MANDARIN CHINESE I**

The first course of a three-course sequence of second-year 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. Recommended preparation: CHN 103 and CHN 110 or instructor approval.

Credits: 4 Lecture: 4

CHN 202**SECOND YEAR MANDARIN CHINESE II**

The second course of a three-course sequence of second-year 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. Recommended preparation: CHN 201 or instructor approval.

Credits: 4 Lecture: 4

CHN 203**SECOND YEAR MANDARIN CHINESE III**

The third course of a three-course sequence of second-year 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. Recommended preparation: CHN 202 or instructor approval.

Credits: 4 Lecture: 4

FL 199**SELECTED TOPICS: FOREIGN LANGUAGE**

This course will cover special topics in language.

Credits: 4

FL 299**SELECTED TOPICS: FOREIGN LANGUAGE**

This course will cover special topics in language.

Credits: 4

FR 101**FIRST YEAR FRENCH I**

Designed for beginners. Emphasizes active communication in French. Develops students' basic skills in listening, reading, writing, and speaking. Successful completion of this sequence prepares students for entry into second-year level at COCC or any other university. Should be taken in sequence. This course is for students who have no experience with French. Students who have previously learned French should contact the instructor for advice on which class to take.

Credits: 4 Lecture: 4

FR 102**FIRST YEAR FRENCH II**

Continues the development of reading, writing, listening and speaking skills. Students are expected to have completed FR 101 material, and are encouraged to review FR 101 concepts and vocabulary prior to class. Recommended preparation: FR 101, one year of high school French, or instructor approval. Course should be taken in sequence. Students who have previously learned French should contact the instructor for advice on which class to take.

Credits: 4 Lecture: 4

FR 103**FIRST YEAR FRENCH III**

Continues the development of reading, writing, listening and speaking skills. Students are expected to have completed FR 102 material, and are encouraged to review the concepts of FR 101 and 102 prior to class. Recommended preparation: FR 102, two years of high school French, or instructor approval. Course should be taken in sequence. Students who have previously learned French should contact the instructor for advice on which class to take.

Credits: 4 Lecture: 4

FR 199**SELECTED TOPICS: FRENCH**

Credits: 1 to 4

FR 201**SECOND YEAR FRENCH I**

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. Recommended preparation: FR 103, 3 years of high school French, or instructor approval.

Credits: 4 Lecture: 4

FR 202**SECOND YEAR FRENCH II**

Continues the work of FR 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. Incorporates culture in all aspects of the course; class taught mostly in French. Course should be taken in sequence. Recommended preparation: FR 201, 4 years of high school French, or instructor approval.

Credits: 4 Lecture: 4

FR 203**SECOND YEAR FRENCH III**

Continues the work of FR 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. Recommended preparation: FR 202 or equivalent, 1 year of IB, AP French in high school, 4+ years of French, or instructor approval.

Credits: 4 Lecture: 4

FR 211**FRENCH CONVERSATION AND CULTURE I**

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. Recommended preparation: FR 103, equivalent, 2 years of high school French, or instructor approval.

Credits: 3 Lecture: 3

FR 212**FRENCH CONVERSATION AND CULTURE II**

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. Recommended preparation: FR 211 or FR 201, 3+ years of high school French, or instructor approval.

Credits: 3 Lecture: 3

FR 213**FRENCH CONVERSATION AND CULTURE III**

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. Recommended preparation: FR 212 or FR 202, 4+ years of French, or instructor approval.

Credits: 3 Lecture: 3

SPAN 101**FIRST YEAR SPANISH I**

Begins the development of reading, writing, listening and speaking skills. Focuses on the concepts of pronunciation, gender, descriptions, possessives, verb tenses, numbers, question words, time, weather, demonstratives, verbs and vocabulary which includes the following categories: alphabet, calendar, clothing, people, greetings, school items, body, family and activities. This class is for beginners only. Advanced students are strongly discouraged from taking this as a review class. Students with prior Spanish experience should contact COCC Spanish instructors to determine which Spanish course is appropriate for them.

Credits: 4 Lecture: 4

SPAN 102**FIRST YEAR SPANISH II**

Continues the development of reading, writing, listening and speaking skills. Focuses on irregular and stem-changing verbs, questions, direct object pronouns (lo, la), ser vs. estar, reflexive verbs, indirect object pronouns, present progressive, obligation, the verbs estar, ir, hacer, salir, jugar, saber, poder, pensar and vocabulary which includes the following categories: prepositions, university, city, foods, holidays, daily routines, physical and mental states, classroom activities and workplaces. Students are encouraged to review SPAN 101 concepts and vocabulary prior to class. Recommended preparation: SPAN 101, one year of high school Spanish, or instructor approval.

Credits: 4 Lecture: 4

SPAN 103**FIRST YEAR SPANISH III**

Continues the development of reading, writing, listening and speaking skills. Focuses on the concepts of comparisons, preterite (past) tense, hacer as a past expression, negative statements, impersonal se, the verbs conocer, pedir, servir and vocabulary which includes these categories: house, furniture, neighborhood, chores, comparisons, nature, restaurant, foods, measurements and kitchen. Students are encouraged to review the concepts of SPAN 101 and SPAN 102 prior to class. Recommended preparation: SPAN 102, two years of high school Spanish, or instructor approval.

Credits: 4 Lecture: 4

SPAN 188**SPECIAL STUDIES: SPANISH**

Credits: 1 to 4

SPAN 199**SELECTED TOPICS: SPANISH**

Credits: 4

SPAN 201**SECOND YEAR SPANISH I**

Continues, after SPAN 103, with the development of reading, writing, listening and speaking skills. Focuses on the concepts of the imperfect (past) tense (with and without the preterite tense), the present perfect tense, past participles, exclamations, por and para, creating adverbs and

vocabulary which includes the following categories: family and relatives, childhood activities, geography, climate, ecology, environment and animals. Class begins with a review of Spanish 101, SPAN 102 and SPAN 103. Recommended preparation: SPAN 103, three years of high school Spanish, or instructor approval.

Credits: 4 Lecture: 4

**SPAN 202
SECOND YEAR SPANISH II**

Continues with the development of reading, writing, listening and speaking skills. Focuses on the concepts of polite commands, the present tense of the subjunctive mood, the imperfect progressive, the verb haber, changes in states, indirect object pronouns with commands, unplanned occurrences, narrating past experiences, adjectives used as nouns, demonstrative pronouns, por and para, two object pronouns together and vocabulary which includes the following categories: polite commands, the present tense of the subjunctive mood, the imperfect progressive, the human body, illnesses, symptoms, health, medicines, medical professions, accidents, emergencies, materials that things are made of, clothing and jewelry, shopping and appliances. Recommended preparation: SPAN 201, four years of high school Spanish, or instructor approval.

Credits: 4 Lecture: 4

**SPAN 203
SECOND YEAR SPANISH III**

Continues with the development of reading, writing, listening and speaking skills. Focuses on the concepts of reciprocal pronouns, polite and informal commands, subjunctive mood in softened commands, future tense, subjunctive mood in adjectival clauses, subjunctive mood in time clauses, doubt, conditional, past subjunctive in "if" clauses, and vocabulary which includes the following categories: personal relationships, reciprocal actions, opinions, general lists of nouns, verbs, adverbs, adjectives and review of and additions to past vocabulary topics. Recommended preparation: SPAN 202, four years of high school Spanish, or instructor approval.

Credits: 4 Lecture: 4

**SPAN 211
SPANISH CONVERSATION AND CULTURE I**

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. Recommended preparation or recommended to be taken with: SPAN 203 or instructor approval.

Credits: 3 Lecture: 3

**SPAN 212
SPANISH CONVERSATION AND CULTURE II**

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. Recommended preparation or recommended to be taken with: SPAN 203 or instructor approval.

Credits: 3 Lecture: 3

**SPAN 213
SPANISH CONVERSATION AND CULTURE III**

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. Recommended preparation or recommended to be taken with: SPAN 203 or instructor approval.

Credits: 3 Lecture: 3

**SPAN 288
SPECIAL STUDIES: SPANISH**

Credits: 1 to 4

**SPAN 299
SELECTED TOPICS: SPANISH**
Credits: 1 to 4

**IT 101
FIRST YEAR ITALIAN I**

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.

Credits: 4 Lecture: 4

**IT 102
FIRST YEAR ITALIAN II**

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. Recommended preparation: IT 101, one year of high school Italian, or instructor approval. Course should be taken in sequence. Students who have previously learned Italian should contact the instructor for advice on which class to take.

Credits: 4 Lecture: 4

**IT 103
FIRST YEAR ITALIAN III**

Continues the development of reading, writing, listening and speaking skills. Students are expected to have completed IT 102 material, and are encouraged to review the concepts of IT 101 and IT 102 prior to class. Recommended preparation: IT 102, two years of high school Italian, or instructor approval. Course should be taken in sequence. Students who have previously learned Italian should contact the instructor for advice on which class to take.

Credits: 4 Lecture: 4

**GER 101
FIRST YEAR GERMAN I**

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, greetings, personal descriptions, items found in the home, hobbies, personal preferences, family, and shopping. 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.

Credits: 4 Lecture: 4

**GER 102
FIRST YEAR GERMAN II**

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 vocabulary which includes the following categories: prepositions, family, dates, holidays, daily routines, telling time, making plans, theater, movies, clothing, building descriptions, and "doch, mal." Students are encouraged to review GER 101 concepts and vocabulary prior to class. Recommended preparation: GER 101, one year of high school German, or instructor approval.

Credits: 4 Lecture: 4

**GER 103
FIRST YEAR GERMAN III**

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, comparisons, and vocabulary which includes these categories: food, menus, ordering and paying in a restaurant, map reading, sports, and hobbies. Students are encouraged to review the concepts of GER 101 and GER 102 prior to class. Recommended preparation: GER 102, two years of high school German, or instructor approval.

Credits: 4 Lecture: 4

GER 201 SECOND YEAR GERMAN I

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, comparisons, the superlative, and vocabulary which includes these categories: fitness, health, sicknesses, lodging, map reading and asking for directions, advantages and disadvantages. Class begins with a review of GER 101, GER 102 and GER 103. Recommended preparation: GER 103, three years of high school German, or instructor approval.

Credits: 4 Lecture: 4

GER 202 SECOND YEAR GERMAN II

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, the subjunctive, and vocabulary which includes the following categories: occupations, applying for jobs, expressing probability, household and student finances, apartments and floor plans, and giving advice. Recommended preparation: GER 201, four years of high school German, or instructor approval.

Credits: 4 Lecture: 4

GER 203 SECOND YEAR GERMAN III

Continues with the development of reading, writing, listening and speaking skills. Focuses on the concepts of subjunctive I and II, cultural and global concerns, infinitive clauses with "zu" and "um...zu", 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 which includes the following categories: newspapers, radio, film, television, podcasts, global issues, time, activities, reading warning signs, food and culture. Recommended preparation: GER 202, four years of high school German, or instructor approval.

Credits: 4 Lecture: 4

FOREST RESOURCES TECHNOLOGY/ FORESTRY

FOR 100 FORESTRY PROGRAM ORIENTATION

Provides students with an orientation to the Forest Resources Technology program. The course is 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.

Credits: 1 Lecture: 1

FOR 105A FOREST SPORTS INTRODUCTION

Introduces students to the competition of forest sports which includes tree climbing, wood chopping, crosscut sawing, axe throwing and log rolling. Provides a comprehensive introduction to any student who is interested

in acquiring or enhancing outdoor skills. Students have the opportunity to compete in collegiate local and regional contests. Instruction will include basic skills for the beginner or instruction for the experienced student.

Credits: 1 Lab: 3

FOR 105B FOREST SPORTS CONDITIONING

Forest Sports will introduce, define and interpret a variety of events making up the art of timbersports. Students will learn the correct weight training regimen for this sport. Course will focus on skills, training and conditioning during off-season periods to train for upcoming competitions.

Credits: 1 Lab: 3

FOR 105C FOREST SPORTS COMPETITION

Course will focus on development of skills and training for participation in forest sports contests to be held later in the fall. Course is intended to give new comers to the sport an opportunity to experience the different events in a low-key environment without the pressure of immediate competition. Returning forestry sports competitors will work to enhance their skills while also assisting in demonstrations of technique and form for potential new competitors. When appropriate, members of the class will also be responsible for hosting a High School Skills contest, showcasing a variety of the events at the high school level.

Credits: 1 Lab: 3

FOR 110 WILDLAND FIRE SCIENCE I

Focuses on the effects of Wildland Fire Policy, current fire suppression strategies and tactics; weather, topography, fuel models and how each interact to affect 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.

Credits: 2 Lecture: 1 Lab: 3

FOR 111 FORESTRY PERSPECTIVES

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.

Credits: 4 Lecture: 3 Lab: 3

FOR 123 LICHENOLOGY BASICS

Introduction and identification, distribution and ecology of lichens found in a variety of Oregon habitats and substrate types. This course has two parts: the lecture portion will present a number of lichen species found in Oregon and the lab portion will provide hands on identification methods as well as some field trips to view lichens in their natural environment.

Credits: 3 Other: 6

FOR 126 FIELD STUDIES PACIFIC NW FORESTS

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.

Credits: 1 Lab: 3

FOR 127 PLANTS OF THE PACIFIC NORTHWEST

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.

Credits: 1 Lab: 3

FOR 130

CHAINSAW USE AND MAINTENANCE

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.

Credits: 2 Lecture: 1 Lab: 3

FOR 180

CO-OP WORK EXPERIENCE FORESTRY

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.

Credits: 1 to 7

FOR 188

SPECIAL STUDIES: FORESTRY

Credits: 1 to 3

FOR 195

WILDERNESS CONCEPTS

Introduction to concepts of wilderness and wilderness management principles. Introduction to the history of wilderness and the National Wilderness Preservation System.

Credits: 2 Lecture: 2

FOR 199

SELECTED TOPICS: FORESTRY

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. Prerequisite: instructor approval. Maximum of three credits may be applied to degree.

Credits: 1 to 3

FOR 202

FOREST ENTOMOLOGY/PATHOLOGY

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.

Credits: 3 Lecture: 2 Lab: 3

FOR 203

APPLIED FOREST ECOLOGY

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.

Credits: 3 Lecture: 2 Lab: 3

FOR 205

SILVICULTURE AND HARVESTING PROCESSES

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.

Credits: 5 Lecture: 3 Lab: 6

FOR 208

SOILS: SUSTAINABLE ECOSYSTEMS

Focuses on the basics of Soil Science, ranging from physical properties to use and management. Soils with respect to traditional agricultural, wildlands and rangelands, watersheds and modern environmental perspectives will be discussed. New and current events of soils applications and the science of soils in the world around us will be reviewed to better understand the role soil has in our everyday lives. Lab component will include in and out of classroom lab work and field trips.

Credits: 4 Lecture: 3 Lab: 3

FOR 209

FIRE ECOLOGY AND EFFECTS

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.

Credits: 3 Lecture: 2 Lab: 3

FOR 210

WILDLAND FIRE SCIENCE II

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.

Credits: 2 Lecture: 1 Lab: 3

FOR 211

SUPERVISION AND LEADERSHIP

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.

Credits: 3 Lecture: 3

FOR 215

FOREST RESOURCE CAPSTONE

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. Instructor approval required.

Credits: 3 Lecture: 1.5 Lab: 4.5

FOR 220A

AERIAL PHOTO

Covers practical use of aerial photographs including photo interpretation, navigation, scale, area and distance determination, corner search, basic type-mapping and GPS application. Recommended preparation: FOR 230B.

Credits: 3 Lecture: 2 Lab: 3

FOR 220B

RESOURCE MEASUREMENT

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.

Credits: 4 Lecture: 3 Lab: 3

FOR 220C

RESOURCE SAMPLING

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. Recommended preparation: FOR 220A.

Credits: 4 Lecture: 2.5 Lab: 4.5

FOR 230A**MAP, COMPASS AND GPS**

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.

Credits: 3 Lecture: 2 Lab: 3

FOR 230B**FOREST SURVEYING**

Studies basic surveying techniques and equipment emphasizing traversing, differential leveling, profiling, GPS mapping and basic coordinate geometry. Recommended preparation: FOR 230A or instructor approval.

Credits: 3 Lecture: 2 Lab: 3

FOR 240A**FOREST ECOLOGY**

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.

Credits: 3 Lecture: 2 Lab: 3

FOR 240B**WILDLIFE ECOLOGY**

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. Recommended preparation: FOR 240A.

Credits: 3 Lecture: 2 Lab: 3

FOR 241A**FIELD DENDROLOGY**

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.

Credits: 3 Lecture: 1 Lab: 6

FOR 241B**DENDROLOGY**

Covers identification, classification and distribution of plant communities (tree, shrub, forb and grass) found within Oregon and major North American plant communities. This class covers in lecture format the structure and function of the primary organs and tissues that comprise woody plants. This course is the classroom portion of FOR 241A. Course does not need to follow FOR 241A.

Credits: 3 Lecture: 3

FOR 251**RECREATIONAL RESOURCE MANAGEMENT**

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.

Credits: 3 Lecture: 2 Lab: 3

FOR 255**RESOURCE INTERPRETATION**

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.

Credits: 3 Lecture: 2 Lab: 3

FOR 260**CONSERVATION OF NATURAL RESOURCES**

Examines current utilization and issues surrounding natural resources availability and management, as well as the effect of human population

on resource use and the environment. Includes critical analysis of sustainable development and resource use concepts, including principles of conservation and management. Emphasis placed on current issues. Two-day field trip required. Recommended preparation: WR 121.

Credits: 3 Lecture: 2 Lab: 3

FOR 262**URBAN FORESTRY**

Examination of the role and values of trees and other vegetation in the urban environment. Draws on traditional forest management concepts to describe successful urban forestry programs, including public participation, funding and the production of human benefits. Covers the role and duties of an urban forester.

Credits: 3 Lecture: 2 Lab: 3

FOR 265**WOOD TECHNOLOGY & UTILIZATION**

Introduces manufacturing and use of forest products, including lumber, plywood, composition board, pulp, paper and other products. Lab work focuses on visiting manufacturing facilities and the identification of woods of different species.

Credits: 4 Lecture: 3 Lab: 3

FOR 299**SELECTED TOPICS: FORESTRY**

Credits: 1 to 5

FW 135**MUSEUM TECHNIQUES**

Course will teach the fundamentals of 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 display. This course is a hands on technique course.

Credits: 1 Lab: 3

FW 199**SELECTED TOPICS: FISH/WILDLIFE**

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. Prerequisite: instructor approval. Maximum of three credits may be applied to a degree.

Credits: 1 to 4

FW 212**SURVEY OF NORTHWEST BIRDS**

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. Recommended preparation: BI 102 or BI 213 or FOR 241A.

Credits: 2 Lab: 6

FW 218**SURVEY OF NORTHWEST MAMMALS**

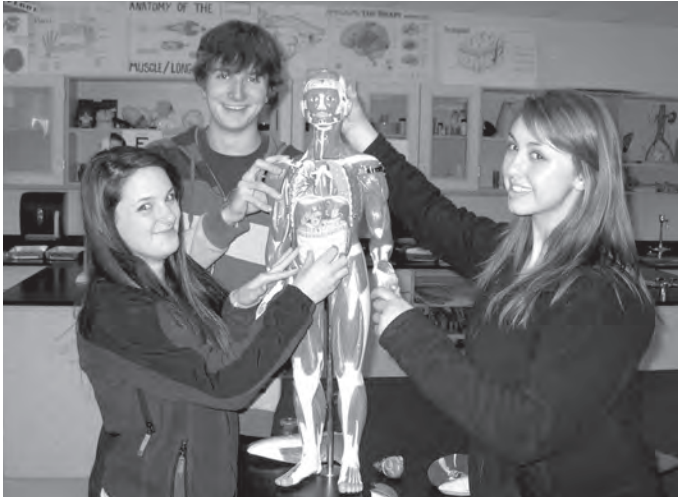
This course is an introduction to mammal systematics, and surveys ecologically, economically, and socially important mammal species in the Pacific Northwest with an emphasis on identification and basic life history. Recommended preparation: BI 102 or BI 213 or FOR 241A.

Credits: 2 Other: 4

FW 251**WILDLIFE CONSERVATION**

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. Recommended preparation: WR 121.

Credits: 3 Lecture: 3



GENERAL SCIENCE

GS 104

PHYSICAL SCIENCE: PHYSICS

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. Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

Credits: 4 Lecture: 3 Lab: 3

GS 105

PHYSICAL SCIENCE: CHEMISTRY

Provides an introduction to properties and structures of matter, chemical bonding, solutions, equilibrium, electrolytes, and acids and bases. Also includes quantitative discussions of the mole, stoichiometry and solution concentration. Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

Credits: 4 Lecture: 3 Lab: 3

GS 106

PHYSICAL SCIENCE: GEOLOGY

Study of physical characteristics of, and processes within, solid earth. Principal topics include minerals, earthquakes, plate tectonics, igneous, sedimentary and metamorphic processes, glaciation and geologic time. Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

Credits: 4 Lecture: 3 Lab: 3

GS 107

PHYSICAL SCIENCE: ASTRONOMY

Introduction to astronomy including solar system, stellar systems and cosmology. Some individual observing may be required. Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

Credits: 4 Lecture: 3 Lab: 3

GS 108

PHYSICAL SCIENCE: OCEANOGRAPHY

Survey course that includes topics from four main areas of oceanography: geology of ocean basins and coasts; waves, tides and currents; sea water chemistry; and marine biology. Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

Credits: 4 Lecture: 3 Lab: 3

GS 199

SPECIAL TOPICS: GENERAL SCIENCE

Credits: 1 to 6

GEOGRAPHIC INFORMATION SYSTEMS

GEOG 211

COMPUTER CARTOGRAPHY

Develops skills needed to produce maps using ArcGIS. Outlines cartographic principles and map use. Emphasis on mapping techniques within a GIS. Recommended preparation: FOR 230A. Usually offered winter term.

Credits: 4 Lecture: 3 Other: 2

GEOG 265

GEOGRAPHIC INFORMATION SYSTEMS

Introduces students to principles and practice of GIS, while providing experience using ArcGIS Desktop and Spatial Analyst software. Develops both theoretical understanding of GIS and experience in accessing GIS datasets. Students exposed to raster and vector GIS. Usually offered fall and winter terms.

Credits: 4 Lecture: 3 Lab: 3

GEOG 266

ARC GIS

Provides working knowledge of ArcGIS Desktop. In addition, students undertake designing and developing a GIS database, performing spatial analysis, creating maps, and generating a report using the desktop products. Usually offered fall term. Recommended to be taken with GEOG 265.

Credits: 5 Lecture: 4 Other: 2

GEOG 267

GEOGRAPHIC INFORMATION SYSTEMS

Covers fundamentals of creating, using, editing, and managing spatial and attribute data stored in a geodatabase in ArcGIS. Topics include data migration; data loading; topology rules; use of subtypes, attribute domains, and relationship classes. Also covered are creation, editing and analysis of geometric networks. Usually offered spring term. Recommended preparation: GEOG 266.

Credits: 5 Lecture: 4 Other: 2

GEOG 273

SPATIAL DATA COLLECTION

Provides the skills to collect location information for the purpose of integration with a Geographic Information System. The focus is on proper utilization of Global Positioning System (GPS) receivers and data collection. Usually offered fall term. Recommended preparation: FOR 230A or instructor approval.

Credits: 5 Lecture: 4 Other: 2

GEOG 275

GIS CAPSTONE

Culmination GIS project. Students are presented with a set of criteria and perform all steps necessary to complete the project including: project planning, designing and developing a GIS database, data collection and editing, performing spatial analysis, creating maps, generating reports and presenting of project output. See instructor for details. Usually offered spring term. Recommended preparation: GEOG 285 or instructor approval.

Credits: 5 Lecture: 4 Other: 2

GEOG 280

CO-OP WORK EXPERIENCE GIS

Provides opportunity for on-the-job experience in the GIS field. Normally taken summer term, but may occur during any term. See instructor for details, instructor approval required.

Credits: 1 to 3

GEOG 284**GIS CUSTOMIZATION**

Utilizes techniques to program ArcGIS software. Emphasis is placed on creating customized applications. Usually offered winter term. Recommended preparation: CIS 122 or instructor approval.

Credits: 5 Lecture: 4 Lab: 2

GEOG 285**DATA CONVERSION AND DOCUMENTATION**

Covers a variety of techniques to collect and convert data between various formats, projections and coordinate systems, etc. Cultivates student's ability to research and experiment with data and enhance problem-solving skills. Stresses use of metadata which allows the data user to determine whether a particular data set is suitable for its proposed use. Usually offered winter term. Recommended preparation: GEOG 266 or instructor approval.

Credits: 5 Lecture: 4 Other: 2

GEOG 286**REMOTE SENSING**

Introduces students to the theory and methods of remote sensing through use of satellite imagery. Practical exercises involve use of SPOT, LANDSAT and Quickbird images with ERDAS Imagine software. Digital analysis is discussed and performed including preprocessing, image classification and image evaluation. Usually offered spring term. Recommended preparation: FOR 220A or instructor approval.

Credits: 5 Lecture: 4 Other: 2

GEOG 287**ANALYSIS OF SPATIAL DATA**

Leads students through the analytical capabilities of GIS. Course begins with the more elementary but useful techniques involving locating and describing features, then proceeds to more advanced techniques based on higher-level spatial objects. Lab exercises utilize the Spatial Analyst Extension of ArcGIS to perform analysis of raster datasets. Usually offered spring term. Recommended preparation: GEOG 266 or instructor approval.

Credits: 5 Lecture: 4 Other: 2

GEOGRAPHY**GEOG 100****INTRODUCTION TO GEOGRAPHY**

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.

Credits: 4 Lecture: 4

GEOG 106**ECONOMIC GEOGRAPHY**

Introductory view on how economic activity varies across space. Besides covering locational theories for different economic sectors, course explores such issues as economic development, business affairs analysis, resource distribution, urbanization patterns, population growth, rural economics and coping with a changing world economy. Recommended preparation: Writing placement test score that places the student in WR 65.

Credits: 4 Lecture: 4

GEOG 107**CULTURAL GEOGRAPHY**

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. Recommended preparation: writing placement test score that places the student in WR 65.

Credits: 4 Lecture: 4

GEOG 190**ENVIRONMENTAL GEOGRAPHY**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

GEOG 195WC**THE WILDERNESS CONCEPT**

Introduction to the concept of wilderness and management principles and issues associated with applying that concept to National Wilderness Preservation System units, using Three Sisters Wilderness as an example.

Credits: 1 Lecture: 1

GEOG 198**FIELD GEOGRAPHY OF CENTRAL OREGON**

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. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

GEOG 199**SELECTED TOPICS: GEOGRAPHY**

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.

Credits: 1 to 4

GEOG 201**WORLD REGIONAL GEOGRAPHY I**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

GEOG 202**WORLD REGIONAL GEOGRAPHY II**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

GEOG 207**GEOGRAPHY OF OREGON**

Survey of the state of Oregon focusing on natural environment, economic developments and human geography. Special emphasis on historical geography and demographic changes. Includes studies of major regions of Oregon. Recommended preparation: WR 065.

Credits: 3 Lecture: 3

GEOG 212**TOURISM AND RECREATION**

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. Recommended preparation: WR 065.

Credits: 3 Lecture: 3

GEOG 213**GEOGRAPHY OF PACIFIC NORTHWEST**

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. Recommended preparation: WR 065.

Credits: 3 Lecture: 3

**GEOG 235
LAND USE RESEARCH**

Introduces students to techniques in land-use research. Classroom instruction focuses on planning and zoning. Students are involved in a Bend-area research project. Recommended preparation: WR 121.

Credits: 3 Lecture: 1 Lab: 6

**GEOG 240
GEOGRAPHY OF CENTRAL OREGON**

Regional study of diversity of landscapes of Central Oregon with emphasis on natural environments, economy of the area, population growth and settlements. Recommended preparation: WR 065.

Credits: 3 Lecture: 3

**GEOG 270
MAP INTERPRETATION AND DESIGN**

Looks at the world of maps. How to design, interpret and critique many forms of maps. Recommended preparation: MTH 60 or equivalent.

Credits: 4 Lecture: 4

**GEOG 272
GEOGRAPHY FOR TEACHERS**

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. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

**GEOG 278
PHYSICAL GEOGRAPHY-LANDFORMS AND WATER**

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.

Credits: 4 Lecture: 3 Lab: 3

**GEOG 279
PHYSICAL GEOGRAPHY-WEATHER AND CLIMATE**

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.

Credits: 4 Lecture: 3 Lab: 3

**GEOG 290
ENVIRONMENTAL PROBLEMS**

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. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

**GEOG 295
WILDERNESS AND SOCIETY**

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.

Credits: 4 Lecture: 4

**GEOG 299
SELECTED TOPICS: GEOGRAPHY**
Credits: 1 to 4

GEOLOGY

**G 148
VOLCANOES AND EARTHQUAKES**

This lab science course examines the global occurrence, origin, and geological processes that create volcanoes and earthquakes. In addition, the course explores geologic hazards, risks, monitoring techniques, and prediction methods associated with earthquakes and volcanism. The course makes extensive use of historic and prehistoric records of earthquakes and volcanic events and highlights examples from Oregon and the western United States.

Credits: 4 Lecture: 3 Lab: 3

**G 162CO
GEOLOGY OF CENTRAL OREGON**

Consists of field studies of selected areas with emphasis on relationship between rock type, geologic setting and topography with a focus on the Geology of Central Oregon. Includes lectures, laboratory and weekend field trips.

Credits: 3 Lecture: 1 Lab: 6

**G 162CV
CASCADE VOLCANOES**

Consists of field studies of selected areas with emphasis on relationship between rock type, geologic setting and topography. Includes lectures, laboratory and weekend field trips. Topic areas include Cascade Volcanoes.

Credits: 3 Lecture: 1 Lab: 6

**G 162OR
GEOLOGY OF OREGON**

Consists of field studies of selected areas with emphasis on relationship between rock type, geologic setting and topography with a focus on the Geology of Oregon. Includes lectures, laboratory and weekend field trips.

Credits: 3 Lecture: 1 Lab: 6

**G 199
SELECTED TOPICS: GEOLOGY**
Credits: 1 to 6

**G 201
GEOLOGY I**

Examines the nature and origins of igneous metamorphic and sedimentary rocks, volcanism and volcanic hazards, geological resources, interior of the earth and plate tectonics.

Credits: 4 Lecture: 3 Lab: 3

**G 202
GEOLOGY II**

Examines the nature of earthquakes, mass wasting, rivers, glaciers, groundwater, deserts, rock deformation, mountain building and plate tectonics. Need not be taken in sequence.

Credits: 4 Lecture: 3 Lab: 3

**G 203
GEOLOGY III**

Examines earth history, geologic time, plate tectonics, fossils and the origin of earth. Need not be taken in sequence.

Credits: 4 Lecture: 3 Lab: 3

**G 207
GEOLOGY OF THE PACIFIC NORTHWEST**

This is a one-term introductory lab science course in geology. It provides an introduction to the regional geology of the Pacific Northwest with emphasis on Oregon, Washington and parts of neighboring states

and provinces. Includes basic geologic principles, earth materials and geologic history of the Pacific Northwest. Required weekend field trip.

Credits: 4 Lecture: 3 Lab: 3

**G 291
ROCKS AND MINERALS**

Studies identification, occurrence and origin of rocks and minerals, emphasizing most common materials of the Earth's crust and mineral resources of the Earth. Includes lectures, laboratory and field trips.

Recommended preparation: GS 106 or G 201.

Credits: 3 Lecture: 2 Lab: 2

**G 299
SELECTED TOPICS: GEOLOGY**

Selected Topics in Geology

Credits: 1 to 6

HEALTH AND HUMAN PERFORMANCE: ACTIVITY CLASSES

**HHP 185AB
ADVANCED BASEBALL**

Allows students to learn and understand the rules and strategy of advanced baseball and to learn to communicate with teammates on the field, demonstrating sportsmanship. Helps improve the student's overall physical conditioning, game strategies and master situational drills. Students will learn the philosophy of the game and be expected to implement assignments in game situations.

Credits: 1 Lab: 3

**HHP 185BA
BARRE BODY**

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 towards a defined physique.

Credits: 1 Lab: 3

**HHP 185BB
SNOWBOARDING I**

For beginning snowboarders. Students will learn the fundamentals of snowboarding with qualified instructors. Equipment must be provided by the student.

Credits: 1 Lab: 3

**HHP 185BC
SNOWBOARDING II**

For intermediate to advanced snowboarders. Students will be provided instruction to enhance their current skill level.

Credits: 1 Lab: 3

**HHP 185BE
SNOWBOARDING III: COMPETITIVE FREESTYLE RIDING**

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.

Credits: 1 Lab: 3

**HHP 185BF
BASKETBALL**

Accommodates all skill levels of basketball and will focus on fundamentals of the game as well as team play.

Credits: 1 Lab: 3

**HHP 185BJ
BRAZILIAN JUJITSU**

Modified version of traditional Japanese Jujitsu and martial art sport that focuses on gaining a dominant position over your opponent. Students will learn proper techniques, using leverage, sparring and self-defense drills to gain self-confidence.

Credits: 1 Lab: 3

**HHP 185BS
SWIMMING I: SWIM FITNESS & TECHNIQUE**

Swim Fitness and Technique helps student feel safe and comfortable in the water for at least 10 minutes at a time, incorporating and refining swimming strokes.

Credits: 1 Lab: 3

**HHP 185BW
BOOT CAMP FOR WOMEN**

Introduction to exercises that improve cardiovascular endurance, muscular strength and flexibility in a supportive team atmosphere. Focus on improving strength and aerobic fitness, utilizing interval training, core strength, plyometrics, running, games and weights.

Credits: 1 Lab: 3

**HHP 185CF
CORE FUSION**

Using the most effective strengthening exercises of yoga, Pilates and group fitness, this class is designed to fatigue the core with emphasis on the upper and lower abdominals, the oblique's, the back, quadriceps, hamstrings, glutes and triceps.

Credits: 1 Lab: 3

**HHP 185CT
CIRCUIT TRAINING**

General, core and cardio. Traditional circuit training class for total body conditioning that includes interval training using various equipment and core circuit training using equipment that emphasizes core-area workout.

Credits: 1 Lab: 3

**HHP 185CY
CYCLING: ROAD, STUDIO, MOUNTAIN**

Two types of cycling modes are offered at varying times throughout the year: indoor studio cycling and mountain biking, which will include local trail systems.

Credits: 1 Lab: 3

**HHP 185DA
AEROBIC DANCE I**

Kickboxing class incorporating traditional aerobic moves along with some resistance and abdominal training. Turbo Kick provides cross-training incorporating noncontact, martial arts aerobic exercises.

Credits: 1 Lab: 3

**HHP 185DB
AEROBIC DANCE II: BENCH/STEP**

Step Bench, Intervals. Traditional step bench and step class which has a combination of both cardio and strength exercises and routines.

Credits: 1 Lab: 3

**HHP 185DC
AEROBIC DANCE III: HIP-HOP**

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.

Credits: 1 Lab: 3

**HHP 185DD
DANCERCISE**

High-energy class emphasizing dance movements including jazz, contemporary and salsa styles.

Credits: 1 Lab: 3

HHP 185GL**GOLF**

Held at local golf courses and is taught by local pro instructors. Instruction of all skill levels will be accommodated.

Credits: 1 Lab: 3

HHP 185IM**INTERMEDIATE MOUNTAIN BIKING**

This course is designed to build upon fundamental mountain bike skills. Trail etiquette and basic nutrition will be reviewed. Intermediate bike maintenance and advanced riding techniques will be introduced. Rides will take place on local trails. Previous mountain biking experience is necessary.

Credits: 1 Lab: 3

HHP 185JG**JOGGING**

Focuses on improving running skills through various running activities. Students will run at both on and off campus sites.

Credits: 1 Lab: 3

HHP 185KA**KI AIKIDO**

Introduces the martial art of Aikido, a form of self-defense and non-fighting. It is based upon coordination of mind and body, not only in throwing, but also in the art of falling (ukemi). Can accommodate all levels.

Credits: 1 Lab: 3

HHP 185KB**ADVANCED KI-AIKIDO**

More closely explains the martial arts of Aikido and its application to daily life. Basic concepts taught in beginning Ki Aikido will continue and are now an expectation. Recommended preparation: HHP 185KA.

Credits: 1 Lab: 3

HHP 185KR**TRADITIONAL JAPANESE SHOTOKAN KARATE**

Beginner class on Traditional Japanese Shotokan Karate with application of basic techniques includes blocks, kicks, punches, strikes and body movements. This course will introduce the student to the philosophy, discipline and techniques of a traditional Asian martial art from experienced instructors and lay the foundation for future development in martial arts.

Credits: 1 Lab: 3

HHP 185MS**MASTERS SWIMMING**

This course is designed to strengthen swimming stroke skills to the advanced level, to introduce advanced concepts of fitness swimming, and to prepare the student for lifetime participation in swimming and racing if desired. Students will attend organized masters swim team practices.

Previous swimming experience expected.

Credits: 1 Lab: 3

HHP 185RC**ROAD CYCLING**

This course is designed to develop fundamental road cycling skills. Road etiquette, basic nutrition, bicycle maintenance and other fitness related information will be addressed. Rides will begin and end on campus and will take place on surrounding roads. Previous cycling experience is not necessary, but a basic level of fitness will help.

Credits: 1 Lab: 3

HHP 185RG**BEGINNING RUGBY**

This is an activity course designed to familiarize the student with the rules, skills, strategy, fitness level and basic concepts of modern Rugby Union Football. The class will equip the student to be an informed Rugby participant.

Credits: 1 Lab: 3

HHP 185SA**SKI ALPINE I**

For beginning downhill skiers. Students will learn the fundamentals of skiing with qualified instructors. Equipment must be provided by the student.

Credits: 1 Lab: 3

HHP 185SB**SKI ALPINE II**

For intermediate to advanced skiers. Students will be provided instruction to enhance their current skill level.

Credits: 1 Lab: 3

HHP 185SF**SOFTBALL**

Focuses on fundamental skill development and team play for all levels of players.

Credits: 1 Lab: 3

HHP 185SH**STRETCH AND RELAXATION**

Introduces students to progressive stretching activities, including the value of stretching to the overall relaxation process.

Credits: 1 Lab: 3

HHP 185SK**SKI CONDITIONING (NORDIC)**

General, Performance. Two levels of conditioning: a general course for all types of groomed and off-track Nordic skiing and a performance for improving fitness and technique for racing and groomed skiing.

Credits: 1 Lab: 3

HHP 185SL**SAND VOLLEYBALL**

Accommodates all skill levels of Sand Volleyball and will focus on skill building, team play, and conditioning.

Credits: 1 Lab: 3

HHP 185SR**SOCCER**

Focuses on fundamental skill development and team play for all levels of players.

Credits: 1 Lab: 3

HHP 185SS**SOCCER ADVANCED**

Geared toward students demonstrating a high skill level. Recommended preparation: HHP 185SR.

Credits: 1 Lab: 3

HHP 185ST**PILATES**

Familiarizes students with the awareness of core flexibility and strength, relative muscle groups and joint actions of the core. Provides Pilates vocabulary and training techniques, including specific stretching, as well as stretching for general health. Also, provides proper sequence form for stretching, the slide, exercise balls and weights.

Credits: 1 Lab: 3

HHP 185SU**PILATES-ALL LEVELS**

Includes a brief review of Pilate's fundamentals or proper spine alignment, elongation, thoracic breath and core control. Class sequence of Pilates exercises with appropriate modifications for all fitness levels.

Credits: 1 Lab: 3

HHP 185SW**SWIMMING FUNDAMENTALS**

Basic swim instruction for individuals with limited to no 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.

Credits: 1 Lab: 3

HHP 185SX**SKI X-COUNTRY I**

For beginning cross-country skiers with little or no experience. Students will learn the fundamentals of skate skiing with a qualified instructor. Skate equipment must be provided by the student.

Credits: 1 Lab: 3

HHP 185SY**SKI X-COUNTRY II**

Focus on skate skiing for intermediate to advanced skiers. Students will improve technique and overall fitness required for groomed-trail skiing or racing. Skate equipment must be provided by student. Offered as needed.

Credits: 1 Lab: 3

HHP 185TA**TENNIS I**

Focuses on skill development for beginning tennis players. Students will learn through various drills and court games.

Credits: 1 Lab: 3

HHP 185TB**TENNIS II**

Geared toward students with intermediate or advanced tennis skills. Should be able to demonstrate prior experience. Recommended preparation: HHP 185TA.

Credits: 1 Lab: 3

HHP 185TF**TOTAL FITNESS**

High intensity and very demanding class. Geared toward improving overall fitness.

Credits: 1 Lab: 3

HHP 185TI**TAI CHI/QIGONG**

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.

Credits: 1 Lab: 3

HHP 185TJ**TAI CHI/QIGONG-INTERMEDIATE**

Introduces Tai Chi Chaun Yang Style 48 form and several additional Qigong exercises for continued health and relaxation through meditation in movement, at the intermediate level. Course encourages students to incorporate daily practice into their schedules and to practice together in study groups. Recommended preparation: HHP 185TI. Offered as needed.

Credits: 1 Lab: 3

HHP 185TK**TAE KWON DO**

Improves cardiovascular endurance, muscular strength and flexibility. Includes: self-defense, social, etiquette and cultural introduction of dojang.

Credits: 1 Lab: 3

HHP 185TR**10K RUNNING**

10K training is designed to increase individual endurance through running specific workouts, strength, formwork, nutrition and specific needs of each student. Previous running experience is helpful.

Credits: 1 Lab: 3

HHP 185VC**VOLLEYBALL ALL LEVELS**

Focuses on fundamental skill development and team play for beginning students and continuing students who want to enhance their skill level.

Credits: 1 Lab: 3

HHP 185VD**VOLLEYBALL - DOUBLES**

Provides rules and strategy of doubles volleyball. Includes communication with teammates on the courts due to the faster pace of the game.

Credits: 1 Lab: 3

HHP 185WA**PROGRESSIVE WALKING**

A group class designed to prepare and progressively maintain health and fitness at a target heart rate through walking.

Credits: 1 Lab: 3

HHP 185WE**WATER AEROBICS**

Introduces water aerobics, which improves cardiovascular endurance, muscular strength and flexibility.

Credits: 1 Lab: 3

HHP 185WN**WILDERNESS TRAINING**

Classes under the HHP 185WN Wilderness Training course number include the following: Wilderness Training Beginning, Orienteering, Hiking and Backpacking, Snowshoeing, Beginning Rock Climbing, Intermediate Rock Climbing, and Back Country Skiing. Recommended preparation for Intermediate Rock Climbing: Beginning Rock Climbing or instructor approval. See the footnote in the class schedule for further course descriptions.

Credits: 1 Lab: 3

HHP 185WT**WEIGHT TRAINING**

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.

Credits: 1 Lab: 3

HHP 185WW**WILDERNESS TRAINING: WATER**

Rafting I; Rafting II; Kayaking I; Kayaking II.

Credits: 1 Lab: 3

HHP 185YA**INTERMEDIATE YOGA**

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.

Credits: 1 Lab: 3

**HHP 185YG
YOGA**

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.

Credits: 1 Lab: 3

**HHP 185YH
YOGA-ALL LEVELS**

Appropriate for all levels. Modification and additional variation in postures for students wanting a more challenging practice, using a blend of different yoga styles.

Credits: 1 Lab: 3

**HHP 185YI
YOGA/PILATES BLEND**

Focuses on a blend of two modalities, with the flexibility of yoga and core strength training of Pilates.

Credits: 1 Lab: 3

**HHP 185YJ
YOGA-VINYASA RISING**

Vinyasa Rising is a dynamic flow of yoga linking breath and movement for a strengthening cardio practice set to rock and popular music. Emphasis is on Ashtanga Yoga in the tradition of Sri Jayakumar Swamysree from the University of Mysore, India. A combination of Vinyasa, Vini and Ashtanga styles of yoga styles will be taught.

Credits: 1 Lab: 3

**HHP 185YK
GENTLE YOGA**

This course is a gentle and restorative flow of yoga designed to heal and strengthen the body; includes various forms of breath work, postures for a more restful sleep, injury recovery, and therapeutic yoga for back and shoulders. The class will also be geared towards relaxing the mind and body, adding flexibility and allowing quiet moments during the yoga practice.

Credits: 1 Lab: 3

**HHP 185ZU
ZUMBA**

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.

Credits: 1 Lab: 3

**HHP 199
SELECTED TOPICS: HEALTH AND HUMAN PERFORMANCE
ACTIVITIES**

Includes both introductory courses and activities.

Credits: 1 to 6

**HEALTH AND HUMAN PERFORMANCE:
EXERCISE SCIENCE****HHP 100
INTRODUCTION TO PUBLIC HEALTH**

Covers basic elements of public health and complex ethical and political issues. Open to all COCC students who want to know more about the field of public health, what it is, how it is organized, and how it works. Requirement for OSU-Cascades Exercise Science (EXSS) majors and is equal to H100 at OSU. Meets health requirements for AAOT degree and serves as an elective for any degree or certificate. Recommended preparation: WR 65 or higher.

Credits: 4 Lecture: 4

**HHP 131
INTRODUCTION TO EXERCISE/SPORT SCIENCE**

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. Recommended preparation: WR 65 or higher.

Credits: 3 Lecture: 3

**HHP 216
SOCIOCULTURAL DIMENSIONS OF PHYSICAL ACTIVITY**

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.

Credits: 3 Lecture: 3

**HHP 246
INTRODUCTION TO ADAPTED PHYSICAL ACTIVITY**

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 community, where you will interact with your classmates and with the instructor.

Credits: 3 Lecture: 3

**HHP 259
CARE AND PREVENTION OF ATHLETIC INJURY**

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. Recommended preparation: WR 65 or higher and HHP 260 or BI 121.

Credits: 3 Lecture: 3

**HHP 260
ANATOMICAL KINESIOLOGY**

This is an introduction to the science of human movement (kinesiology). The class explores the anatomical elements such as muscle action and joint structure and function involved in the gross motor movement. Major emphasis will be on structural anatomy, primary movers of each joint, and muscle utilization for specific sport actions. Recommended preparation: WR 65 or higher and BI 231.

Credits: 4 Lecture: 3 Lab: 3

**HHP 261
EXERCISE PHYSIOLOGY**

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. Recommended preparation: WR 65 and MTH 20 or higher.

Credits: 4 Lecture: 4

HHP 262 TRAINING THEORY AND APPLICATIONS

Provides physiological knowledge surrounding cardiovascular training and physiologic mechanisms underlying improvement in strength and flexibility. Explores various testing techniques, training methods, application and periodization as related to physical training. Acts as a practical guide for understanding of individualized exercise prescription (personal training). Initial client consultation, required paperwork, risk-factor stratification and legal implications are also discussed. Recommended preparation: HHP 260 and HHP 261.

Credits: 3 Lecture: 3

HHP 267 WELLNESS COACHING FUNDAMENTALS

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. Recommended preparation: WR 65 or higher.

Credits: 3 Lecture: 3

HHP 270 SPORT AND EXERCISE PSYCHOLOGY

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. Recommended preparation: WR 65 or higher.

Credits: 3 Lecture: 3

HHP 280A/B PRACTICUM – EXERCISE SCIENCE

Provides Exercise Science practicums by the department in conjunction with the community in health & fitness programs including group fitness, personal training, wellness coaching, and research, clinical professions such as physical therapy, occupational therapy, athletic training, and cardiac rehabilitation. Recommended preparation: complete a minimum of three EXS classes with a "C" grade or better prior to taking a practicum and must be approved for enrollment by an HHP/Exercise Science advisor before registering.

Credits: 1 to 2 Lecture: 3



HEALTH AND HUMAN PERFORMANCE: HEALTH

HHP 212 CPR - AMERICAN HEART ASSOCIATION HEARTSAVER WITH PEDIATRIC

The Heartsaver Automatic External Defibrillator (AED) with Pediatric CPR course teaches the basic techniques of adult CPR and use of an AED. Pediatric CPR skills may be taught if students live or work in a setting where children are present. Students also learn to use barrier devices in CPR and give first aid for choking for responsive adult, child and infant victims. Course teaches how to recognize the signs of four major emergencies: heart attack, stroke, cardiac arrest, and foreign-body airway obstruction. Through the American Heart Association. Course meets the Dental Assistant standards.

Credits: 1 Lecture: 1

HHP 212A CPR - AMERICAN HEART ASSOCIATION HEALTHCARE PROVIDER

Basic Life Support Healthcare Providers course teaches the skills of CPR for victims of all ages (including ventilation with a barrier device, a bag-mask device, and oxygen), use of an automatic external defibrillator and relief of foreign-body airway obstruction in responsive and nonresponsive victims. The course is designed for health care providers who care for patients in a wide variety of settings, both in and out of hospital. Through the American Heart Association. Course meets the Allied Health and Nursing standards.

Credits: 1 Lecture: 1

HHP 220 INTRODUCTION TO EPIDEMIOLOGY

Combines fields of statistics, sociology, microbiology and other relevant sciences. Considered a fundamental science of public health and defined as the study of distribution and determinants of disease frequency in human populations, and the application of this science to the control of health problems. Topics covered include: history of epidemiology, study design (cohort and case control), and measure of disease frequency, prevalence and incidence. Offered as needed. Recommended preparation: MTH 20 or higher.

Credits: 3 Lecture: 3

HHP 231 HUMAN SEXUALITY

Explores physiological, sociological and psychological factors relating to human sexual behavior. Topics include male and female sexual anatomy, gender identity and roles, relationships and communication, fertility management and sexual diseases and dysfunctions. Recommended preparation: WR 65 or higher.

Credits: 3 Lecture: 3

HHP 242 STRESS MANAGEMENT

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. Recommended preparation: WR 65 or higher.

Credits: 3 Lecture: 3

HHP 243 OCCUPATION HEALTH, AHA BLS CPR

This class provides an introduction to major concepts and issues in occupational health and safety, including health promotion, injury and disease prevention, and protection of worker populations from environmental hazards. The course will also include a section on stress

management with a focus on the application of managing stress on the job, and will include the American Heart Association (AHA) Basic Life Support (BLS) for Health Care Providers (HCP) CPR course which is what we currently teach in our one-credit HHP 212A class.

Credits: 3 Lecture: 3

HHP 248

HEALTH PSYCHOLOGY

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 bio-psychosocial factors related to chronic diseases like obesity, heart disease, and HIV/AIDS. Recommended preparation: WR 65 or higher.

Credits: 4 Lecture: 4

HHP 252

FIRST AID & HCP PROVIDER CPR

The course will be devoted entirely to the instruction of First Aid & CPR. Immediate and temporary care for a wide variety of injuries, illnesses, conditions and events will be taught. Students will learn the skills of CPR for victims of all ages (including ventilation with a face shield, pocket mask and a bag-mask device), use of an automated external defibrillator (AED), and relief of choking. Both one- and two-person CPR will be taught as well as compression-only CPR. The practical exam will consist of individual hands-on testing. Upon successful completion of course (>80% on the three written exams and >80% on the practical exam), students will receive a National Safety Council Standard First Aid card valid for three years & an American Heart Association (AHA) Health Care Provider (HCP) Basic Life Support (BLS) (Adult & Pediatric CPR) card valid for two years. Recommended preparation: WR 65 or higher.

Credits: 3 Lecture: 3

HHP 252A

FITNESS/FIRST AID

Introduces both first aid and wellness topics, such as immediate and temporary care for injury and illness, control of bleeding, care for poisoning, splinting, bandaging and transportation, as well as fitness, nutrition and stress management. Students earn first aid and CPR cards in both adult and infant from the National Safety Council upon completion of course. Recommended preparation: WR 65 and MTH 20 or higher.

Credits: 3 Lecture: 3

HHP 258

HOLISTIC WELLNESS

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. Recommended preparation: WR 65 or higher.

Credits: 4 Lecture: 4

HHP 266

NUTRITION FOR HEALTH

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. Recommended preparation: MTH 20 or higher.

Credits: 3 Lecture: 3

HHP 268

SUSTAINABLE FOOD AND NUTRITION

Farmer and author Wendell Berry once wrote that eating is an "agricultural act". It is also an ethical, cultural, political, and environmental act. In an attempt to understand the full impact of our food choices, this course will explore American food production from start to finish, past to present, and field to fork. Along the way, we will answer questions such as: How does a plant grow? What is the difference between conventional vs. organic agriculture? How and why did our current food system evolve? How much does a fast-food cheeseburger really cost? What and why is food biotechnology? Where can I buy a local head of lettuce or leg of lamb? And, ultimately, what should I eat? Recommended preparation: WR 65 or higher.

Credits: 4 Lecture: 4

HHP 295

HEALTH AND FITNESS

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. Recommended preparation or recommended to be taken with: WR 65 and MTH 20 or higher.

Credits: 3 Lecture: 3

HHP 299

SELECTED TOPICS: HHP

Health topics requiring advanced level of critical thinking, writing and/or other skills.

Credits: 1 to 3

HEALTH AND HUMAN PERFORMANCE: OUTDOOR LEADERSHIP

OL 111

INTRODUCTION TO OUTDOOR LEADERSHIP

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 is a foundation course and a recommended prerequisite to outdoor leadership program courses. Prerequisites: WR 65 with a "C" or higher.

Credits: 3 Lecture: 3

OL 160

PROCESSING THE EXPERIENCE

Students will be introduced to a variety of creative processing tools to be used either during or after the experience. The use of a field journal for reflection notes, as well as for processing through creative pursuits like sketching or painting will be introduced, as will group-based processing tools like formal debriefs, creating skits and collaborative art projects. This course is offered only during fall term.

Credits: 2 Lecture: 2

OL 171

TECHNICAL SKILLS FOR OUTDOOR LEADERSHIP

This course focuses on introducing students to a variety of basic skills, gear, and systems necessary for a variety of Outdoor pursuits, including alpine mountaineering, challenge course and rock climbing. Students are introduced to a variety of skills, with the intention of moving into more guide oriented courses later in their program. This class will present

students with various technical skills that will serve as a foundation for the advanced training in specific outdoor disciplines. Students will be introduced to 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.

Credits: 2 Other: 4

**OL 194AA
AVALANCHE LEVEL I**

This course is designed to introduce the student to 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. Additional field time is spent on practicing transceiver search techniques (single and multiple burial), snowpack assessment (through a 'Test-pit Plus'), and safe travel practices/group travel skills. The course includes one or more mock avalanche rescues.

Credits: 1 Other: 2

**OL 194AB
AVALANCHE LEVEL I REFRESHER**

This course is designed to review the materials from Avalanche Level I, including the various factors that contribute to avalanche hazard including terrain, weather, snowpack, and the human component (good vs. bad decision making). Avalanche safety equipment such as transceivers, probes and shovels are also reviewed, along with how to use each of these critical pieces of safety gear. Field time is spent practicing transceiver search techniques (single and multiple burial), snowpack assessment (through a 'Test-pit Plus'), and safe travel practices and group travel skills. Students must have completed an Avalanche Level I course within the past five years. Recommended preparation: OL 194AA or instructor approval.

Credits: 1 Other: 2

**OL 194AC
AVALANCHE LEVEL II**

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. Recommended preparation: OL 194AA or OL 194AB or instructor approval.

Credits: 2 Lecture: 1 Other: 2

**OL 194MA
MOUNTAINEERING I**

This course is designed as an introduction to safe travel in the mountains. The basics of outdoor clothing, mountaineering equipment and snow camping will be covered, as will navigation, snow anchors, snow travel (ice axe and crampon use), route planning and roped travel. Environmental hazards such as weather and avalanches will also be discussed.

Credits: 2 Lecture: 1 Lab: 3

**OL 194MB
MOUNTAINEERING II**

This course is designed to introduce the student to technical mountain travel with specific emphasis on rock, snow and ice anchors, glacier travel and crevasse rescue, and climbing steep snow and ice. Additional relevant topics may also be introduced (avalanche safety, high altitude mountaineering, etc.). Recommended preparation: OL 194MA.

Credits: 2 Lecture: 1 Lab: 3

OL 199

SELECTED TOPICS: OUTDOOR LEADERSHIP

Credits: 1 to 4

**OL 207
SEMINAR IN OUTDOOR LEADERSHIP**

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.

Credits: 2 Lecture: 2

**OL 244
PSYCHOLOGY OF RISK AND ADVENTURE**

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. Recommended preparation or recommended to be taken with: WR 121, instructor permission required.

Credits: 3 Lecture: 3

**OL 253
WILDERNESS ADVANCED FIRST AID**

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.

Credits: 3 Lecture: 2 Other: 2

**OL 255
OUTDOOR LIVING SKILLS**

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 is a foundation course and recommended preparation to outdoor leadership program courses.

Credits: 5 Lecture: 4 Lab: 3.6

**OL 271
FACILITATING GROUP EXPERIENCES**

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. 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 foundational course and recommended preparation to outdoor leadership program courses. Prerequisites: OL 111, OL 253, OL 255, WR 121.

Credits: 4 Lecture: 3 Lab: 3

**OL 273
OUTDOOR RECREATION LEADERSHIP**

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. Prerequisites: OL 111, OL 253, OL 255, WR 121.
Credits: 5 Lecture: 4 Lab: 3.6

OL 280**CO-OP WORK EXPERIENCE: OUTDOOR LEADERSHIP**

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. Recommended preparation: complete a minimum of three OL classes with a "C" grade or better prior to taking a practicum and must be approved for enrollment by an HHP/Outdoor Leadership advisor before registering.
Credits: 2 Lab: 6

OL 294CC**CHALLENGE COURSE PRACTICES**

This course is designed to educate the student on the history, philosophy, principles, management, and use of challenge courses (high and low). Course competencies will be fostered through experiential learning methodologies and practical experiences in challenge course environments. Risk management, maintenance, staff training, operational procedures, course construction, and program planning will be emphasized. Prerequisites: OL 171, OL 271, OL 273.
Credits: 3 Lecture: 1.5 Lab: 4.5

OL 294RC**TEACHING ROCK CLIMBING**

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. Prerequisites: OL 171, OL 271, OL 273.
Credits: 3 Lecture: 1.5 Lab: 4.5

OL 294MB**MOUNTAIN BIKE GUIDING AND TRAIL STEWARDSHIP**

This course is designed to instruct the student on 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 skill, 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. Prerequisites: OL 271, OL 273.
Credits: 3 Lecture: 1.5 Lab: 4.5

OL 294WG**WHITewater RAFT GUIDING**

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. Pre-requisites: OL 271, OL 273, OL 171.
Credits: 3 Lecture: 1.5 Lab: 4.5

HEALTH INFORMATION TECHNOLOGY**AH 111****MEDICAL TERMINOLOGY I**

Covers terminology pertaining to medical term construction, body structure, integumentary, hematopoietic/lymph, cardiovascular, oncology, respiratory and musculoskeletal systems. Includes standard abbreviations, anatomic, diagnostic, symptomatic and operative terms related to these body systems. Students (online and face-to-face) must pass a face-to-face written final exam at 70% or higher to pass this class.
Credits: 3 Lecture: 3

AH 112**MEDICAL TERMINOLOGY II**

Covers terminology pertaining to pharmacology, nervous system, mental health, special senses (eye and ear), reproductive (male and female), obstetrics, digestive, urinary and endocrine systems. Includes standard abbreviations, anatomic, diagnostic, symptomatic and operative terms related to these body systems. Prerequisite: AH 111. Students (online and face-to-face) must pass a face-to-face written final exam at 70% or higher to pass this class.
Credits: 3 Lecture: 3

HIT 103**HEALTH INFORMATION SYSTEMS AND PROCEDURES**

Health Information Procedures is a course designed to provide the student with a fundamental knowledge of health information delivery and information systems, functions of the health record, and the skills necessary to integrate theoretical knowledge with application functions. Lab includes application of health care procedures via the AHIMA Web-based virtual lab. Enrollment limited to HIT majors. Prerequisites: WR 121, AH 111, CIS 120. Offered fall term only.
Credits: 5 Lecture: 4 Lab: 3

HIT 104**HEALTH DATA CONTENT/STRUCTURE**

Utilization and application of health care data content (health record analysis) with special emphasis on mechanics of physician's orders, clinical lab tests, diagnostic and treatment modalities, pharmacology and an overview of applicable consent and confidentiality principles. Lab includes application of health care procedures via the AHIMA Web-based virtual lab. Enrollment limited to HIT majors. Prerequisite: HIT 103. Instructor approval required. Offered winter term only.
Credits: 5 Lecture: 4 Lab: 3

HIT 131A**DOCUMENT MANAGEMENT AND TECHNOLOGY**

Provides specific fundamental experience in the identification and application of inpatient and outpatient records and reports based on current use of electronic health records (EHRs). It is important to have strong skills in spelling, medical terminology, the English language, attention to detail, proofreading, quality editing and grammatical appropriateness. Prerequisite: HIT 104. Instructor approval required. Offered spring term online.
Credits: 3 Lecture: 3

HIT 131C**MEDICAL TRANSCRIPTION APPLICATIONS**

Provides training and practical experience in the transcription of various medical reports and is designed to instill accuracy. Students spend twelve hours per week in lab. This time affords the opportunity to obtain entry-level transcription skills. Passing a competency exam is required for Medical Transcription certificate. Prerequisite: completion of HIT program first-year curriculum. Instructor approval required. Offered summer term.
Credits: 4 Lab: 12

HIT 180**HIPAA MANAGEMENT**

Presents a medical-legal foundation with respect to HIPAA (Health Insurance Portability and Accountability Act), federal legislation enacted in 1996. HIPAA encompasses the privacy, security and electronic transaction standards for maintaining and transmitting protected health information. This course is designed to provide a basis for understanding the impact this legislation imposes on the health care industry and on health information management. Offered online and face-to-face. Students (online and face-to-face) must pass a face-to-face written final exam at 70% or higher to pass this class.

Credits: 2 Lecture: 2

HIT 182**INTRODUCTION TO MEDICAL CODING**

Explores the history, arrangement and application of ICD-9-CM, ICD-10-CM and CPT coding systems. ICD-9/10-CM/CPT conventions, updates, influencing entities and how these expectations are communicated to health care providers, coding clearinghouses, ethical and quality coding, coder responsibilities, etc. will be determined. Basic coding guidelines by body system and/or payer requirements will be explored and applied including reporting of ICD-9/10-CM/CPT codes, inpatient and ambulatory reporting/billing. Recommended preparation or recommended to be taken with: AH 111, AH 112, BI 231, BI 232, BI 233, HIT 184, HIT 103, HIT 104. Instructor approval required.

Offered spring term.

Credits: 4 Lecture: 4

HIT 184**ADVANCED PATHOPHYSIOLOGY**

This course provides an in-depth study of human pathological processes, which affect body organs and interrelated body systems. Upon completion of this course, students will know the etiology, physical signs and symptoms, pathogenesis, diagnosis, treatment modalities and prognosis of disease conditions identified in specific body systems. Students will be able to analyze and interpret laboratory, EKG, pulmonary and radiologic findings. This course will prepare students to understand and apply clinical concepts to medical coding, utilization review, quality management and clinical documentation. Prerequisites: AH 112, BI 232. Recommended to be taken with BI 233. Offered spring term.

Credits: 5 Lecture: 5

HIT 193**DIRECTED PRACTICE I**

In the realm of health information management, this is a course in which students report to a health care facility and experience planned activities in the environment of the actual workplace. Provision for technical experiences is an integral component of curricula. Provides for lecture preparation and application of classroom and laboratory objectives in a supervised affiliation site in Oregon, typically. Performed under leadership of a registered health information administrator or registered health information technician. Fulfills 60 of the 120 total clinical hours distributed in the curriculum at various points of program completion. Forty hours of actual clinical and 20 hours of preparatory instruction. Prerequisite: successful completion of first-year HIT curriculum (or higher) or permission of the HIT director. Offered summer term between the first and second year.

Credits: 2 Other: 6

HIT 199**SELECTED TOPICS: HEALTH INFORMATION TECHNOLOGY**

Credits: 2 to 4

HIT 201**LEGAL ASPECTS HEALTH CARE**

This course presents the medical-legal aspects of health care. The course is designed to provide a foundation for understanding the rapidly expanding field of laws and regulations affecting the health care industry. Special emphasis is placed in the areas of preservation of medical records, hospital and physician liability, statutes of limitations,

consents for treatment, release of information. Preparation of medical records in answer to a subpoena duces tecum, behavior of the medical record practitioner in court, principles of confidentiality—highlights the technical role of the professional. Special legal implications for medical administration and risk management also are addressed. Instructor approval required. Offered fall term.

Credits: 3 Lecture: 3

HIT 203**HEALTHCARE DELIVERY AND TECHNOLOGY**

Provides analysis of the common terms and procedures related to the development and implementation of information systems; specifically networks and interfaces (in reference to electronic health records), the personal health record (PHR), public health and other administrative application/systems, database architecture and design along with systems analysis and database informatics. Also provided in this class is an overview of the health care delivery system and its relationship to technology in health care. Prerequisite: completion of first-year HIT program curriculum; enrollment limited to second-year HIT majors. Instructor approval required. Offered winter term.

Credits: 3 Lecture: 3

HIT 205**INTRODUCTION TO MEDICAL RECORD ANALYSIS**

Application of qualitative and quantitative analyses of health records based on accreditation standards, licensing and certifying agencies. The applications of accrediting standards are also covered. Prerequisite: completion of first-year HIT program curriculum; enrollment limited to second-year HIT majors. Instructor approval required. Offered fall term.

Credits: 3 Lecture: 3

HIT 272**HEALTH INFORMATION MANAGEMENT**

Studies organization and management principles in order to develop effective skills in leadership, motivation and team-building techniques for the health care workplace. Covers computer concepts with emphasis on DRG grouping and encoding applications via AHIMA virtual lab Web-based software. Prerequisite: completion of first-year HIT program curriculum; enrollment limited to second-year HIT majors. Instructor approval required. Offered spring term.

Credits: 5 Lecture: 4 Lab: 2

HIT 281**HEALTH DATA COLLECTION**

Studies data computation, presentation, and analysis of health statistics with an emphasis on validity and reliability. Includes definitions, the use of graphs and tables, measures of central tendency, percentile and Z scores. Prerequisite: Completion of first-year HIT program curriculum; enrollment limited to second-year HIT majors. Instructor approval required. Offered winter term.

Credits: 3 Lecture: 2 Lab: 2

HIT 282**QUALITY IMPROVEMENT IN HEALTH CARE**

Application and analysis of quality management, utilization management, risk management and other related studies. Also covered is the analysis of clinical data to identify trends that demonstrate quality, safety and effectiveness of health care. Abstraction of data for facility-wide quality management and performance improvement programs is also utilized. In addition, review of registries (cancer, disease, diabetes, etc.), indexes and databases are covered. Prerequisite: Completion of first-year HIT program curriculum; enrollment limited to second-year HIT majors. Instructor approval required. Offered spring term.

Credits: 4 Lecture: 3 Lab: 2

HIT 283**CODING CLASSIFICATIONS**

Places major emphasis on coding guidelines and application of codes for diseases and conditions in the ICD-10-CM coding classification. Prerequisites: Completion of first-year HIT program curriculum;

enrollment limited to second-year HIT majors. Instructor approval required. Offered winter term.

Credits: 6 Lecture: 3 Lab: 6

HIT 284

CLASSIFICATION AND REIMBURSEMENT SYSTEMS

Applies advanced coding principles with application based on legislative developments. Emphasizes merger of clinical and financial data for patient care reimbursement. Focuses on specialized coding pertinent to the Prospective Payment System including HCPCS coding. Explores alternate coding systems and extensive application of CPT coding system. Offered for second-year program students. Instructor approval required. Strongly recommend ICD-10-CM coding skills. Offered fall term.

Credits: 4 Lecture: 4

HIT 285

ADVANCED CODING CLASSIFICATIONS

The use of ICD-10-CM/PCS will offer greater coding detail and granularity and will greatly enhance the precision with which hospitals measure quality, collect statistical data and submit claims for reimbursement. This course is designed to provide advanced level hands on application of ICD-10-CM/PCS and in depth instruction in ICD-10-PCS. Prerequisites: HIT 283, HIT 284, instructor approval is required for this course.

Credits: 4 Lecture: 4

HIT 288

SPECIAL STUDIES: HEALTH INFORMATION TECHNOLOGY

Credits: 1 to 3

HIT 293

DIRECTED PRACTICE II

In the realm of health information management, this is a course in which students report to a health care facility and experience planned activities in the environment of the actual workplace. Provision for technical experiences is an integral component of curricula. Provides for application of classroom and laboratory objectives in supervised affiliation sites in Oregon, typically. Performed under leadership of a registered record administrator or accredited record technician. Fulfills 60 of the 120 total DP clinical hours for the program. Total of 40 clinical hours plus 20 preparatory instruction hours are distributed in the curriculum at various points of program completion. Prerequisite: Must have successfully completed first year and second year of HIT curriculum (or higher) or permission of the HIT director. Offered summer term following graduation.

Credits: 2 Other: 6

HIT 294

RHIT EXAM PREPARATION

Helps prepare students for the National RHIT Examination. Students will review core curriculum identified by AHIMA as essential domains of learning and take practice exams to familiarize them with the types of questions and formats they will encounter when taking the national exam. Completion of the Health Information Technology AAS degree required. Offered summer term.

Credits: 1 Lecture: 1

HIT 295

CCA EXAM PREPARATION

This course is designed for graduates of the HIT Program to prepare them to take the national credential exam for Certified Coding Associate. The HIT Advisory Committee and local employers have indicated that potential entry-level coders will be required to obtain this credential within six months after hire. This course will provide support for student success in the workplace. Instructor approval required. Offered summer term.

Credits: 1 Lecture: 1

HIT 296

AMBULATORY DATA SYSTEMS

Focuses on electronic information systems in non-acute facilities with emphasis on professional medical billing. Course will focus on insurance, legal and regulatory conditions, coding systems, reimbursement issues, and filing claims utilizing electronic medical data systems. Prerequisites: completion of first-year HIT program curriculum; enrollment limited to second-year HIT majors. Instructor approval required. Offered fall term.

Credits: 3 Lecture: 2 Lab: 2

HIT 297

CURRENT TOPICS

Discusses current trends, topics and procedures affecting the medical record professional and the delivery system in general.

Credits: 1 Lecture: 1

HIT 299

SELECTED TOPICS: HEALTH INFORMATION TECHNOLOGY

Credits: 4

HISTORY

HST 101

HISTORY OF WESTERN CIVILIZATION

This course provides a framework for understanding the notion of "Western Civilization." HST 101 surveys political, social, intellectual and cultural developments in Europe from prehistoric times to the early Medieval period. It covers the ancient civilizations, the establishment of early European civilizations, and the world of the Greeks and Romans. Recommended preparation or recommended to be taken with: WR 121. HST 101, HST 102, and HST 103 need not be taken in sequence.

Credits: 4 Lecture: 4

HST 102

HISTORY OF WESTERN CIVILIZATION

This course provides a framework for understanding the notion of "Western Civilization." HST 102 surveys the development of European civilization from the fall of the Roman Empire, continuing through the Medieval period through 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. Need not be taken in sequence. Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HST 103

HISTORY OF WESTERN CIVILIZATION

This course provides a framework for understanding the notion of "Western Civilization." HST 103 explores European civilizations from the French Revolution to present. Focuses on the establishment of nations, the Industrial Revolution, nationalism and racism, colonization, and the two World Wars. Need not be taken in sequence. Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HST 104

WORLD HISTORY

This is a survey of the development of world civilizations and alternative nomadic/pastoral lifestyles. It investigates cultures, politics, and lifestyles from prehistoric times through the classical period. Students learn about the origins of civilizations in the Middle East, the Mediterranean, Africa, China, and the Indian subcontinent. Need not be taken in sequence.

Recommended preparation or recommended to be taken with: WR 121.
Credits: 4 Lecture: 4

HST 105**WORLD HISTORY**

HST 105 traces the post-classical through early modern period focusing on the spread of Islamic empires in the Middle East, Africa, India, Europe and Europe's first worldwide expansion. Need not be taken in sequence. Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HST 106**WORLD HISTORY**

HST 106 traces the impact of industrialization upon the world. Industrialization propelled colonial expansion by European powers, and this course will trace the colonizers and the colonized. The twentieth century endured two world wars, two genocides, and several wars of decolonization. This course will include a focus on the cultural and intellectual trends that went along with political turmoil, industrialization, and modern war. Need not be taken in sequence. Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HST 188**SPECIAL STUDIES: HISTORY**

Credits: 1 to 3

HST 199**SELECTED TOPICS: HISTORY**

Credits: 1 to 4

HST 201**UNITED STATES HISTORY TO 1820**

This course provides an overview of the development of the U.S. from the pre-Columbian era to the present. Attention is given to economic, political, and social trends, as well as to international relations. Covers pre-Columbian and colonial origins to 1820. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HST 202**UNITED STATES HISTORY, 1820-1920**

This course surveys the divisive issues that led to the Civil War, the Reconstruction Era, the rapid industrialization, impact of new immigration and resulting cultural diversity, from the end of the Civil War to the gradual emergence of the U.S. as a world power during the early 20th century. Recommended preparation: WR 121

Credits: 4 Lecture: 4

HST 203**UNITED STATES HISTORY FROM 1920 TO PRESENT**

This course examines the rise of the United States as a global power in the 20th century and into the first decade of the 21st century. Topics to be studied include American foreign policy, the Cold War, economic development, civil rights, and American political trends. Recommended preparation: WR 121

Credits: 4 Lecture: 4

HST 204**HISTORY OF THE CIVIL WAR**

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". Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HST 207**HISTORY OF THE AMERICAN WEST**

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.

Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HST 218**NATIVE AMERICAN HISTORY**

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. Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HST 225**US WOMEN'S HISTORY**

Survey of the problems and achievements of U.S. women from the 16th to the 20th century, including issues of race, ethnicity and class.

Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HST 236**WOMEN IN 20TH CENTURY EUROPEAN HISTORY**

Offers students an introductory survey of European women's history in the 20th century and provides them with a basic understanding of how gender has been a factor in this historical context. Recommended preparation or recommended to be taken with: WR 121, LIB 127.

Credits: 4 Lecture: 4

HST 242**HISTORY OF THE PACIFIC NORTHWEST**

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. Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HST 258**COLONIAL LATIN AMERICAN HISTORY**

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. Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HST 259**MODERN LATIN AMERICAN HISTORY**

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. Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HST 260**HISTORY OF THE MIDDLE EAST**

This course covers political, social, and religious developments in the Islamic world from 600 C.E. to the 1960s. It traces the formation of Islam and the establishment of the Caliphate; the impact of the Mongol invasions; the Ottoman, Mughal, and Safavid Empires; and the impact of European colonization and 20th Century movements of decolonization.

Credits: 4 Lecture: 4

HST 270**20TH CENTURY EUROPEAN HISTORY**

Introduces the intellectual, political and cultural history of 20th century European history. Studies significant events in a European context, identifying the historical setting and significance of major occurrences in Europe, such as fascism, world war, communism and decolonization. Recommended preparation or recommended to be taken with: WR 121 and LIB 127.

Credits: 4 Lecture: 4

HST 280**CO-OP WORK EXPERIENCE HISTORY**

Credits: 1 to 3

HST 290**EAST ASIAN HISTORY**

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. Recommended preparation or recommended to be taken with: WR 121.

Credits: 4 Lecture: 4

HST 291**EAST ASIAN HISTORY**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HST 292**EAST ASIAN HISTORY**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HST 299**SELECTED TOPICS: HISTORY**

Credits: 1 to 4

HOSPITALITY, TOURISM AND RECREATION

HTRM 105**FOOD SERVICE MANAGEMENT**

Covers principles of managing a food service operation including concept development, site selection, how to develop an operational plan, how to develop and price a menu, principles of local food service marketing, how to estimate sales, developing an understanding of food costs and controls, and how to obtain funding for building a restaurant. Involves students in assessing service and determining service niches in the community. Students prepare detailed business plans for fictitious or actual operations.

Credits: 4 Lecture: 4

HTRM 106**LODGING MANAGEMENT**

Covers principles of managing lodging operations. Explores current operational practices of lodging operations throughout the world. Discusses management functions related to front office, housekeeping, marketing, reservations, maintaining customer accounts, laws affecting lodging operations and typical service problems. Students will go on field trips to learn about different kinds of lodging operations throughout the state.

Credits: 3 Lecture: 3

HTRM 188**SPECIAL STUDIES: HOSPITALITY, TOURISM AND RECREATION**

Credits: 1 to 3

HTRM 233**EVENT PLANNING**

Introduces students to special event planning processes and techniques. Emphasis is on the designing, planning, marketing and staging events. Additional topics will focus on management, legal compliance, risk management, financial control and successful event evaluation.

Credits: 3 Lecture: 3

HUMANITIES/FILM

FA 101**INTRODUCTION TO FILM**

Enhances student enjoyment and understanding of film through exploring the cinematic languages of acting, directing cinematography and narrative. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

FA 125**WORLD CINEMA**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

FA 257**LITERATURE INTO FILM**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 105**ITALIAN LIFE AND CULTURE**

Offered as a required course in the Florence Quarter study abroad program. The student will gain a broad overview of contemporary Italian society by examining cultural traditions and values. Besides topical lectures by native guest lecturers, the course engages students in experiential learning through field trips to such historic and cultural sites as Etruscan Fiesole, the Uffizi Gallery, the Accademia Museum and the Medici Pitti Palace. (Elective credit only: Does not satisfy general education requirements)

Credits: 2 Lecture: 2

HUM 106**BRITISH LIFE AND CULTURE**

Offered as a required course in the London Quarter study abroad program. The student will gain a broad overview of contemporary British culture and society by examining traditions and institutions that impact the British way of life in the twenty-first century. Besides topical presentations by native guest lecturers, the course engages students in experiential learning through field trips to such historic and cultural sites as the Museum of London, the National Gallery, Shakespeare's Globe Theatre and the Houses of Parliament.

Credits: 3 Lecture: 3

HUM 107**SPANISH LIFE AND CULTURE**

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 Dalí museum. (Elective credit only: Does not satisfy general education requirements)

Credits: 3 Lecture: 3

HUM 188**SPECIAL STUDIES: HUMANITIES**

Credits: 1 to 4

HUM 199**SELECTED TOPICS: HUMANITIES**

Credits: 1 to 4

HUM 210**CULTURE AND LITERATURE OF ASIA**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 211**CULTURE AND LITERATURE OF AFRICA**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 212**CULTURE AND LITERATURE OF THE AMERICAS**

Interdisciplinary study of representative literary and historical texts (and other media) from Hispanic and Afro-Caribbean cultures of traditional, colonial and post-colonial origin. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 213**CULTURE AND LITERATURE OF MIDDLE EAST**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 230**IMMIGRANT EXPERIENCE AMERICAN LITERATURE**

Introductory survey of the immigrant experience in the United States as reflected in literature, autobiography and film. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 240**NATIVE AMERICAN LITERATURE AND CULTURE**

Introduction to traditional oral and contemporary Native American texts with an emphasis on cultural contexts and continuity. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 255**CULTURAL DIVERSITY IN CONTEMPORARY AMERICAN LITERATURE**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 256**INTRODUCTION TO AFRICAN-AMERICAN LITERATURE**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 261**POPULAR CULTURE: SCIENCE FICTION**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 262**POPULAR CULTURE: THE AMERICAN WESTERN**

Historical study of the Western story and the cowboy hero in American culture through genres such as fiction, film, song, art and advertising. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 263**POPULAR CULTURE: DETECTIVE STORIES**

Historical study of crime stories and the detective figure as revealed in popular culture through genres such as fiction, film, television, comics and journalism. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 264**POPULAR CULTURE: SPY THRILLER**

Thematic study of espionage stories and the spy figure, as revealed in popular culture through genres such as fiction, film, advertising and journalism. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 265**POPULAR CULTURE: NOIR FILM AND FICTION**

Historical, thematic and technical study of film noir and related fiction as a subversive force in popular culture. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 266**POPULAR CULTURE: TRAVEL LITERATURE**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 267**POPULAR CULTURE: COUNTERCULTURE**

An exploration of the chaos and transformation that shaped America in the second half of the 20th century. A study of key personalities, artistic expressions, and social movements in this period. Retraces the tumultuous trajectory of the time from precursors in Henry Miller and others through Kerouac and the Beats to Timothy Leary, Hippies, Yippies, communes and ultimately the breakdown of the counterculture movement and its rejection in the Punk movement of the late 1970s. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 268**DIGITAL GAMES CULTURE**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

HUM 299**SELECTED TOPICS: HUMANITIES**

Credits: 1 to 4

WS 101**INTRODUCTION TO WOMEN'S AND GENDER STUDIES**

Explores the impact of women's and gender studies in many academic fields. Examines women's status and achievements, and the issues raised for men and women by feminism and the women's movement.

Recommended preparation: WR 121.

Credits: 4 Lecture: 4

JOURNALISM

J 188**SPECIAL STUDIES: JOURNALISM**

Credits: 1 to 3

J 199**SELECTED TOPICS: JOURNALISM**

Credits: 1 to 4

J 215**PUBLICATIONS LAB**

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. Recommended prerequisite or recommended to be taken with: J 216.

Credits: 1 Lab: 3

J 216**REPORTING I**

A beginning class in newswriting. Emphasis is placed on writing leads, developing the story and a sense for news. Character and communication of news and the rights and responsibilities of journalists explored. Open to all students. Recommended preparation: WR 121 or instructor approval.

Credits: 3 Lecture: 3

J 217**REPORTING II**

A continuation of Reporting I with emphasis placed on comprehensive news story writing, covering speeches and meetings and interviewing. Recommended preparation: J 216 or instructor approval.

Credits: 3 Lecture: 3

J 280**JOURNALISM PRACTICUM**

Community work experience in journalism (may include internships in local media).

Credits: 1 to 3

J 299**SELECTED TOPICS: JOURNALISM**

Credits: 1 to 4

LIBRARY

LIB 100**INTRODUCTION TO FINDING INFORMATION**

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.

Credits: 1 Lecture: 1

LIB 127**INFORMATION RESEARCH SKILLS**

Library 127 teaches college-level research and information skills including finding and accessing resources in physical and digital formats; developing topics and research strategies; learning and applying advanced search techniques; exercising critical thinking to evaluate information and using the Internet as a research tool.

Credits: 3 Lecture: 3

LIB 199**SPECIAL TOPICS: LIBRARY**

Credits: 1 to 3

LIB 227**MAPPING INFO WORLD**

This course familiarizes students with the world of information and research. Students become familiar with various issues related to the "information society" as well as the world of research. Specifically, the course addresses the impact of information in our lives, the life cycle and characteristics of information as it transforms in different publication formats, use and selection of information tools based on the nature of research need, the explosion and implications of Web 2.0 technology, and ethical issues in the use of information with specific reference to issues of plagiarism and proper citation.

Credits: 1 Lecture: 1

LIB 299**SPECIAL TOPICS: LIBRARY**

Credits: 1 to 3

LITERATURE

ENG 104**INTRODUCTION TO LITERATURE: FICTION**

Explores human purposes, literary structures, cultural values and rich varieties of the short story and the novel. Close reading, interpretation and evaluation of selected works of fiction, with attention to authors' contexts, creative process, narrative elements (such as theme, character, plot, point of view, setting, symbol, and style) and reader responses. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 105**INTRODUCTION TO LITERATURE: DRAMA**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 106**INTRODUCTION TO LITERATURE: POETRY**

Explores critical and personal pleasures of poetry as a powerful and compact means to express feelings and ideas and respond to the varieties of human experience. Close reading of a wide range of poetry with attention to poets' roles, literary traditions and poetic strategies expressed

through tone, speaker, situation and event, theme, irony, language, images, sounds, rhythms, symbols, open and closed poetic forms. Need not be taken in sequence. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 107

WESTERN WORLD LITERATURE: ANCIENT

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 108

WESTERN WORLD LITERATURE: MIDDLE AGES

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 109

WESTERN WORLD LITERATURE: MODERN

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 140

SHAKESPEARE REVIEW IN ASHLAND

Reading and critical analyses of plays by Shakespeare and other dramatists performed by the Oregon Shakespeare Festival and other theaters in Oregon. Required field trip(s) to view productions. May be repeated with different content. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

ENG 188

SPECIAL STUDIES: LITERATURE

Credits: 1 to 4

ENG 199

SELECTED TOPICS: LITERATURE

Credits: 1 to 4

ENG 201

SHAKESPEARE

The major plays of Shakespeare's early and middle periods. May also include selected study of his sonnets. Need not be taken in sequence. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 202

SHAKESPEARE

The major plays of Shakespeare's middle and later periods. May also include selected study of his sonnets. Need not be taken in sequence. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 204

SURVEY BRITISH LITERATURE I

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 205

SURVEY BRITISH LITERATURE II

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 212

AUTOBIOGRAPHY

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 221

INTRODUCTION TO CHILDREN'S LITERATURE

Provides an overview of children's literature for toddlers through teens by examining the different genres of children's literature, including picture books, myths and folklore, poetry, nonfiction, historical fiction, and fantasy, as well as the criteria for evaluation of each genre. This course is recommended for education majors as well as parents (present and future) who are interested in children's literature and issues related to children's literature. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 232C

TOPICS IN AMERICAN LITERATURE: CONTEMPORARY FICTION

In-depth study of several works of contemporary (late 20th/21st century) American fiction. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 232M

TOPICS IN AMERICAN LITERATURE: LITERATURE AND MEDICINE

This course examines fiction, poetry, drama and creative nonfiction by and about members of the health professions. The goal is to understand multiple perspectives on illness, health, and healing as presented in the course material. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 250

INTRODUCTION TO FOLKLORE AND MYTHOLOGY

Study of the systematic ways to explain how and why so many of the world's great religions, past and present, share similar stories, heroes and ways of attempting to understand and explain the unknowable. Analyzes tales from, among other locales, India, China, Africa, and North and South America. Some of the key myths include those of the Aztecs and Mayans, Native North Americans, the Sumerians and the Gnostics. The first few weeks of the course will provide an introduction to folklore. It will then provide insight into the social, psychological and aesthetic nature of mythology and an introduction to the theoretical approaches to understanding mythology. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 253

SURVEY AMERICAN LITERATURE I

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

**ENG 254
SURVEY AMERICAN LITERATURE II**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

**ENG 256
FOLKLORE AND US POPULAR CULTURE**

Explores the relationship between folklore and popular culture, with special emphasis on the analysis of legends, myths, icons, stereotypes, heroes, rituals, and celebrations. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

**ENG 260
INTRODUCTION TO WOMEN WRITERS**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

**ENG 288
SPECIAL STUDIES: LITERATURE**

Credits: 1 to 4

**ENG 299
SELECTED TOPICS: LITERATURE**

Credits: 1 to 4

MANUFACTURING TECHNOLOGY

**MFG 100
MFG ORIENTATION**

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.

Credits: 1 Lecture: 1

**MFG 101
BLUEPRINT READING**

Provides student with training to read and interpret various types of industrial blueprints. Includes interpretation of line types, geometric tolerancing and dimensioning, surface finish callouts, auxiliary views and orthographic projection. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

**MFG 102
BLUEPRINT READING SHEET METAL**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

**MFG 103
WELDING TECHNOLOGY I**

Introductory course covering basic welding processes. Includes relevant safety topics and introduction to shielded metal arc welding and gas metal arc welding. Recommended preparation: MFG 100 and instructor approval.

Credits: 3 Lab: 9

**MFG 105
WELDING TECHNOLOGY II**

Intermediary course focused on welding carbon steel plate in specific out-of-position set-ups. Includes continuing practice in GMAW and SMAW welding and interpretation of inspection standards related to weld quality. Recommended preparation: MFG 100 and instructor approval.

Credits: 3 Lab: 9

**MFG 107
WELDING TECHNOLOGY III**

Final course offered in the basic welding technology series. Includes welding practice utilizing electrodes F-1 through F-4 in the SMAW process and introduction to gas tungsten arc welding and flux core arc welding. Recommended preparation: MFG 100 and instructor approval.

Credits: 3 Lab: 9

**MFG 109
LEAN PRACTICES**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lecture: 2

**MFG 110
MANUFACTURING PROCESSES I**

Overview of manufacturing theory and manual operation of machine tools. Includes safety, using hand tools, bandsaw, drill press, lathe and milling machine operations. Recommended preparation: MFG 100 and instructor approval.

Credits: 3 Lab: 9

**MFG 112
MANUFACTURING PROCESSES II**

Continued student proficiency development in machining operation including speed and feed calculations, milling machine and lathe practice. Recommended preparation: MFG 100 and instructor approval.

Credits: 3 Lab: 9

**MFG 114
MANUFACTURING PROCESSES III**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 3 Lab: 9

**MFG 115
DESIGN PROCESSES I**

Introduction to computer-aided manufacturing. Includes interpretation and construction of technical drawings and technical sketching. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 116**MANUFACTURING ELECTRICAL SYSTEMS**

Studies electrical circuitry and components used in manufacturing applications. Includes introductory AC/DC electrical circuit construction and Ohm's Law. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 118**FLUID POWER SYSTEMS I**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 133**QUALITY ASSURANCE**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 3 Lab: 9

MFG 160**MATERIALS ENGINEERING**

A continuation of Quality Assurance topics focused on materials. Includes shear, hardness, tensile and compression testing and other material analyzing techniques. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 201**BENCH WORK**

Using hand tools, files, hacksaw, chisels and coated abrasives. Includes shop safety, hand tapping, thread measurement, arbor press operations, micrometer and vernier caliper reading. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 202**METALS PREPARATION**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 203**LAYOUT**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 205**DRILL PRESS**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 210**VERTICAL MILLING**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 211**CNC MILL OPERATOR**

Computer numerical control machining center operator training. Includes safety, machine maintenance, tool offsets, controller editing and operations, cutting tool set-ups, carbide insert and holders and part running. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 213**CNC TURNING OPERATOR**

Computer numerical control turning center operator training. Includes safety, machine maintenance, coordinate systems, tool length offsets, controller editing and operations, overrides, tool set-ups and loading, carbide insert and holder selections, tool vectors and part running. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 214**LATHE OPERATOR I**

Introductory manual lathe operations training. Includes safety, machine maintenance, quick-change tooling, chuck set-ups, compound taper cutting, general turning and drilling operations. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 216**LATHE OPERATOR II**

Advanced lathe operations training. Four-jaw chucking, taper turning, carbide cutting tool selections, boring, single point threading, thread measurement and other precision turning operations. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 230**CNC PROGRAMMING MILL**

Programming computer numerical control mills and machining centers. Includes G & M programming, canned cycles, subroutines, profile milling, cutter diameter compensation, part proofing. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 232**CNC PROGRAMMING LATHE**

Programming computer numerical control turning center. Includes G & M manual programming, canned cycles, subroutines, profile shaping, TNR, tool vectors, cutter selection and part proofing. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 234**CAD/CAM MILL**

CAD/CAM operations related to programming a computer numerical control machining center. Includes drilling 2.5-D and 3-D milling operations using wire frame and solids model geometry. A student considering this course should be familiar with CNC milling machine operations and G & M programming. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 236**CAD/CAM LATHE**

CAD/CAM operations related to programming computer numerical control turning centers. Includes drilling, grooving and threading operations using wire frame and solids model geometry. A student considering this course should be familiar with CNC lathe operations and G & M programming. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 238**OPTICAL COMPARATOR**

Optical comparator operations. Includes operation of H-14 metrology controller, stage set-up and fixturing, inspection of rectangular and round workpieces. Recommended preparation: MFG 100 and instructor approval.

Credits: 1 Lab: 3

MFG 239**COORDINATE MEASUREMENT MACHINE**

Coordinate measuring machine operations. Includes establishment of part coordinate systems, touch probe calibration procedures and measuring workpiece geometry. Recommended preparation: MFG 100 and instructor approval.

Credits: 1 Lab: 3

MFG 241**ELECTRIC MOTOR CONTROL**

Peripheral devices used to control motors. Includes study of components used to control industrial motors and automated systems. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 242**PROGRAMMABLE LOGIC CONTROLLERS I**

Introduction to programmable logic controller programming. Includes ladder logic, sealing circuits and event sequencing. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 243**INDUSTRIAL SENSORS**

Sensor applications. Includes study of mechanical, electronic and proximity sensor applications found in a typical manufacturing environment. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 244**PROGRAMMABLE LOGIC CONTROLLERS II**

Continuation of Programmable Logic Controller training. Includes advanced programming problems, discrete IO interfacing, PLC timers and counters. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 245**ELECTRICAL CONTROL/FLUID POWER**

Electrical control of pneumatic and hydraulic circuits. Includes pressure valves, sensors, interfacing with PLC, control sequencing, timing and circuit design. Instructor approval required.

Credits: 2 Lab: 6

MFG 246**MECHANICAL TROUBLESHOOTING**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 250**ADDITIVE MANUFACTURING**

This course provides students with a basic understanding of Additive Manufacturing concepts including various processes used in rapid prototyping. Students will be able to design and create sample parts using a 3-D printing process. Recommended preparation: MFG 100, CIS 135S1 and instructor approval.

Credits: 2 Lab: 6

MFG 254**MANUFACTURING JIGS AND FIXTURES**

Jig and fixture design practices. Includes clamps, locators, degrees of freedom, radial and conical locators, templates, automated clamping and modular fixturing. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 262**WELDING INSPECTION/QUALITY CONTROL**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 264**AUTOMATED WELDING AND CUTTING**

Cutting and welding steel shapes using numerically controlled processes. Includes cutting torch settings, set-up, maintenance practices and plasma-cutting exercises. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 266**MANUFACTURING COST ESTIMATION**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 267**OXYGEN-FUEL AND PLASMA CUTTING**

Gas torch, air carbon arc and plasma gas cutting. Includes torch set-up and maintenance, flame setting, diagnostics, track torch operations, circle cutting and carbon arc scarfing practice. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 271**SWAW I**

Shielded metal arc welding. Includes machine set-up, fillet and groove welds on plain carbon steel in all positions. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 272**GMAW I**

Gas metal arc welding. Includes machine set-up for short-circuiting and spray transfer on plain carbon steel. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 273**SWAW II**

Shielded metal arc welding. Includes machine set-up, groove welds on plain carbon steel plate, stainless steel plate and pipe. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 274**GMAW II**

Gas metal arc welding. Includes machine set-up for groove welds on plain carbon steel pipe and plate and aluminum plate. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 275**SMAW III**

Shielded metal arc welding. Includes machine set-up, groove welds on plain carbon steel to a limited plate thickness of 3/4" and pipe in all positions. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 276**GMAW III**

Gas metal arc welding. Includes machine set-up, groove welds on plain carbon steel and stainless steel in all positions. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 280**CO-OP WORK EXPERIENCE MANUFACTURING**

Credit granted for applicable on-the-job work experience. Minimum of 90 hours of work for the three credits granted. Recommended preparation: MFG 100 and instructor approval.

Credits: 1 to 3

MFG 281**GTAW I**

Gas tungsten arc welding. Includes machine setup for fillet and groove welds on plain carbon steel in all positions. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 282**FCAW I**

Flux core arc welding. Includes machine set-up for fillet and groove welds on plain carbon steel in all positions. Limited thickness to 3/4" plate. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 283**GTAW II**

Gas tungsten arc welding. Includes machine set-up for fillet and groove welds on plain carbon steel, aluminum, stainless steel tubing and plate in all positions. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 284**FCAW II**

Flux core arc welding. Includes machine set-up for fillet and groove welds on pipe and plain carbon steel plate to a limited plate thickness to 3/4". Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 285**GTAW III**

Gas tungsten arc welding. Includes machine set-up, groove welds on plain carbon, aluminum and stainless steel pipe in all positions. Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 286**FCAW III**

Flux core arc welding. Includes machine set-up and groove welds on plain carbon steel plate and pipe in limited positions to a plate thickness of less than 3/4". Recommended preparation: MFG 100 and instructor approval.

Credits: 2 Lab: 6

MFG 287**CNC PRESS BRAKE AND SHEARING**

Covers safety and operation of equipment utilized in parting, forming and fabricating sheet metal. Recommended preparation: MFG 100 and instructor approval.

Credits: 3 Lab: 9

MFG 288**INDUSTRIAL FABRICATION**

Sheet metal fabrication focusing on proper fit techniques, length and width allowances, welding processes, utilization of jigs and fixtures, and the use of fasteners. Recommended preparation: MFG 100 and instructor approval.

Credits: 3 Lab: 9

MFG 289**MATERIAL HANDLING-FORK LIFT SAFETY**

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. Recommended preparation: MFG 100 and instructor approval.

Credits: 1 Lab: 3

MFG 290**CERTIFICATION TEST PREPARATION AWS I**

Testing materials preparation for Level One Weld Certification Testing. Includes materials test sample preparation, set-up, testing, grinding samples and evaluation. Recommended preparation: MFG 100 and instructor approval.

Credits: 1 Lab: 3

MFG 291**CERTIFICATION TEST PREPARATION NIMS I**

Testing materials preparation for Level One NIMS Certification Testing. Includes materials test workpiece preparation, set-up, testing and evaluation activities. Recommended preparation: MFG 100 and instructor approval.

Credits: 1 Lab: 3

MFG 292**CERTIFICATION TEST PREPARATION AWS II**

Testing materials preparation for Level Two Weld Certification Testing. Includes materials test sample preparation, set-up, testing and evaluation activities. Recommended preparation: MFG 100 and instructor approval.

Credits: 1 Lab: 3

MFG 293**CERTIFICATION TEST PREPARATION NIMS II**

Testing materials preparation for Level Two NIMS Certification Testing. Includes materials test workpiece preparation, set-up, testing and evaluation activities. Recommended preparation: MFG 100 and instructor approval.

Credits: 1 Lab: 3

MFG 294**CERTIFICATION TEST PREPARATION AWS III**

Testing materials preparation for Level Three Weld Certification Testing. Includes materials test sample preparation, set-up, testing, grinding samples and evaluation. Recommended preparation: MFG 100 and instructor approval.

Credits: 1 Lab: 3

MFG 295**CERTIFICATION TEST PREPARATION NIMS III**

Testing materials preparation for Level Three NIMS Certification Testing. Includes materials test workpiece preparation, set-up, testing and evaluation activities. Recommended preparation: MFG 100 and instructor approval.

Credits: 1 Lab: 3

MFG 296**CERTIFICATION TEST PREPARATION SME**

Testing materials preparation for Society of Manufacturing Engineers Certification Testing. Includes set-up, testing and evaluation activities. Recommended preparation: MFG 100 and instructor approval.

Credits: 1 Lab: 3

MFG 297**CERTIFICATION TEST PREPARATION NAIT**

Testing materials preparation for NAIT Certification Testing. Includes set-up, testing and evaluation activities. Recommended preparation: MFG 100 and instructor approval.

Credits: 1 Lab: 3

MASSAGE THERAPY

LMT 101**INTRO MASSAGE THERAPY CAREER**

Explore the education and academic requirements of the LMT program and the requirements for massage therapy licensure in Oregon.

Credits: 1 Lab: 2

LMT 113**KINESIOLOGY I**

This is the first of a four-part series of Kinesiology for massage therapists. The introduction and overview of the basic principles of kinesiology.

Emphasis is placed on anatomical terminology, skeletal anatomy and function, and the study of the joints and their functions. Palpation skills will be emphasized. Prerequisites: Minimum placement scores resulting in WR 121 placement or completion of WR 65 or WR 95; Placement into MTH 20 or completion of MTH 10 or higher and completion of one of BI 121 or BI 122 or BI 231 or BI 232 or BI 233. Corequisites: LMT 130, LMT 155, LMT 170.

Credits: 3 Lecture: 2 Lab: 3

LMT 118**KINESIOLOGY II**

This is the second of a four-part series of Kinesiology for massage therapists. A study of the muscles that will include attachments, actions, nerves, joints and the boney landmarks. Palpation skills will be emphasized. Prerequisite: completion of LMT 113.

Credits: 4 Lecture: 3 Lab: 3

LMT 124**KINESIOLOGY III**

This is the third of a four-part series of Kinesiology for massage therapists. A study of the muscles that will include attachments, actions, nerves, joints and the boney landmarks. Palpation skills will be emphasized. Prerequisite: completion of LMT 118.

Credits: 3 Lecture: 2 Lab: 3

LMT 128**KINESIOLOGY IV**

This is the fourth of a four-part series of Kinesiology for massage therapists. A study of the muscles that will include attachments, actions, nerves and boney landmarks. Palpation skills will be emphasized. Prerequisite: Completion of LMT 124.

Credits: 3 Lecture: 2 Lab: 3

LMT 130**MASSAGE FUNDAMENTALS**

Introduction to the history of massage, proper body mechanics, basic medical terminology, universal sanitation precautions, draping, communication, and the effects of Swedish massage strokes.

Prerequisites: Minimum placement scores resulting in WR 121 placement or completion of WR 65 or WR 95; Placement into MTH 20 or completion of MTH 10 or higher and completion of one of BI 121 or BI 122 or BI 231 or BI 232 or BI 233. Corequisites: LMT 113, LMT 155, LMT 170.

Credits: 2 Lecture: 2

LMT 135**MANAGING A MASSAGE PRACTICE**

Managing a Massage Practice will explore business structures, legal, and tax documentation requirements for a massage therapy practice. Students will formulate a marketing plan including advertising, market analysis, and professional goals.

Credits: 3 Lecture: 3

LMT 140**PATHOLOGY**

The effects of massage therapy on the body systems will be discussed using the client health intake process. The inflammation process, contraindication to massage, and an understanding of medical terminology will be reviewed. Prerequisites: BI 121, BI 122 or BI 231, BI 232.

Credits: 4 Lecture: 4

LMT 145**MASSAGE I**

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 are introduced. Prerequisites: LMT 130, LMT 170.

Credits: 4 Lecture: 2.5 Lab: 4.5

LMT 150**MASSAGE II**

The theory and practice of various modalities deep tissue, trigger point therapy, muscle energy technique, and stretching. Client assessment and treatment planning for a massage session is incorporated. Prerequisites: LMT 118, LMT 145.

Credits: 4 Lecture: 2.5 Lab: 4.5

LMT 155**EASTERN THEORY & PRACTICE**

This course is philosophically neutral and will focus on Chinese Medicine as the primary model which includes an introduction to eastern philosophy and its complimentary healing techniques. Prerequisites:

Minimum placement scores resulting in WR 121 placement or completion of WR 65 or WR 95; Placement into MTH 20 or completion of MTH 10 or higher and completion of one of BI 121 or BI 122 or BI 231 or BI 232 or BI 233. Corequisites: LMT 113, LMT 130, LMT 170.

Credits: 2 Other: 4

LMT 160**HYDROTHERAPY**

The principles and techniques of water as it relates to a massage therapy session in its three forms: solid, liquid and vapor. Prerequisites: LMT 145.

Credits: 1 Other: 2

LMT 170**PROFESSIONAL ETHICS AND RULES**

The professional and ethical boundaries that govern the practice of massage therapy will be explored. The Oregon Administrative Rules and Statutes that apply to licensed massage therapists will be examined and discussed. Prerequisites: Minimum placement scores resulting in WR 121 placement or completion of WR 65 or WR 95; Placement into MTH 20 or completion of MTH 10 or higher and completion of one of BI 121 or BI 122 or BI 231 or BI 232 or BI 233. Corequisites: LMT 113, LMT 130, LMT 155.

Credits: 2 Lecture: 2

LMT 175**SWEDISH RELAXATION CLINIC**

Swedish Relaxation Clinic will practice basic massage therapy techniques on the general public while demonstrating professionalism, client communication, and client consent during supervised public clinics. Prerequisites: LMT 145.

Credits: 2 Lecture: 1 Lab: 3

LMT 180**THERAPEUTIC CLINIC**

Therapeutic Clinic offers relaxation and treatment massages to the general public. Subjective Objective Action Plan (SOAP) charting, professionalism, client communication, and client consent will be practiced during supervised public clinics. Prerequisite: LMT 150.
Credits: 3 Lecture: 1 Lab: 6

LMT 188**SPECIAL STUDIES: LICENSED MASSAGE THERAPY**

Specific modules that relate to first year courses.
Credits: 1 to 4

LMT 199**SELECTED TOPICS: LICENSED MASSAGE THERAPY**

Selected Topics related to Massage Therapy.
Credits: 4

LMT 205**MOVEMENT FOR MASSAGE**

The student will explore their body mechanics and body awareness through the practice of Qigong to meet the physical demands of a massage therapy career.
Credits: 1 Other: 2

LMT 206**SPIRIT OF MASSAGE**

The Spirit of Massage will explore the holistic view of massage and facilitate a self-awareness of one's personal connection to the massage therapy session and client goals.
Credits: 1 Lecture: 1

LMT 210**ADVANCED CLINIC**

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. Recommended preparation: one-year Massage Therapy certificate, LMT, or other related health care professional.
Credits: 2 Lecture: 1 Other: 3

LMT 216**AROMATHERAPY I**

An introduction to the properties and benefits of essential oils and their effects on the body when used in clinical and holistic settings.
Credits: 1 Other: 2

LMT 217**AROMATHERAPY II**

Advanced exploration of the essential oils examined in Aromatherapy I and how to utilize them in a massage therapy session. Prerequisite: LMT 216.
Credits: 1 Other: 2

LMT 226**THAI MASSAGE I**

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 hands and knees. Prerequisite: LMT 130, LMT 155.
Credits: 2 Lecture: 1 Other: 2

LMT 227**THAI MASSAGE II**

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 hands and knees. Prerequisites: LMT 226.
Credits: 2 Lecture: 1 Other: 2

LMT 228**THAI FOOT REFLEXOLOGY**

Students will practice Thai reflexology routines, pressure points, and techniques that combine to make a unique foot massage like those enjoyed throughout Thailand.
Credits: 2 Lecture: 1 Other: 2

LMT 240**NEUROMUSCULAR TREATMENTS**

This is advanced myofascial coursework that focuses on the treatment of specific injuries and conditions using massage therapy neuromuscular treatment protocols. This course will be offered in two sections: LMT 240 trunk and LMT 241 extremities.
Credits: 5 Lecture: 4 Lab: 3

LMT 241**NEUROMUSCULAR TREATMENT EXT**

This is advanced myofascial coursework that focuses on the treatment of specific injuries and conditions using massage therapy neuromuscular treatment protocols. This course will be offered in two sections: LMT 240 trunk and LMT 241 extremities. Prerequisite: LMT 150.
Credits: 2 Lecture: 1 Other: 2

LMT 245**EFFECTIVE OFFICE DECISIONS**

This course will explore insurance billing, retail selling, target marketing, bookkeeping, credentialing and other issues a massage practice may encounter. Recommended preparation: one-year Massage Therapy certificate, LMT, or other related health care professional.
Credits: 2 Lecture: 2

LMT 250**CRANIAL SACRAL LEVEL I**

This course will offer a cranio sacral approach to massage therapy with an emphasis on relevant anatomy. Recommended preparation: one-year Massage Therapy certificate, LMT, or other related health care professional.
Credits: 5 Lecture: 4 Lab: 3

LMT 255**ZEN SHIATSU**

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. Recommended preparation: LMT 155, LMT 130.
Credits: 3 Lab: 6

LMT 257**CHINESE MEDICINE THEORY**

Chinese Medicine Theory will provide a deeper understanding of Eastern/Asian foundational elements and the application of the elements as it relates to therapeutic massage therapy and bodywork. Prerequisite: LMT 155.
Credits: 3 Lecture: 2 Other: 2

LMT 260**SPA TREATMENTS**

Spa treatment commonly used in spa facilities will be explored. A variety of spa treatments will be practiced in class. Contraindications, hygiene, sanitation and spa etiquette will be examined. Recommended preparation: one-year Massage Therapy certificate, LMT, or other related health care professional.
Credits: 5 Lecture: 4 Lab: 3

LMT 261**ANCIENT HAWAIIAN MASSAGE**

Introduction to the history and the traditions of ancient Hawaiian concepts of bodywork and healing.
Credits: 1 Other: 2

LMT 265**SPORTS MASSAGE**

The principles of Deep Tissue, Myofascial Release, and Muscle Energy Techniques will be applied to target sports performance and exercise recovery and will be integrated in the rehabilitation of athletic related injuries. Prerequisite: LMT 150.

Credits: 3 Lab: 6

LMT 270**CLINICAL ASSESSMENTS**

This is a non-treatment course that will evaluate and assess ROM, posture, gait and soft tissue injury when determining massage therapy treatment options. Students taking Advanced Treatment courses are advised to enroll. Recommended preparation: one-year Massage Therapy certificate, LMT, or other related health care professional.

Credits: 4 Lecture: 3 Lab: 3

LMT 271**PREGNANCY MASSAGE**

Advanced massage training when working with pregnant clients that will include precautions, draping, positioning and how massage can support women in labor. Prerequisite: LMT 145.

Credits: 1 Other: 2

LMT 288**SPECIAL STUDIES: LICENSED MASSAGE THERAPY**

Specific coursework related to massage therapy. Recommended preparation: one-year Massage Therapy certificate, LMT, or other related health care professional.

Credits: 4

LMT 295**INTEGRATED THERAPIES**

This course will explore the history and cultural aspects of Ayurveda principles and bodywork and how it may be integrated into a traditional massage therapy setting. Recommended preparation: one-year Massage Therapy certificate, LMT, or other related health care professional.

Credits: 3 Lecture: 2 Lab: 3

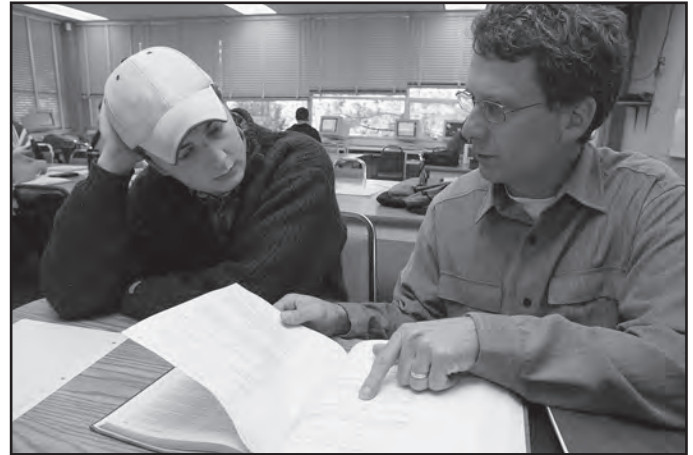
LMT 299**SELECTED TOPICS: LMT**

Selected topics related to massage therapy. Recommended preparation: one-year Massage Therapy certificate, LMT, or other related health care professional.

Credits: 7

LMT 999**FIRST TERM LMT PROGRAM CLASSES**

Credits: 9 Lecture: 6 Lab: 3 Other: 4



MATHEMATICS

MTH 010**DEVELOPMENTAL MATHEMATICS**

Introduces mathematics and its application; explains language and symbols used in math; develops concepts in whole number, fraction, and decimal operations and applications; and develops analytical thinking while emphasizing study and learning skills necessary for success in math courses and overcoming anxiety toward math.

Credits: 4 Lecture: 4

MTH 020**PRE-ALGEBRA**

Emphasizes applications of basic arithmetic skills. Equips students to handle everyday arithmetic problems and lays a foundation for algebra. Topics include ratio, proportion, percent, measurement, perimeter, area, volume and integers. Recommended preparation: MTH 10 or equivalent.

Credits: 4 Lecture: 4

MTH 029**FRACTION REVIEW WORKSHOP**

Provides a concentrated experience for students needing a review of fractions and associated number theory skills. This course is not a replacement for students who place into or need to take MTH 10. May be taken concurrently with another math class.

Credits: 2 Lecture: 2

MTH 031**HEALTH CARE MATH**

This is a three-credit course designed for students majoring in Addictions Studies, Massage Therapy, Health Information Technology, among others. Includes topics from pre-algebra and descriptive statistics. MTH 31 is not designed to serve as a pre-requisite to MTH 60. Recommended preparation: MTH 10.

Credits: 3 Lecture: 3

MTH 060**ALGEBRA I**

Introduction to algebra, integers, rational and real numbers, algebraic expressions, linear equations and inequalities in one and two variables, and systems of equations and inequalities. Recommended preparation: MTH 20 or equivalent.

Credits: 4 Lecture: 4 Other: 2

MTH 065**ALGEBRA II**

Continues development of manipulative algebra skills from MTH 60. Includes algebraic expressions and polynomials, factoring algebraic expressions, rational expressions, roots and radicals, and quadratic equations. Recommended preparation: MTH 60.

Credits: 4 Lecture: 4 Other: 2

MTH 085**TECHNICAL MATHEMATICS I**

First in a two-term sequence designed for majors in forest technology, fire science, CAD and GIS, among others. Includes introduction to algebra and geometry with a focus on units of measurement, formula manipulation, solving linear and literal equations, exponents, three-dimensional geometry and preparation for trigonometry. Real-world applications are emphasized. Recommended preparation: MTH 20 and/or MTH 60 equivalent.

Credits: 4 Lecture: 4

MTH 086**TECHNICAL MATHEMATICS II**

Second in a two-term sequence designed for majors in forest technology, fire science, CAD and GIS, among others. Includes a review of geometry and a thorough discussion of trigonometry with an introduction to vectors and their applications. The second half of the term includes an introduction to functions and their applications including graphing equations, developing equations from graphs, analysis of linear and non-linear functions and functions as models. Students will work in teams to develop and analyze a complex, real-world application and submit a technical report detailing the results. A graphing calculator is required, TI-83 or TI-84 recommended. Recommended preparation: MTH 85 or equivalent.

Credits: 4 Lecture: 4

MTH 095**INTERMEDIATE ALGEBRA**

Continues the algebra foundation necessary to study college-level mathematics and statistics. Includes systems of equations and inequalities, linear and quadratic regressions, functions and function notation, equation solving through manual and graphical means, inequalities and complex numbers. Recommended preparation: MTH 65 or equivalent. Graphing calculator required; a large percentage of the course will be learned using it, TI-83 or TI-84 recommended.

Credits: 4 Lecture: 4

MTH 099**SELECTED TOPICS: MATHEMATICS**

Offers selected topics in mathematics for courses generally available only once. Topics and credits to be arranged.

Credits: 1 to 3

MTH 105**INTRODUCTION TO CONTEMPORARY MATHEMATICS**

Introduces concepts of contemporary mathematics to students considering pursuing liberal arts majors. This course helps students develop a working knowledge of math and a better understanding of its breadth and importance. Topics selected from finite mathematics, probability, descriptive statistics and mathematical problem solving, examples of major mathematical ideas and applications. Topic presentation includes group discovery activities and writing assignments. Prerequisite: "C" or better in MTH 95, MTH 95 equivalency met, appropriate placement exam score, or instructor approval.

Credits: 4 Lecture: 4

MTH 111**COLLEGE ALGEBRA**

Introduces graphs and functions (linear, quadratic, polynomial, rational, exponential and logarithmic) using a graphing calculator. First term of a precalculus sequence for science students. Recommended preparation: MTH 95 or equivalent. Graphing calculator required, TI-83 or TI-84 recommended.

Credits: 4 Lecture: 4

MTH 111F**MATH FIT FOR COLLEGE ALGEBRA**

Helps students improve their success in a concurrent mathematics course. All presentations are designed as collaborative group activities. Course is graded pass/no pass. Recommended to be taken with MTH 111.

Credits: 1 Lab: 2

MTH 112**TRIGONOMETRY**

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. Recommended preparation: MTH 111 or equivalent. Graphing calculator required, TI-83 or TI-84 recommended.

Credits: 4 Lecture: 4

MTH 113**TOPICS IN PRECALCULUS**

Examines topics chosen from the applied, real-world and theoretical mathematical implications of analytic geometry, nonrectangular coordinate systems, vectors, matrices and sequences. The symbolic, numerical, and graphical representations of these functions and their applications form the core of the course. Emphasizes solving problems symbolically, numerically and graphically and understanding the connections among these methods in interpreting and analyzing results. The primary focus is preparation for Calculus. Recommended preparation: MTH 112 or equivalent. Graphing calculator required, TI-83 or TI-84 recommended.

Credits: 4 Lecture: 4

MTH 188**SPECIAL STUDIES: MATHEMATICS**

Credits: 1 to 3

MTH 198**PRACTICUM IN MATHEMATICS**

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.

Credits: 2 Lecture: 1 Other: 3

MTH 199**SELECTED TOPICS: MATHEMATICS**

Offers selected topics in mathematics for courses generally available only once. Topics and credits to be arranged.

Credits: 1 to 3

MTH 211**FUNDAMENTALS OF ELEMENTARY MATHEMATICS I**

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. Recommended preparation: MTH 95 or equivalent.

Credits: 4 Lecture: 4

MTH 212**FUNDAMENTALS OF ELEMENTARY MATHEMATICS II**

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. Recommended preparation: MTH 211 or equivalent.

Credits: 4 Lecture: 4

MTH 213**FUNDAMENTALS OF ELEMENTARY MATHEMATICS III**

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. Recommended preparation: MTH 211.

Credits: 4 Lecture: 4

MTH 231**DISCRETE MATHEMATICS I**

This course is designed to introduce concepts of mathematics applicable to the field of computer science. Topics in the course will examine in detail the applied, real-world and theoretical mathematical implications of the mathematical concepts of logic, sets, Boolean Algebra, mathematical induction, relations, functions and recursion. The symbolic, numerical and graphical representations of the mathematical concepts will be expanded and explored. Emphasis will be on solving problems symbolically, numerically and graphically and understanding the connections among these methods in interpreting and analyzing results. Recommended prerequisite: MTH 111.

Credits: 4 Lecture: 4

MTH 241**CALCULUS FOR MANAGEMENT/SOCIAL SCIENCE**

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. Recommended preparation: MTH 111. A graphing calculator is required, TI-83 or TI-84 recommended.

Credits: 4 Lecture: 4

MTH 243**INTRODUCTION TO PROBABILITY AND STATISTICS I**

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. Recommended preparation: MTH 111 (for those needing MTH 241 or MTH 251), MTH 105, or instructor approval. A graphing calculator is required, TI-83 or TI-84 recommended.

Credits: 4 Lecture: 4

MTH 244**INTRODUCTION TO PROBABILITY AND STATISTICS II**

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. Prerequisites: "C" or better in MTH 243 or MTH 243 equivalency met or instructor approval.

Credits: 4 Lecture: 4

MTH 245**MATH FOR MGMT/SOCIAL SCIENCE**

This is a Finite Math course that covers techniques of counting, probability and elements of statistics including binomial and normal distributions, introductory matrix algebra, and elements of linear programming. Recommended preparation is MTH 111.

Credits: 4 Lecture: 4

MTH 251**CALCULUS I**

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 functions; applications including maximum-minimum problems; antiderivatives and definite integrals. Topic presentation includes group discovery activities. Real applications, technical writing, group activities

and group projects are emphasized. A graphing calculator is required, TI-83 or TI-84 is recommended. Computer literacy recommended. Recommended preparation: MTH 112, MTH 113 or equivalent or instructor approval.

Credits: 4 Lecture: 3 Lab: 3

MTH 252**CALCULUS II**

Introduces concepts of integral calculus to science, mathematics and engineering students. Includes antidifferentiation, fundamental theorem, integration techniques, numerical methods, improper integrals and mathematical modeling with applications to geometry, physics, economics, and population dynamics. Topic presentation includes group discovery activities. Real applications, technical writing, group activities and group projects are emphasized. A graphing calculator is required, TI-83 or TI-84 recommended. Computer literacy recommended. Recommended preparation: MTH 251.

Credits: 4 Lecture: 3 Lab: 3

MTH 253**CALCULUS III**

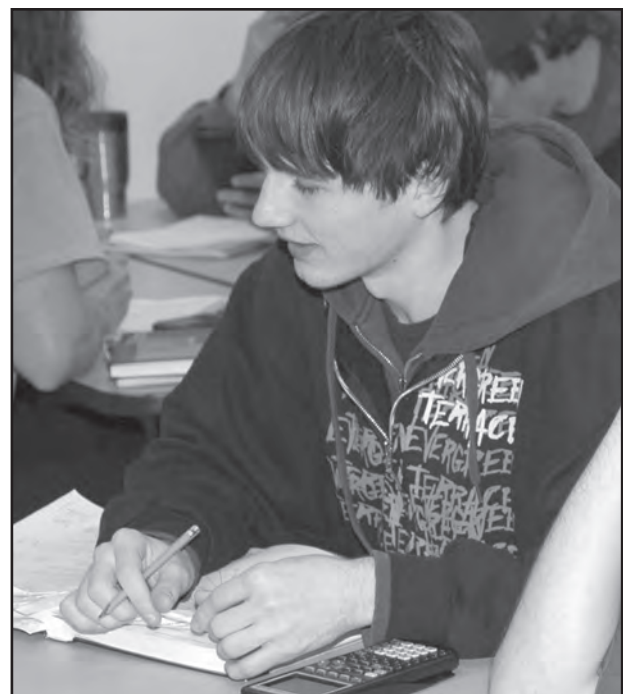
Introduces further calculus concepts to science, mathematics and engineering students. Includes infinite sequences, infinite series, Taylor series, parametric equations and functions in polar coordinates, and an introduction to linear algebra including systems of linear equations, vectors, matrices, linear independence/dependence, matrix inverses, determinants, eigenvalues, eigenvectors. Real applications, technical writing, group activities and group projects are emphasized. A graphing calculator is required, TI-83 or TI-84 is recommended. Computer literacy recommended. Recommended preparation: MTH 252.

Credits: 4 Lecture: 3 Lab: 3

MTH 254**VECTOR CALCULUS I**

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. Recommended preparation: MTH 253.

Credits: 4 Lecture: 3 Lab: 2



MTH 255 VECTOR CALCULUS II

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. Recommended preparation: MTH 254.

Credits: 4 Lecture: 3 Lab: 2

MTH 256 APPLIED DIFFERENTIAL EQUATIONS

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. Recommended preparation: MTH 253.

Credits: 4 Lecture: 3 Lab: 2

MEDICAL ASSISTANT

MA 113 INTRODUCTION TO MEDICAL ASSISTING

First of three classes which cover key competencies related to clinical responsibilities of the medical assistant as identified by the American Association of Medical Assistants. Fundamental principles include medical aseptic technique, standard precautions, patient preparation and education, assisting with routine and specialty physical examinations, vital signs, patient interview and history, medical record documentation, preparation and maintenance of examination and treatment areas and administration of oral medications. Math component includes basic skills in preparation for understanding and calculating medication dosage. Corequisite or Prerequisite: Completion or registration into AH 113. Prerequisites: GED or high school diploma, background check, WR 65 or WR 95, or placement test score consistent with placement in WR 121, MTH 020 or higher, AH 111, AH 112, CIS 120, BI 121, BI 122 (BI 231, BI 232, BI 233 series may be substituted for BI 121 and BI 122). Corequisites: MA 125, MA 145.

Credits: 4 Lecture: 3 Lab: 3

MA 123 MEDICAL ASSISTING BASIC PROCEDURES

Second of three classes which cover key competencies related to clinical responsibilities of the medical assistant as identified by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Fundamental principles include key concepts related to diagnostic testing and follow-up, maintenance of the clinician-owned lab and CLIA-waived testing, quality control measures, surgical asepsis, fundamentals of assisting with procedures, patient preparation, education and post-procedure care, safe delivery of parenteral medications, and introduction to phlebotomy. Math components include basic skills review in preparation for understanding, calculating, and delivering oral and parenteral medications. Body structure, function, pathology, medical terminology, diagnostic testing and procedures are reviewed in relationship to their impact on various body systems. Prerequisites: MA 113, MA 125, MA 145, all required immunizations, diplomas and background checks completed. Corequisites: MA 135, MA 150.

Credits: 5 Lecture: 4 Lab: 3

MA 125 MEDICAL OFFICE PROCEDURES I

First of two classes which cover key competencies related to office practices and administrative responsibilities of the medical assistant as identified by the American Association of Medical Assistants. Course includes maintaining professionalism and confidentiality, appropriate written and oral communication within the medical setting, telephone

techniques, legal concepts, introductory scheduling concepts and appointment triage, office safety, ethical and cultural considerations in the medical setting, office management, and medical record preparation, documentation and maintenance. Corequisite or prerequisite: Completion or registration into AH 113. Prerequisites: GED or high school diploma, background check, WR 65 or WR 95 or placement test score consistent with placement in WR 121, MTH 20 or higher, AH 111, AH 112, CIS 120, BI 121, BI 122 (BI 231, 232, 233 series may be substituted for BI 121 and 122). Corequisite: MA 113 and MA 145.

Credits: 4 Lecture: 4

MA 133 MEDICAL ASSISTING ADVANCED PROCEDURES

Third of three classes which cover key competencies related to clinical responsibilities of the medical assistant as identified by the American Association of Medical Assistants. Advanced principles include: phlebotomy, variations on parenteral and other medication delivery systems, additional CLIA-waived testing, assisting with procedures, specialty exams and office emergencies, relevant patient preparation and education and implementation of ECGs, catheterization and pulmonary function testing. Math components include applying methods of dosage calculation to prepare and administer medication as directed by an appropriate health care provider. Body structure, function, pathology, medical terminology, diagnostic testing and procedures are reviewed in relationship to their impact on various body systems. Prerequisites: MA 123, MA 125, MA 150. Corequisites: MA 145.

Credits: 4 Lecture: 3 Lab: 3

MA 135 MEDICAL OFFICE PROCEDURES II

Second of two classes which cover key competencies related to office practices and administrative responsibilities of the medical assistant as identified by the American Association of Medical Assistants. Includes application of computerized medical office software, office management skills, banking and accounting procedures, billing and collections, coding and insurance. Prerequisites: MA 113, MA 125. Corequisites: MA 123, MA 150.

Credits: 4 Lecture: 4

MA 145 COMPUTERIZED MEDICAL OFFICE PROCEDURES

Computers and electronic medical records are integral parts of today's medical facilities. They are the method of choice for managing administrative tasks as well as documenting delivery of patient care. This course gives students an introduction to the application of electronic medical records software in the medical office. Corequisite or prerequisite: Completion or registration into AH 113. Prerequisites: GED or high school diploma, background check, WR 65 or WR 95 or placement test score consistent with placement in WR 121, MTH 20 or higher, AH 111, AH 112, CIS 120, BI 121, BI 122 (BI 231, 232, 233 series may be substituted for BI 121 and 122). Corequisite: MA 113 and MA 125.

Credits: 1 Other: 2

MA 147 MEDICAL ASSISTANT PRACTICUM I

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 as required by practicum sites. Instructor approval required.

Credits: 5 Other: 16

MA 150**PHARM FOR MEDICAL ASSISTANTS**

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 achieving a basic understanding of pharmacologic categories and factors affecting drug kinetics. Successful completion of the first term of the Medical Assistant program is required prior to enrollment in this class. Prerequisites: MA 113, MA 125. Corequisites: MA 123, MA 135.

Credits: 3 Lecture: 3

MA 199**SELECTED TOPICS: MEDICAL ASSISTANT**

Credits: 1 to 4

MA 999**MEDICAL ASSISTING PROGRAM**

Credits: 9 Lecture: 7 Lab: 5

MILITARY SCIENCE**MS 111****LEADERSHIP AND PERSONAL DEVELOPMENT**

This course introduces students to the personal challenges and competencies that are critical for effective leadership. Students will learn the basic skills related to leadership and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions while gaining a comprehensive understanding of the ROTC program, its purpose in the Army, and its advantages for the student. This course is open to any student in any course of study.

Credits: 1 Lecture: 1

MS 112**INTRODUCTION TO TACTICAL LEADERSHIP**

This course introduces students to the personal challenges and competencies that are critical for effective leadership. Topics include developing life skills such as goal setting, time management, physical fitness and stress management relative to leadership, officership, and the Army profession. Students will further explore Army leadership dimensions in depth, as they relate to tactical leadership. This class is open to any student in any course of study. Recommended preparation: MS 111.

Credits: 1 Lecture: 1

MS 113**ORIENTEERING AND LAND NAVIGATION**

This course introduces students to basic orienteering and map reading. Students will gain confidence in their ability to read different types of maps, plan routes and find their location on the ground using a military map and compass. Students will learn to identify terrain features on a map and on the ground. Students will use these skills to move from one point to another by orienteering and terrain association. This class is open to any student in any course of study. Recommended preparation: MS 112.

Credits: 1 Lecture: 1

MS 180**ARMY PHYSICAL FITNESS**

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.

Credits: 1 Lab: 3

MS 205**OCS PHASE I**

Intensive two-week, pre-commissioning phase held during summer term. Course is oriented on leader development and individual/small unit training and a physically and mentally demanding environment. Individual proficiency in land navigation and communications skills are evaluated. Each student is provided practical experience in a variety of leadership positions. Prerequisite: instructor approval.

Credits: 5 Lecture: 4 Lab: 3

MS 211**FOUNDATIONS IN LEADERSHIP**

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. Recommended preparation: MS 113.

Credits: 2 Other: 4

MS 212**EFFECTIVE TEAM BUILDING**

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. Recommended preparation: MS 211.

Credits: 2 Other: 4

MS 213**FUNDAMENTALS OF MILITARY OPERATIONS**

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. Recommended preparation: MS 212.

Credits: 2 Other: 4

MS 215**AMERICAN MILITARY HISTORY**

This course is designed to utilize American military history as a tool for studying military professionalism. This course examines the military heritage of the United States from the colonial period to the present time. Through an in-depth study of the extensive literature in American military history, students will assess the key individuals, military policies, postures, organizations, strategies, campaigns, tactics and battles that define the American military experience.

Credits: 3 Lecture: 3

MS 299**SELECTED TOPICS: MILITARY SCIENCE**

Credits: 4 Lecture: 4 Lab: 12 Other: 12

MUSIC

MUS 101 MUSIC FUNDAMENTALS

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.

Credits: 3 Lecture: 3

MUS 111 MUSIC THEORY IA

Harmony of the common-practice period with attention to part writing (the melodic aspects of music). An entrance placement exam will be given during the first class session. This sequence course should be taken by all students who intend to major or minor in music. Recommended preparation: MUS 101 or equivalent. Recommended to be taken with: MUS 114.

Credits: 3 Lecture: 3

MUS 112 MUSIC THEORY IB

Harmony of the common-practice period with attention to part writing (the melodic aspects of music). This sequence course should be taken by all students who intend to major or minor in music. Recommended preparation: MUS 111. Recommended to be taken with: MUS 115.

Credits: 3 Lecture: 3

MUS 113 MUSIC THEORY IC

Harmony of the common-practice period with attention to part writing (the melodic aspects of music). This sequence course should be taken by all students who intend to major or minor in music. Recommended preparation: MUS 112. Recommended to be taken with: MUS 116.

Credits: 3 Lecture: 3

MUS 114 MUSICIANSHIP IA

Focuses on developing practical skills necessary for any musician. Builds aural acuity through drill and practice in ear training, sight singing and dictation. Keyboard (piano) exercises will be an important part of the work. Course is designed to be taken concurrently with: MUS 111.

Credits: 2 Lecture: 2

MUS 115 MUSICIANSHIP IB

Focuses on developing practical skills necessary for any musician. Builds aural acuity through drill and practice in ear training, sight singing and dictation. Keyboard (piano) exercises will be an important part of the work. Course is designed to be taken concurrently with MUS 112. Recommended preparation: MUS 114.

Credits: 2 Lecture: 2

MUS 116 MUSICIANSHIP IC

Focuses on developing practical skills necessary for any musician. Builds aural acuity through drill and practice in ear training, sight singing and dictation. Keyboard (piano) and computerized drill and exercises will be an important part of the work. Course is designed to be taken concurrently with MUS 113. Recommended preparation: MUS 115.

Credits: 2 Lecture: 2

MUS 123 OPERA PERFORMANCE

Study, rehearsal and performance of operas for vocalists, instrumentalists and production technicians. An audition is required before enrollment. May be repeated, no limit. Not offered every year.

Credits: 1 Other: 3

MUS 131 PIANO CLASS I

Teaches fundamentals of piano performance in a class format.

Credits: 2 Lecture: 2

MUS 134 VOICE CLASS I

Teaches fundamentals of vocal performance in a class format.

Credits: 2 Lecture: 2

MUS 137 CLASS GUITAR I

Teaches fundamentals of guitar performance in a class format.

Credits: 2 Lecture: 2

MUS 161 JAZZ IMPROVISATION

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. Not offered every year. May be repeated, no limit.

Credits: 2 Lecture: 2

MUS 188 SPECIAL STUDIES: MUSIC

Credits: 1 to 3

MUS 194 BIG BAND JAZZ

Study and performance of music for large jazz band. May be repeated; no limit. Contact ensemble conductor for information about required audition.

Credits: 1 Other: 3

MUS 195 CONCERT BAND

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.

Credits: 1 Other: 3

MUS 196 SYMPHONY

The study and performance of music for symphony orchestra. One major concert is presented each term. Instructor approval required. May be repeated, no limit. Contact ensemble conductor for information about required audition.

Credits: 1 Other: 3

MUS 197 CASCADE CHORALE

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.

Credits: 1 Other: 3

MUS 197A COLLEGE CHOIR

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, that are often performed off campus. May be repeated, no limit.

Credits: 2 Lecture: 1 Lab: 3

MUS 199

SELECTED TOPICS: MUSIC

Credits: 1 to 3

MUS 201

UNDERSTANDING MUSIC

Introduces the history of Western fine-art music and its literature. Encompasses the study of musical vocabulary, style, form, principal composers and the historical development of music in various style periods. The content of each course varies somewhat from term to term, but typically MUS 201 covers medieval, renaissance, baroque and classical era music while MUS 202 discusses music and composers from the romantic, 20th century and contemporary periods. MUS 203, when offered, covers topics such as World Music. The classes need not be taken in sequence and do not require any previous musical experience. Students interested in learning how to read musical notation (rhythm, notes, etc) should enroll in MUS 101.

Credits: 3 Lecture: 3

MUS 202

UNDERSTANDING MUSIC

Introduces the history of Western fine-art music and its literature. Encompasses the study of musical vocabulary, style, form, principal composers and the historical development of music in various style periods. The content of each course varies somewhat from term to term, but typically MUS 201 covers medieval, renaissance, baroque and classical era music while MUS 202 discusses music and composers from the romantic, 20th century and contemporary periods. MUS 203, when offered, covers topics such as World Music. The classes need not be taken in sequence and do not require any previous musical experience. Students interested in learning how to read musical notation (rhythm, notes, etc) should enroll in MUS 101.

Credits: 3 Lecture: 3

MUS 203

UNDERSTANDING MUSIC

Introduces the history of Western fine-art music and its literature. Encompasses the study of musical vocabulary, style, form, principal composers and the historical development of music in various style periods. The content of each course varies somewhat from term to term, but typically MUS 201 covers medieval, renaissance, baroque and classical era music while MUS 202 discusses music and composers from the romantic, 20th century and contemporary periods. MUS 203, when offered, covers topics such as World Music. The classes need not be taken in sequence and do not require any previous musical experience. Students interested in learning how to read musical notation (rhythm, notes, etc) should enroll in MUS 101.

Credits: 3 Lecture: 3

MUS 205

INTRODUCTION TO JAZZ HISTORY

Covers the history of jazz. Styles and significant artists are studied in depth. No previous musical knowledge required. Not offered every term.

Credits: 3 Lecture: 3

MUS 207

HISTORY OF ROCK MUSIC

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.

Credits: 3 Lecture: 3

MUS 211

MUSIC THEORY IIA

A continuation of common-practice period harmony (Music Theory I) with stress on chromatic resources and style analysis including an introduction to harmonic practices of the 20th century. Recommended preparation: MUS 113. Recommended to be taken with MUS 214.

Credits: 3 Lecture: 3

MUS 212

MUSIC THEORY IIB

A continuation of common-practice period harmony (Music Theory I) with stress on chromatic resources and style analysis including an introduction to harmonic practices of the 20th century. Recommended preparation: MUS 211. Recommended to be taken with MUS 215.

Credits: 3 Lecture: 3

MUS 213

MUSIC THEORY IIC

A continuation of common-practice period harmony (Music Theory I) with stress on chromatic resources and style analysis including an introduction to harmonic practices of the 20th century. Recommended preparation: MUS 212. Recommended to be taken with MUS 216.

Credits: 3 Lecture: 3

MUS 214

MUSICIANSHIP IIA

Focuses on developing practical skills necessary for any musician. Builds aural acuity through drill and practice in ear training, sight singing and dictation. Keyboard (piano) and computerized drill and exercises will be an important part of the work. Recommended preparation: MUS 116. Recommended to be taken with MUS 211.

Credits: 2 Lecture: 2

MUS 215

MUSICIANSHIP IIB

Focuses on developing practical skills necessary for any musician. Builds aural acuity through drill and practice in ear training, sight singing and dictation. Keyboard (piano) and computerized drill and exercises will be an important part of the work. Recommended preparation: MUS 214. Recommended to be taken with MUS 212.

Credits: 2 Lecture: 2

MUS 216

MUSICIANSHIP IIC

Focuses on developing practical skills necessary for any musician. Builds aural acuity through drill and practice in ear training, sight singing and dictation. Keyboard (piano) and computerized drill and exercises will be an important part of the work. Recommended preparation: MUS 215. Recommended to be taken with MUS 213.

Credits: 2 Lecture: 2

MUP 105

JAZZ COMBO

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.

Credits: 2 Lecture: 2

MUP 111

WOODWIND ENSEMBLE

The study and performance of chamber music for woodwind instruments in an ensemble such as a woodwind or a clarinet quartet. Instructor approval required. Not offered every year. May be repeated, no limit.

Credits: 2 Lecture: 2

MUP 114

VOCAL ENSEMBLE

A select group of singers that focuses on various jazz idioms: blues, funk, Latin and straight-ahead. Enrollment is by audition. Recommended to be

taken with MUS 197A. Contact choral program director for information about required audition. May be repeated, no limit.

Credits: 2 Lecture: 2

MUP 146

STRING ENSEMBLE

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. Instructor approval required. Not offered every year. May be repeated, no limit.

Credits: 2 Lecture: 2

MUP 171-191, MUP 271-291

PRIVATE MUSIC LESSONS

Private lessons provide individual instruction in techniques of performance for voice, guitar, keyboard and all standard string, woodwind, brass and percussion instruments. Instructor's permission and additional fee required. May be repeated, no limit.

Credits: 1 Other: 5

NON DESTRUCTIVE TESTING

NDT 100

NON DESTRUCTIVE TEST AND INSPECTION ORIENTATION

Provides new NDT students with the required information before participating in self-directed learning. Includes understanding MATC/NDTI procedures, lab safety, personal protective equipment (PPE), career planning, an overview of non-destructive testing methods and computer login procedures.

Credits: 1 Lecture: 1

NDT 110

INTRODUCTION TO ULTRASONIC INSPECTION

This course introduces ultrasonic inspection principles including terminology, sound wave propagation, and uses of ultrasonic inspection. It also covers calibration methods for ultrasonic equipment and various straight beam testing methods. Prerequisite: NDT 100.

Credits: 3 Lab: 9

NDT 111

ULTRASONIC TECHNIQUES I

This course introduces ultrasonic inspection principles including terminology, sound wave propagation, and uses of ultrasonic inspection. It also covers calibration methods for ultrasonic equipment and various straight beam testing methods. Prerequisite: NDT 110.

Credits: 2 Lab: 6

NDT 112

ULTRASONIC TECHNIQUES II

This course covers angle beam testing to characterize welding flaws. Inspection techniques for composite materials will also be discussed.

Prerequisite: NDT 111.

Credits: 2 Lab: 6

NDT 120

EDDY CURRENT INSPECTION TECHNIQUES I

This course discusses eddy current theory, electrical concepts, calibration and operation of eddy current machines. Applications of eddy current testing are shown. Prerequisite: NDT 100, PH 201, concurrent enrollment acceptable.

Credits: 3 Lab: 9

NDT 130

INTRODUCTION TO METALLURGY

This course provides an introduction to metallurgy and its applications. Topics include metallographic sample preparation hardness and tensile testing, fundamentals of physical metallurgy and heat treating.

Prerequisite: PH 201, concurrent enrollment acceptable.

Credits: 3 Lab: 9

NDT 140

MAGNETIC PARTICLE INSPECTION TECHNIQUES I

This course describes basic methods and principles used in magnetic particle inspection. Equipment types and typical applications are covered. Magnetization techniques using wet and dry particle materials are included in the lab work. Prerequisite: PH 201, concurrent enrollment acceptable.

Credits: 2 Lab: 6

NDT 150

DYE PENETRANT INSPECTION TECHNIQUES I

This course covers methods and principles used in liquid dye penetrant inspection. Students learn when to use various types of penetrants, and proper techniques and precaution for use in the lab. Prerequisite: PH 201, concurrent enrollment acceptable.

Credits: 2 Lab: 6

NDT 160

INTRODUCTION TO INDUSTRIAL RADIOGRAPHY

This course introduces radiographic principles, terms, definitions, and theory to provide students with a fundamental understanding of radiation, measurements of radiation, radiographic imaging, film characteristics, processing, quality and interpretation. Prerequisite: NDT 100.

Credits: 3 Lab: 9

NDT 161

X-RAY RADIOGRAPHY TECHNIQUES I

This course covers basic techniques used in industrial radiography. Safety procedures, setup of equipment, methods of film selection, and film processing are discussed. A comparison of film vs. digital imaging techniques and interpretation is presented. Students learn interpretation of X-ray images for welds, castings and nonmetallic materials is covered with an emphasis on nonconforming indications. Prerequisite: NDT 100, PH 201, concurrent enrollment acceptable.

Credits: 2 Lab: 6

NDT 162

X-RAY RADIOGRAPHY TECHNIQUES II

This course introduces intermediate radiographic principles, including various radiographic procedures, standards and codes. This course covers radiographic techniques used by the American Society of Mechanical Engineers (ASME), American Welding Society (AWS), American Petroleum Institute (API), and the American Society for Non Destructive Testing (ASNT). Students will make and interpret radiographs using the X-ray machine lab following several procedures drawn from industry practices to illustrate differences between the various standards. Prerequisite: NDT 161.

Credits: 2 Lab: 6

NDT 210

ULTRASONIC TECHNIQUES II

This course teaches advanced principles of ultrasonic testing using normal beam and angle beam testing techniques. Prerequisite: NDT 112.

Credits: 3 Lab: 9

NDT 211

ULTRASONIC TECHNIQUES IV

Advanced ultrasonic techniques and methods used in industry are covered. Techniques used in the power industry, construction industry, manufacturing industry, as well as aircraft inspection will be performed. Prerequisite: NDT 210.

Credits: 2 Lab: 6

NDT 212

ULTRASONIC TECHNIQUES FOR NON FERROUS MATERIALS

This course covers advanced ultrasonic applications including non-ferrous materials and composite inspection. Ultrasonic phased array testing and its applications are introduced including linear and sectorial scanning

setups utilizing A, B, and C scan imaging. In preparation for the ASNT compliant Level I exam given by participating employers, the student will take an ASNT Level I practice exam including General, Specific and Practical tests for Ultrasonic Inspection. Prerequisite: NDT 210.

Credits: 2 Lab: 6

NDT 220

EDDY CURRENT INSPECTION TECHNIQUES II

This course presents advanced theory and application as it relates to depth of penetration, characteristic frequency, and flaw characteristics. Lab exercises prove and reinforce these advanced theories. Prerequisite: NDT 120.

Credits: 2 Lab: 6

NDT 221

EDDY CURRENT INSPECTION TECHNIQUES III

This course covers advanced eddy current inspection techniques. Advanced applications include multi-frequency inspection, and aircraft inspection techniques. At the completion of this course the student will take an ASNT practice exam including Level I General, Specific and Practical tests for Eddy Current Inspection. Prerequisite: NDT 220.

Credits: 2 Lab: 6

NDT 240

MAGNETIC PARTICLE INSPECTION TECHNIQUES II

This course will include use of proper use of magnetization techniques, evaluation of indications, and interpretation of standards. Ports are tested using relevant codes and standards. Prerequisite: NDT 140.

Credits: 1 Lab: 3

NDT 250

DYE PENETRANT INSPECTION TECHNIQUES II

This course covers liquid penetrant indications, interpreting standards and specifications, and checking penetrant system quality. Students will work with lab techniques, create written procedures according to relevant codes and standards, and perform inspections of welds, casting, forgings and machined components. In preparation for the ASNT compliant Level I exam given by participating employers, the student will take an ASNT Level I practice exam including General, Specific and Practical tests for Dye Penetrant Inspection. Prerequisite: NDT 150.

Credits: 1 Lab: 3

NDT 260

RADIOLOGICAL SAFETY FOR ISOTOPES

This course discusses safety rules when working with radioisotopes and radiation emitting equipment used in isotopic radiography. Federal, State, and Homeland Security regulations are discussed. Physiological dangers of radiation exposure are discussed and proper laboratory procedures to prevent exposures are practiced. Prerequisite: NDT 100.

Credits: 3 Lab: 9

NDT 261

ISOTOPIC RADIOGRAPHY TECHNIQUES I

Basic techniques used in industrial/isotopic radiography are covered. Emphasis is placed on safety protocols and proper setup and use of equipment in both lab and field radiographic situations. Students will set up and make a radiograph using the isotopic radiography hot lab. Prerequisite: NDT 260.

Credits: 2 Lab: 6

NDT 262

ISOTOPIC RADIOGRAPHY TECHNIQUES II

This course covers isotopic radiographic techniques used by the American Petroleum Institute (API), American Society for Non Destructive Testing (ASNT), and other codes used in industry for isotopic radiography. The student will perform radiographic inspections codes using the isotopic radiography hot lab. In preparation for the ASNT compliant Level I exam given by participating employers, the student will take an ASNT Level I practice exam including General, Specific and Practical tests for Radiographic Inspection. Prerequisite: NDT 261.

Credits: 3 Lab: 9

NDT 270

VISUAL INSPECTION TECHNIQUES

This course prepares students to detect visual discontinuities seen in industry processes. Lab exercises are performed using common visual inspection tools. Prerequisite: NDT 100.

Credits: 2 Lab: 6

NDT 271

MISCELLANEOUS NDT TOOLS

This course will cover miscellaneous techniques used in non destructive testing—such as basic principles of acoustic emission testing, infrared inspection and other indirect sensing methods. Prerequisite: NDT 100.

Credits: 3 Lab: 9

NDT 280

COOPERATIVE WORK EXPERIENCE NON DESTRUCTIVE

Credit granted for applicable on-the-job work experience. Minimum 90 hours of work for the 3 credits granted. Instructor approval required. Prerequisite: NDT 100.

Credits: 3 Other: 9

NURSING

NUR 088

SPECIAL STUDIES: NURSING

Allows nursing students to pursue a special content area. Special study arrangements must be made through the nursing program coordinator.

Credits: 1 to 8

NUR 095

NURSING ASSISTANT

Covers basic nursing assistant level one care and effective communication skills for clients in acute and long-term care facilities. Issues of confidentiality, client rights and role of the nursing assistant are discussed. Students are eligible to sit for the Oregon State Board of Nursing-sanctioned certified nursing assistant level one examination upon satisfactory performance of course outcomes and assessments; and completion of the minimum 150 mandatory student contact hours: 75 hours of lecture/lab and 75 hours of clinical experience. Clinic takes place in acute and long-term care facilities. To enroll in the course, students must hold a current Health Care Provider CPR card, pass a criminal history check, pass a urine drug screen and meet immunization and TB test requirements. Department approval is required each term.

Credits: 7 Lecture: 3 Lab: 4.5 Other: 7.5

NUR 096

LEVEL 2 NURSING ASSISTANT - ACUTE CARE

Provides an Oregon State Board of Nursing-approved standardized curriculum and competency evaluation for the designation of Level 2 Nursing Assistant in Acute Care. This course focuses on technical skills, interpersonal skills and communication, safety, infection control, and documentation with the outcome of demonstrated proficiency in knowledge, skills and abilities in these areas. The course has a clinical component to be scheduled at an acute-care facility. To enroll in the course, students must hold a current, unencumbered Oregon CNA 1 certificate, hold a current Healthcare Provider CPR card, pass a criminal history check, a urine drug screen and meet immunization and TB test requirements. Department approval required.

Credits: 6 Lecture: 2 Lab: 3 Other: 6

NUR 098

PATIENT CARE SKILLS REVIEW

The course is for newly-admitted Nursing program students to review skills learned in a nursing assistant course. This is designed for students who are not working as nursing assistants or who may have taken their nursing assistant class more than one year prior to entering the Nursing program. Corequisite: NUR 106.

Credits: 1 Other: 2

NUR 099**SPECIAL TOPICS: NURSING**

Allows nursing students to pursue a special content area. Special study arrangements must be made through the Nursing program director.

Credits: 1 to 8

NUR 106**NURSING I**

Introduces fundamental concepts of nursing practice including nursing process, critical thinking, therapeutic communication, grief, loss 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 working knowledge of pharmacological principles. Students will transfer the concepts of safe, patient medication administration to the Learning Resource Center and clinical setting. Lab skills focus on 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 nursing sequence and of the Nursing program. Prerequisite: admission to nursing program.

Credits: 11 Lecture: 6 Lab: 6 Other: 9

NUR 107**NURSING II**

Introduces students to the knowledge and skills that are necessary in providing nursing care to individual patients experiencing an altered state of health. Students are also provided with the opportunity to learn concepts relating to the care of developing families. The clinical lab focuses on developing skills in the areas of intravenous therapy, complex wound management and nutritional therapies. 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 PN sequence and the Nursing program. Prerequisite: NUR 106.

Credits: 10 Lecture: 4 Lab: 4.5 Other: 13.5

NUR 108**NURSING III**

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 nursing are introduced. The ability to communicate effectively, therapeutically and professionally is emphasized. Students will transfer pharmacological knowledge and concepts of safe, patient medication administration to the Learning Resource Center and clinical setting. The clinical skills lab provides a capstone comprehensive assessment of the student's 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 and participates in nursing care delivery at the practical nurse level. Students also have the opportunity to provide care for the childbearing family. Final term of the practical nursing sequence and the third term of the Nursing program. Prerequisite: NUR 107.

Credits: 11 Lecture: 6 Lab: 3 Other: 12

NUR 188**SPECIAL STUDIES: NURSING I**

Allows first-year nursing students to pursue a special content area in nursing. Special study arrangements must be made through the nursing program director.

Credits: 1 to 8

NUR 199**SELECTED TOPICS: NURSING I**

Presents selected topics of study in the field of nursing offered on a temporary or experimental basis.

Credits: 1 to 8

NUR 206**NURSING IV**

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 their significant others. Clinical skills lab focuses on the development of higher-level assessment, intravenous medication fluid therapy, and assessment skills. 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 program, first term of the RN sequence. Prerequisite: completion of the first-year Nursing program or PN license and other advanced placement requirements.

Credits: 11 Lecture: 6 Lab: 4.5 Other: 10.5

NUR 207**NURSING V**

Focuses on the concepts of community-based nursing care of individuals and significant others, care of the critically ill patient, as well as maternal child care of the childbearing family. The nursing curriculum continues to expand on the role of the RN and to promote critical thinking and clinical decision making. Students further develop their skills in patient teaching, patient care planning and patient care management skills. Clinical skills lab provides students with opportunities to simulate the care of complex, acutely ill patients. The clinical practicum focuses on applying the nursing process to provide and direct holistic, individualized patient care. Students are provided additional experiences in community-based, critical care and mother-baby clinical settings. Fifth term of the Nursing program, second term of the RN sequence of the program. Prerequisite: NUR 206.

Credits: 10 Lecture: 5 Other: 15

NUR 208**NURSING VI**

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. The holistic, individualized needs of the individual and family are the focus for collaborative care management decisions. Theoretical concepts of quality nursing care, legal and ethical issues, leadership and management of care; and nursing care of patients with life-threatening conditions are addressed in relation to clinical 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 program, third term of the RN sequence. Prerequisite: NUR 207.

Credits: 9 Lecture: 4 Other: 15

NUR 218**BASIC EKG**

Basic three-lead electrocardiograph interpretation. Open to Allied Health and Nursing students.

Credits: 1 Lecture: 1

NUR 280A**CO-OP WORK EXPERIENCE NURSING I**

Provides an opportunity for certified nursing assistants in the nursing program to obtain college credit while providing direct patient care in acute or long-term care facility. Prerequisites: admission to Nursing program, status as a certified nursing assistant and departmental approval.

Credits: 1 to 4

NUR 280B**CO-OP WORK EXPERIENCE NURSING II**

Licensed practical and graduate practical nurses can obtain college credit for providing direct patient care while employed in a long-term or acute-care facility. Prerequisites: enrollment in Nursing program, LPN status and departmental approval.

Credits: 1 to 4

NUR 288**SPECIAL STUDIES: NURSING**

Allows second-year nursing students to pursue a special content area in nursing. Special study arrangements must be made through the Nursing program director.

Credits: 1 to 4

NUR 299**SELECTED TOPICS: NURSING**

Presents selected topics of study in the field of nursing offered on a temporary or experimental basis.

Credits: 1 to 3

NUTRITION

FN 225**HUMAN NUTRITION**

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.

Credits: 4 Lecture: 4

OFFICE ADMINISTRATION

OA 180**CO-OP WORK EXPERIENCE OFFICE ADMINISTRATION**

Designed to address specific office practice skills and theory. Knowledge of office practices and skills developed on the job will be assessed through written work with the instructor. Learning experience must be coordinated with student's supervisor. Main idea is to either learn psychomotor or cognitive skills on the job or apply traditional classroom learning in a real-life environment. Instructor approval required.

Credits: 1 to 3

OA 188**SPECIAL STUDIES: OFFICE ADMINISTRATION**

Credits: 1 to 3

OA 199**SELECTED TOPICS: OFFICE ADMINISTRATION**

Credits: 1 to 3

OA 280**CO-OP WORK EXPERIENCE OFFICE ADMINISTRATION**

Enhances a student's knowledge, personal development, professional development and professional preparation by integrating academic study with practical experience. In addition to completing on-the-job training in an office situation, students will discuss work attitudes, work ethics and other human relations topics as they relate to successful employment in an office environment. Faculty coordinator will work with the student to arrange a suitable work site. Instructor approval required.

Credits: 1 to 4



PHARMACY TECHNICIAN

PHM 100**INTRODUCTION TO PHARMACY TECHNICIAN**

This course teaches pharmacy technician students information, techniques, and procedures needed to assist the pharmacist in delivery of pharmaceutical products and services. The main objective is to provide the students with 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. Students will understand 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. 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.

Department approval required.

Credits: 4 Lecture: 3 Other: 2

PHM 101**PHARMACY TECH LAW AND ETHICS**

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.

Department approval required.

Credits: 3 Lecture: 3

PHM 110**PHARMACY CALCULATIONS**

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. Prerequisite: entrance to the Pharmacy Technician program or instructor approval.

Credits: 3 Lecture: 3

PHM 120**DRUG CLASSIFICATION AND THERAPEUTICS I**

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. Prerequisite: entrance to the Pharmacy Technician program or instructor approval.

Credits: 3 Lecture: 3

PHM 130**DRUG CLASSIFICATION AND THERAPEUTICS II**

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. Prerequisites: Departmental approval and PHM 120.

Credits: 3 Lecture: 3

PHM 140**PHARMACY TECHNICIAN PRACTICE II**

This online course teaches pharmacy technician students information, techniques and procedures needed to assist the pharmacist in delivery of pharmaceutical products and services. The main objective is to provide the students with 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 campus and students are responsible for all travel expenses. Recommended preparation: Department approval, PHM 100.

Credits: 4 Lecture: 3 Other: 2

PHM 181**PHARMACY TECHNICIAN SEMINAR**

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. Prerequisite: Entrance to the Pharmacy Technician program or instructor approval. Corequisites: PHM 190, PHM 191.

Credits: 1 Lecture: 1

PHM 190**PHARMACY TECHNICIAN PRACTICUM I: HOSPITAL/ INSTITUTIONAL**

An unpaid learning experience which takes place on site at a prearranged clinical facility and supervised by a registered pharmacist. Provides students with the opportunity to perform clearly identified competencies within the clinical setting. Each credit is equivalent to 30 hours participation in the clinical setting. Students will be prepared to participate in the administration of a pharmacy practice, including filling drug orders. Prerequisite: entrance to the Pharmacy Technician program or instructor approval. Corequisite: PHM 181.

Credits: 3 Other: 9

PHM 191**PHARMACY TECHNICIAN PRACTICUM II: RETAIL/ COMMUNITY**

An unpaid learning experience which takes place on site at a prearranged pharmacy and supervised by a registered pharmacist. Provides student with the opportunity to perform clearly identified competencies within the clinical setting. Each credit is equivalent to 30 hours participation in the clinical setting. Prerequisite: entrance to the Pharmacy Technician program or instructor approval. Corequisite: PHM 181.

Credits: 3 Other: 9

PHILOSOPHY**PHL 170****PHILOSOPHY OF LOVE AND SEX**

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.

Credits: 3 Lecture: 3

PHL 199**SELECTED TOPICS: PHILOSOPHY**

Credits: 1 to 3

PHL 200**FUNDAMENTALS OF PHILOSOPHY**

Fundamentals of Philosophy will survey some of the major questions and philosophical subject areas of the Western World. Topics would include 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. Recommended preparation: WR 121

Credits: 4 Lecture: 4

PHL 201**PROBLEMS OF PHILOSOPHY: EPISTEMOLOGY**

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. Recommended preparation: WR 121 or equivalent skills.

Credits: 3 Lecture: 3

PHL 202**PROBLEMS OF PHILOSOPHY: ETHICS**

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. Recommended preparation: WR 121 or equivalent skills.

Credits: 3 Lecture: 3

PHL 203**PROBLEMS OF PHILOSOPHY: LOGIC**

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. Recommended preparation: MTH 95 or Math placement test scores that place a student in MTH 105; WR 121 or equivalent skills.

Credits: 3 Lecture: 3

PHYSICS

PH 201 GENERAL PHYSICS I

Studies Newtonian Mechanics beginning with basic math concepts and continuing into kinematics, dynamics, uniform circular motion, energy, momentum, and rotational equivalents of some of these topics. Lab addresses experiments and applied settings of Newtonian Mechanics along with explorations of diverse methods for analyzing and interpreting scientific data. Meets the basic requirements for many pre-health and life science programs. Should be taken in sequence. Recommended to be taken with MTH 111.

Credits: 5 Lecture: 4 Lab: 3

PH 202 GENERAL PHYSICS II

Studies basic electrostatic and magnetic interactions. Builds on concepts from PH 201 and continues into electrostatic forces, electric field concepts, electric potential, basic DC circuit concepts, magnetic interactions and forces, sources of magnetic fields and Faraday's Law. Lab addresses concepts and measurements in thermal physics and continues to explore the processes by which science seeks answers to questions. Meets the basic requirements for many pre-health and life science programs. Should be taken in sequence. Recommended to be taken with MTH 112.

Credits: 5 Lecture: 4 Lab: 3

PH 203 GENERAL PHYSICS III

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.

Credits: 5 Lecture: 4 Lab: 3

PH 211 GENERAL PHYSICS I

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. Recommended preparation: MTH 251.

Credits: 5 Lecture: 4 Lab: 3

PH 212 GENERAL PHYSICS II

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. Recommended preparation: MTH 252 and PH 211.

Credits: 5 Lecture: 4 Lab: 3

PH 213 GENERAL PHYSICS III

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. Recommended preparation: MTH 253 and PH 212. Recommended to be taken with: MTH 256.

Credits: 5 Lecture: 4 Lab: 3

PH 299 SELECTED TOPICS: PHYSICS Credits: 1 to 5

POLITICAL SCIENCE

PS 188 SPECIAL STUDIES: POLITICAL SCIENCE Credits: 1 to 3

PS 198 CO-OP WORK EXPERIENCE: POLITICAL SCIENCE INTERNSHIP Credits: 1 to 15

PS 199 SELECTED TOPICS: POLITICAL SCIENCE Credits: 1 to 4

PS 201 INTRODUCTION TO U.S. GOVERNMENT AND POLITICS Examines the Constitution with its separation of powers, limited authority and guarantee of individual liberty. Includes English heritage, the colonial experience and the American Revolution, which shaped the charter of American government. Includes the process of self-government through public opinion and elections. Recommended preparation: WR 121. **Credits: 4 Lecture: 4**

PS 203 STATE/LOCAL GOVERNMENT 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. Recommended preparation or recommended to be taken with: WR 121. **Credits: 3 Lecture: 3**

PS 204 INTRODUCTION TO COMPARATIVE POLITICS Surveys the field of comparative politics through in-depth analyses of countries in Western Europe, the former Soviet bloc, and the developing world. The first part of the course is structured around the history of liberal democracy and its challengers: fascism and communism. The next part of the course turns to the politics of development. Recommended preparation: WR 121. **Credits: 4 Lecture: 4**

PS 205 INTRODUCTION TO INTERNATIONAL RELATIONS 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. Recommended preparation: WR 121. **Credits: 4 Lecture: 4**

PS 206**INTRODUCTION TO POLITICAL THOUGHT**

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 treatments. Introduces the issue of political obligation with the trial of Socrates in ancient Greece. The notion of toleration and its limits is explored in the era of the Glorious Revolution. Covers the two most central issues of political theory: justice and democracy. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

PS 207**POLITICS OF THE MIDDLE EAST**

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.

Credits: 4 Lecture: 4

PS 250**TERRORISM AND THE AMERICAN PUBLIC**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

PS 280**CO-OP WORK EXPERIENCE POLITICAL SCIENCE**

Credits: 1 to 3

PS 299**SELECTED TOPICS: POLITICAL SCIENCE**

Credits: 4 Lecture: 4 Lab: 12 Other: 12

PSYCHOLOGY

PSY 101**APPLIED PSYCHOLOGY**

This course introduces the basic foundation of psychology to degree-seeking students and career and technical students. Focuses on practical applications of psychological principles in the workplace and everyday life. Topics include motivation, emotions, individual development, identifying problem behavior, coping resources, group dynamics and communication skills. This course is considered a human relations component.

Credits: 3 Lecture: 3

PSY 188**SPECIAL STUDIES: PSYCHOLOGY**

Credits: 1 to 3

PSY 199**SELECTED TOPICS: PSYCHOLOGY**

Credits: 1 to 4

PSY 201**MIND AND BRAIN**

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. Recommended preparation: Placement scores that allow enrollment into college-level reading.

Credits: 4 Lecture: 4

PSY 202**MIND AND SOCIETY**

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. Recommended preparation: Placement scores that allow enrollment into college level reading.

Credits: 4 Lecture: 4

PSY 204**RESEARCH METHODS: DESIGN AND ANALYSIS**

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, how research how statistics are used to understand data. Class includes parametric and nonparametric analysis, between subject designs, within subjects designs, differences between experimental and correlational research and the differences between qualitative and quantitative data.

Credits: 4 Lecture: 3.6 Lab: 3

PSY 213**INTRODUCTION TO PHYSIOLOGICAL PSYCHOLOGY**

This course provides a scientific introduction to how the brain's neuroanatomy and neurofunction provide 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 functions, gender, psychological disorders and addictions will be presented. Recommended preparation: PSY 201 or BI 121 or BI 122 or BI 231 or BI 232 or BI 233.

Credits: 4 Lecture: 3 Lab: 3

PSY 214**PERSONALITY PSYCHOLOGY**

Examines the major theoretical perspectives on personality formation, including biological, psychodynamic, humanistic, cognitive, behavioral, and sociocultural influences. Personality tests and measures are also discussed. The major theoretical approaches to psychology are included. Recommended preparation: Placement scores that allow enrollment into college-level reading and PSY 201 or PSY 202.

Credits: 4 Lecture: 4

PSY 215**DEVELOPMENTAL PSYCHOLOGY**

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. Recommended preparation: Placement scores that allow enrollment into college-level reading.

Credits: 4 Lecture: 4

PSY 215N**DEVELOPMENTAL PSYCHOLOGY FOR NURSES**

Comprehensive study of human development over the lifespan from prenatal to 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. This course will be emphasizing the social-cognitive outcomes required by the nursing program and is recommended for nursing students who do not require an additional background in Anatomy and Physiology. Recommended preparation: Placement scores that allow enrollment into college-level reading.

Credits: 4 Lecture: 4

PSY 216**SOCIAL PSYCHOLOGY**

Surveys influence of psychological processes on groups and influence of culture, society and groups on individuals. Includes analysis and exploration of social 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. Recommended preparation: Placement scores that allow enrollment into college-level reading, PSY 202 or SOC 201.

Credits: 4 Lecture: 4

PSY 219**ABNORMAL PSYCHOLOGY**

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 major forms of psychopathology. Recommended preparation: Placement scores that allow enrollment into college-level reading.

Credits: 4 Lecture: 4

PSY 225**EATING DISORDERS**

This course explores eating behavior, weight regulation, and body image in contemporary society. Cultural, familial, social, personal and biological factors in eating and weight problems will be examined. The course will cover the full continuum from normal, healthy eating to clinical eating disorders and related behaviors, which include chronic dieting, excessive exercise, emotional eating, obesity or poor body image. Recommended preparation: WR 121 and PSY 201 or PSY 202.

Credits: 3 Lecture: 3

PSY 227**ANIMAL BEHAVIOR**

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.

Credits: 4 Lecture: 3 Lab: 3

PSY 228**POSITIVE PSYCHOLOGY**

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 ones' community. Recommended preparation: Placement scores that allow enrollment into college-level reading.

Credits: 4 Lecture: 4

PSY 233**PSYCHOLOGY OF VIOLENCE & AGGRESSION**

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. Recommended preparation: Placement scores that allow enrollment into college-level reading.

Credits: 4 Lecture: 4

PSY 280**CO-OP WORK EXPERIENCE PSYCHOLOGY**

Credits: 1 to 4

PSY 299**SELECTED TOPICS: PSYCHOLOGY**

Credits: 1 to 4

READING**RD 099****SELECTED TOPICS: READING**

Credits: 1 to 4

RD 117**COLLEGE READING**

Offers instruction in flexible reading skills. Focuses on building reading speed and comprehension, and acquiring a repertoire of reading strategies suitable for understanding and retaining information acquired in typical college reading.

Credits: 3 Lecture: 3

RD 199**SELECTED TOPICS: READING**

Credits: 1 to 3

SOCIOLOGY**SOC 141****FILM & SOCIETY: RACE, GENDER, AND CLASS**

Examines the representation of race, gender and social class 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.

Credits: 2 Lecture: 1 Lab: 3

SOC 142**FILM & SOCIETY: GLOBAL CULTURES**

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

Credits: 2 Lecture: 1 Lab: 3

SOC 143**FILM & SOCIETY: CONTEMPORARY ISSUES**

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

Credits: 2 Lecture: 1 Lab: 3

SOC 199**SELECTED TOPICS: SOCIOLOGY**

Credits: 1 to 4

SOC 201**INTRODUCTION TO SOCIOLOGY**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

SOC 206**SOCIAL PSYCHOLOGY**

Explores the relationship between individuals and society from the sociological perspective, with focus on symbolic interactionism. Examines current social-psychological issues including aggression and prejudice, altruism and moral development, love and friendship, groupthink and social movements. Recommended preparation: SOC 201.

Credits: 4 Lecture: 4

SOC 208**SPORT AND SOCIETY**

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. Recommended preparation: SOC 201.

Credits: 4 Lecture: 4

SOC 211**SOCIAL DEVIANCE**

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. Recommended preparation: WR 121, SOC 201 or instructor approval.

Credits: 4 Lecture: 4

SOC 212**RACE, CLASS, ETHNICITY**

Examines the interrelationships between race, class, and gender and political and economic systems. Historical and contemporary issues are highlighted. Different levels of analysis are provided, including societal structures, representations and social interactions. Recommended preparation: WR 121, SOC 201 or instructor approval.

Credits: 4 Lecture: 4

SOC 214**SOCIALIZATION**

Examines the lifelong processes by which people learn the norms and values of their society. Includes processes in primary and secondary socialization, resocialization and anticipatory socialization. Explores impacts of socialization agents, including media, culture and societal composition. Surveys classic and contemporary theories of socialization in the sociological and broader social science perspective. Recommended preparation: SOC 201.

Credits: 3 Lecture: 3

SOC 215**SOCIAL ISSUES AND SOCIAL MOVEMENTS**

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. Recommended preparation: WR 121, SOC 201 or instructor approval.

Credits: 4 Lecture: 4

SOC 216**SOCIOLOGY OF GENDER**

Examines gender within societies, from the individual through families, groups and social institutions, and especially how gender is interconnected with race, class and sexuality. Surveys the historical and cultural development of gender; gender in relationships, the workplace, crime and prostitution; and how gender interacts with religion, education, the state and mass media. Recommended preparation: SOC 201.

Credits: 4 Lecture: 4

SOC 219**SOCIOLOGY OF RELIGION**

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. Recommended preparation: SOC 201.

Credits: 4 Lecture: 4

SOC 222**SOCIOLOGY OF FAMILY**

The course examines the interrelationships between family life and society. By focusing on the interaction between family and society, the course addresses the impact of economic, social, and political conditions on the institution of family past and present. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

SOC 250**SOCIOLOGY OF POPULAR CULTURE**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

SOC 299**SELECTED TOPICS: SOCIOLOGY**

Credits: 1 to 4

SPEECH**SP 111****FUNDAMENTALS OF PUBLIC SPEAKING**

Emphasizes enhancing the relationship between speaker and audience through the content, organization and delivery of short oral presentations. Helps relieve student speech anxiety.

Credits: 3 Lecture: 3

SP 114**ARGUMENTATION AND CRITICAL DISCOURSE**

Explores theories of argumentation. Students will develop skills of inquiry and advocacy through oral and written discourse, including critical analysis and rules of evidence. Students will also practice planning, constructing and delivering persuasive arguments in a variety of extemporaneous formats. Through this course, students will learn how to more effectively influence others as well as raise their awareness of others trying to influence them.

Credits: 3 Lecture: 3

SP 115**INTRODUCTION TO INTERCULTURAL COMMUNICATION**

Explores the influence of cultural differences in communication styles and social values and their impact on work, family, legal and economic systems.

Credits: 3 Lecture: 3

SP 188**SPECIAL STUDIES: SPEECH**

Credits: 1 to 3

SP 199**SELECTED TOPICS: SPEECH**

Credits: 1 to 3

SP 218**INTERPERSONAL COMMUNICATION**

Promotes enhanced personal and work relationships by presenting the theoretical concepts and practical skills used in effective one-to-one communication.

Credits: 3 Lecture: 3

SP 219**SMALL GROUP COMMUNICATION**

Provides theory and practice in leadership style, conflict management through role playing in the small group situation. The emphasis will be on task-oriented, decision-making groups.

Credits: 3 Lecture: 3

SP 220**GENDER COMMUNICATION**

Introduces students to the differences between masculine and feminine communication styles and gives them the tools to manage those differences. Also reviews how communication is used to create, structure and maintain gender identities in a variety of contexts.

Credits: 3 Lecture: 3

SP 230**INTRODUCTION TO THE RHETORIC OF FILM**

Introduction to the Rhetoric of Film introduces students to the visual and aural languages of moving pictures (film and video) and gives them 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 and the environment will be discussed. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

SP 234**INTRODUCTION TO VISUAL RHETORIC**

Introduction to Visual Rhetoric gives students the tools they need to analyze the languages of visual communication, including composition, color, and content, and how such languages are used to produce both overt and covert influence on the ideas, attitudes and behaviors of others. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

SP 241**MEDIA, COMMUNICATION, SOCIETY**

Analyzes the social and cultural impact of media, including broadcast, print, film, and computer-mediated communication. Also examines careers and entrepreneurship in selected areas of media. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

SP 250**LISTENING**

Gives students a deeper understanding of and more practical skills in listening to increase understanding and to help others.

Credits: 1 Lecture: 1

SP 252**TEAM SKILLS**

Gives students an understanding of the systems nature of small groups and gives them the skills needed to manage decision-making, leadership and the communication climate of the team setting.

Credits: 1 Lecture: 1

SP 253**CONFLICT MANAGEMENT**

Gives students an understanding of conflict management and the skills needed to become more successful in the conflict situation.

Credits: 1 Lecture: 1

SP 270**COMMUNICATING LOVE**

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. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

SP 280**CO-OP WORK EXPERIENCE SPEECH INTERNSHIP**

Credits: 1 to 3

SP 299**SELECTED TOPICS: SPEECH**

Explores an area of communication not included in the regular curriculum. Possible topics include gender communication, media issues and relational communication.

Credits: 1 to 3

STRUCTURAL FIRE SCIENCE

SFS 101**INTRODUCTION TO EMERGENCY SERVICES**

This course provides an overview to Fire Protection & EMS; career opportunities within and related fields; philosophy and history of fire and EMS; organization and function of public and private fire and EMS services; fire and emergency nomenclature; specific fire protection and EMS functions.

Credits: 3 Lecture: 3

SFS 102**FIRE SERVICE SAFETY AND SURVIVAL**

This course broadens the scope of the national firefighter life-safety initiatives and emphasizes their importance to firefighters and on up the ranks through management levels. It is designed to create a positive attitude towards firefighter safety; to have the student recognize how serious the firefighter injury and death problem is; to recognize their responsibility for reducing future injuries and deaths; to provide information for improving safety considerations; to demonstrate that most firefighter injuries and deaths are preventable.

Credits: 3 Lecture: 3

SFS 105**FIRE BEHAVIOR AND COMBUSTION I**

Explores the theories and fundamentals of how and why fires start, spread, and how they are controlled. Pre or Corequisite: GS 105 or CH 104 or higher and Department approval.

Credits: 3 Lecture: 3

SFS 110**BUILDING CONSTRUCTION FOR FIRE PERSONNEL**

Studies building construction with emphasis on how buildings fail when subjected to fire. Case studies used to illustrate points. Studies of roof and wall construction enable the student to predict failure points and adapt firefighting strategies accordingly. Types of materials used and their response to fire. Buildings under construction and those subjected to external forces will also be studied. Field trips take students into the community to study various construction techniques. Recommended preparation: SFS 101, SFS 102.

Credits: 3 Lecture: 3

SFS 112**PUBLIC EDUCATION AND FIRE PREVENTION**

Studies fundamentals of public relations pertaining to fire service including emergency operations, general public appearances, writing news releases, articles and speeches and general media contact. Students work in developing an effective public education campaign for delivery. Audience type and message content is carefully analyzed. Recommended to be taken with WR 121, SFS 101 and SFS 102.

Credits: 3 Lecture: 3

SFS 120**FIXED SYSTEMS AND EXTINGUISHERS**

Studies portable and fixed extinguisher equipment, fire alarm and detection systems, sprinkler systems and standpipes, and special hazard protection systems. Covers extinguishing agents, system design and maintenance procedures. Field exercises expose students to systems discussed in class. Recommended preparation: SFS 101, SFS 102. This course is offered in a hybrid environment where students meet in the classroom for half of required course dates.

Credits: 3 Lecture: 3

SFS 121**FIRE LAW**

Introduces the modern legal system with emphasis on cases related to fire service. Case law is studied to understand underlying concepts. Reviews case law affecting modern fire service agencies. Explores laws relating to medical treatment of patients, fire protection, codes, emergency response and department activities on the fire ground. Recommended preparation: SFS 101, SFS 102.

Credits: 1 Lecture: 1

SFS 122**FIRE DEPARTMENT BUDGET**

Outlines the budget process as required by Oregon laws to include types of budgets, the process of preparing the budget and classifying expenditures.

Credits: 1 Lecture: 1

SFS 188**SPECIAL STUDIES: STRUCTURAL FIRE SCIENCE**

Credits: 1 to 4

SFS 199**SELECTED TOPICS: STRUCTURAL FIRE SCIENCE**

Credits: 1 to 4

SFS 205**FIRE BEHAVIOR AND COMBUSTION II**

Builds on the foundational knowledge and skills objectives developed in SFS 105, Fire Behavior & Combustion I and Firefighter I academy. Department Approval Required. Due to safety and OSHA requirements, students must be affiliated with a fire department and have passed within the previous year an SCBA Fit test. Prerequisite: SFS 105 and Firefighter I Academy. This course is designed for second year students to be taken the year of graduation.

Credits: 3 Lecture: 2 Lab: 3

SFS 210**FIRE INVESTIGATION**

Provides basic information in fire cause determination. Studies arson detection, protection of point of origin, fire indicators, motives and vehicle fire investigation. Field trips and classroom props aid the student in understanding the science of fire investigation. Recommended preparation: SFS 101, SFS 102. Department approval required.

Credits: 3 Lecture: 3

SFS 211**TACTICS & STRAT FOR CAPSTONE**

This course provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment and extinguishing agents on the fire ground. Students will apply what has been learned throughout the program and engage in simulations designed to summarize the program content within the Structural Fire program. Department approval required. This course is to be taken spring term in the year of graduation.

Credits: 3 Lecture: 2 Lab: 2

SFS 212**FIRE CODES AND ORDINANCES**

Introduces the International Fire and Building Code (IFC) and laws promulgated by the Office of the State Fire Marshal relating to fire safety and prevention. Includes overview of administrative provisions and many of the applicable standards in the codes. Students apply the codes to specific situations to illustrate understanding and application of the codes and related laws. Students also identify applicable sections of the codes in response to scenarios presented in the classroom or in the field. Recommended preparation: SFS 101, SFS 102.

Credits: 3 Lecture: 3

SFS 215**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. Prerequisite: completion of first year of the program S130/190 certification, and department approval required.

Credits: 3 Lecture: 2 Other: 2

SFS 230**RESCUE PRACTICES**

Explores techniques and applications of specialized rescue practices in modern fire service. Focuses on vehicle rescue, steep-angle rescue and swift-water rescue with basic overviews of ice rescue, electrical rescue and trench rescue techniques. Using modern tools and techniques, students apply classroom learning in several comprehensive and dynamic field exercises. Emergency Medical Technician - Basic training allows students to integrate fire and EMS activities at an emergency rescue scene. Department approval required. Recommended to be taken with: SFS 101 and SFS 102.

Credits: 3 Lecture: 2 Lab: 3

SFS 232**FIRE PROTECTION HYDRAULICS AND WATER SUPPLY**

This course provides a foundation of theoretical knowledge in conjunction with hands on labs in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems. Recommended preparation: MTH 65 or higher; GS 104, GS 105, SFS 105, and access to engines or affiliation are highly recommended for students' success in the class. Department approval required.

Credits: 4 Lecture: 3 Lab: 3

SFS 233**FIRE SERVICE ENTRANCE EXAMS**

Introduces and prepares student for processes and procedures of testing for employment in a structural fire agency. Also beneficial for career personnel preparing for promotional examinations within their agency. Tests students in oral and written communication skills, offering strategies to improve weak areas. Students practice oral interview procedures, reading comprehension, concentration and memory. Several diagnostic tests evaluate mechanical ability, comprehension, basic chemistry and basic physics. Recommended preparation: SFS 101, SFS 102. Department approval required.

Credits: 3 Lecture: 3

SFS 288**SPECIAL STUDIES: STRUCTURAL FIRE**

Credits: 1 to 3

SFS 299**SELECTED TOPICS: STRUCTURAL FIRE SCIENCE**

Credits: 1 to 4

STUDY SKILLS

HD 100CS COLLEGE SUCCESS

Addresses both study skills and personal characteristics (critical thinking, decision making, and responsibility) a student needs to ensure a successful transition to college life. Will introduce students to college resources and student services that support successful academic growth and planning. Will explore learning styles, proactive communication strategies and study skills such as note taking and memory techniques for positive class performance. Will introduce students to techniques for effectively managing their time and achieving balance between school, work and personal commitments. Will also identify essential college resources for the development of a realistic and workable academic plan. Designed to give new students a broad overview of college basics.

Credits: 2 Lecture: 2

HD 100NT NOTE TAKING

Introduces students to active listening and note taking for later recall of information from lectures, classroom and activities. Students will learn to identify key points, use the five most effective techniques for taking notes, use notes for class assignments and tests, and design a note-taking style for personal fit.

Credits: 1 Lecture: 1

HD 100OL EXPLORING ONLINE LEARNING

Introduces students to the world of online education. By taking into account personal characteristics, learning styles, and knowledge of technology, students will determine if online courses fit their academic goals. Specific tools for evaluating the quality of online degree programs will be presented, while challenges and common misconceptions of online classes will be discussed.

Credits: 2 Lecture: 2

HD 100PM PROCRASTINATION & MOTIVATION

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.

Credits: 1 Lecture: 1

HD 100TM TIME MANAGEMENT

Introduces students to techniques for effectively managing their time and achieving balance between school, work, and personal commitments. Students will define values and academic goals, assess where time is spent, and develop a plan to achieve academic success. Weekly, monthly and long-term schedules along with daily to-do and priority lists will be developed. Tools for evaluation will be introduced and a 6-month plan developed.

Credits: 1 Lecture: 1

HD 100TT TEST TAKING

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.

Credits: 1 Lecture: 1

HD 100VC VALUES CLARIFICATION

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.

Credits: 1 Lecture: 1

HD 101 STUDY STRATEGIES

Emphasizes study skills, acquisition of college knowledge, resources, and personal responsibility while building and using strategies for college and workplace success. Effective learning and study strategies are reviewed and practiced including text reading, note taking, test taking, listening strategies, and time management. Learning styles are identified and connected to pro-active behaviors. College resources, campus protocol and ethical student behavior are introduced and integrated with examination of self-talk and application of visualization processes to enhance confidence and self-esteem in the college environment.

Credits: 3 Lecture: 3

HD 102 LEADERSHIP DEVELOPMENT

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. Department approval required.

Credits: 2 Lecture: 2

SUPPLY CHAIN MANAGEMENT

SCM 101 INTRODUCTION TO SUPPLY CHAIN MANAGEMENT

This course introduces the student to supply chain management which encompasses all activities associated with the flow and transformation of goods and services from beginning to the end user. Recommended preparation: BA 101.

Credits: 4 Lecture: 4

SCM 102 LOGISTICS MANAGEMENT I

This course introduces the student to logistics management processes. Attention is given to such issues as transportation management, warehouse and facility location management, inventory management, and customer service strategies. Recommended preparation: BA 101.

Credits: 4 Lecture: 4

SCM 104 INTRODUCTION TO TRANSPORTATION LOGISTICS

This course provides a working knowledge of the processes involved in dispatching trucks, trip assembly, and transportation terminology. Recommended preparation: BA 101.

Credits: 4 Lecture: 4

SCM 105**TRUCKING OPERATIONS MANAGEMENT**

This course provides a working knowledge of the basic regulations governing the movement of domestic cargo. Additionally, the student will understand how the various modalities of domestic and international cargo combine to move freight in the global supply chain. Prerequisite: SCM 104.

Credits: 4 Lecture: 4

THEATER ARTS**TA 141****ACTING I**

Acquaints students with fundamental principles of acting. In-class performance of memorized material required. Grading based primarily on in-class participation. Attendance is mandatory.

Credits: 3 Lecture: 3

TA 142**ACTING II**

Emphasizes in-depth character study and textual analysis through preparation of scenes from modern American plays. Attendance is mandatory. Recommended preparation: satisfactory completion of TA 141 or instructor approval.

Credits: 3 Lecture: 3

TA 143**ACTING III**

Further in-depth character study and scene work. May be repeated for credit. Attendance is mandatory. Recommended preparation: successful completion of TA 141 and TA 142.

Credits: 3 Lecture: 3

TA 188**SPECIAL STUDIES: THEATER**

Credits: 1 to 3

TA 200**INTRODUCTION TO THEATER**

Introduces student to the world of theater. Combines overview of historical facts and theory with contemporary practice. Explores career options in theatrical production.

Credits: 3 Lecture: 3

TA 207**READINGS IN THEATER**

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. May be repeated once for credit.

Credits: 3 Lecture: 3

TA 280**CO-OP WORK EXPERIENCE THEATER**

Credits: 1 to 3

VETERINARY TECHNICIAN**VT 101****INTRO TO VETERINARY TECHNICIAN**

This course introduces students to the broad field of veterinary medicine, focusing on the specific roles and responsibilities of the veterinary technician. Students will be introduced to the historical aspects of veterinary medicine and the duties of the technician, including ethics, common animal breeds, safety and first aid and basic principles of nursing care, including clear and compassionate communication with owners. Prerequisites: BI 101 or BI 211; GS 105 or CH 104; MTH 60 or higher; and WR 121. Corequisites: VT 102, VT 103, VT 117.

Credits: 4 Lecture: 4

VT 102**VETERINARY TERMINOLOGY**

This course is an introductory course designed to acquaint students with veterinary medical terminology, including medical word parts, abbreviations and basic terms along with a basic knowledge of word construction. Corequisites: VT 101, VT 103, VT 117.

Credits: 3 Lecture: 3

VT 103**ANIMAL HOSPITAL AND OFFICE PROCEDURES**

An introduction to veterinary medical records, admitting procedures, history taking, record maintenance for both in/out patients, and kennel records. Includes follow-up and discharge procedures on filing and record retention. This course also covers the fundamentals of client interaction, basic bookkeeping skills and the use of computer software specifically designed for use in a veterinary hospital. Corequisites: VT 101, VT 102, VT 117.

Credits: 4 Lecture: 4

VT 108**ANIMAL NURSING I**

This is the first of four courses involving nursing and management of the small animal patient. This course is the introduction to small animal patient care and treatment that a technician will be expected to provide in a veterinary practice. It includes techniques, equipment, client education, management of the hospitalized patient and preventative medicine. Emphasis will be on the role of the veterinary technician in the veterinary hospital. Prerequisites: VT 101, VT 102, VT 103 and VT 117 with a grade of "C" or better. Corequisites: VT 114, VT 118, VT 110.

Credits: 4 Lecture: 3 Lab: 3

VT 110**CLINICAL PATHOLOGY I**

This is the first of a three-part sequence. Students will be introduced to veterinary clinical laboratory equipment and its proper use and maintenance. Students will be taught basic hematology, including making and reading blood slides and how to collect, process and analyze urine samples. Prerequisites: VT 101, VT 102, VT 103 and VT 117 with a grade of "C" or better. Corequisites: VT 114, VT 118, VT 108.

Credits: 4 Lecture: 3 Lab: 3

VT 111**CLINICAL PATHOLOGY II**

This is the second course of a three-part sequence. This course will focus on processing and analyzing blood and fecal material and reporting results. Students will also study and learn the life cycles, characteristics and treatment for common internal and external parasites. Prerequisites: VT 114, VT 118, VT 108, VT 110 with a grade of "C" or better. Corequisites: VT 112, VT 113, VT 116.

Credits: 4 Lecture: 3 Lab: 3

VT 112**ANIMAL NURSING II**

This is the second in a four-course series on Animal Nursing. This course will focus on the care and monitoring of hospitalized patients and acquiring samples and specimens for diagnostic testing. Prerequisites: VT 118, VT 114, VT 108, VT 110 with a grade of "C" or better. Corequisites: VT 111, VT 113, VT 116.

Credits: 4 Lecture: 3 Lab: 3

VT 113**EXOTIC AND LAB ANIMAL MEDICINE**

This course provides a comprehensive overview of anatomy and physiology, and the care and handling of common laboratory and exotic small animals. Emphasis is on the principles of lab animal use in research, maintaining human health and safety in a research environment, nursing care, correct husbandry techniques, restraint and handling, and humane euthanasia techniques in laboratory and small exotic animals. Prerequisites: VT 108, VT 110, VT 114, VT 118. Corequisites: VT 111, VT 112, VT 116.

Credits: 4 Lecture: 3 Lab: 3

VT 114**PHARMACOLOGY I**

This course is the first of two courses focusing on pharmacology and medical dosing for veterinary technicians. This course focuses on basic terms and abbreviations of pharmacology, properties of specific drug classes, pharmaceutical therapy for cardiovascular, respiratory, musculoskeletal and nervous systems. Students will also be introduced to medical math and dosing calculations. Prerequisites: VT 101, VT 102, VT 103, VT 117 with a grade of "C" or better. Corequisites: VT 108, VT 110, VT 118.

Credits: 3 Lecture: 3

VT 116**PHARMACOLOGY II**

This course is the second in a two-part series focusing on advanced pharmacology and medical dosing for veterinary technicians. Focus is on advanced terms and abbreviations of pharmacology, properties of specific drug classes, and advanced pharmaceutical therapy for cardiovascular, respiratory, musculoskeletal and nervous systems. Students will also be expected to demonstrate advanced skills in medical math and dosing. Prerequisites: VT 108, VT 110, VT 114 and VT 118 with a grade of "C" or better. Corequisites: VT 111, VT 112, VT 113.

Credits: 3 Lecture: 3

VT 117**VETERINARY ANATOMY & PHYSIOLOGY I**

This is the first of two courses covering the form and function of animal bodies and their anatomical and Physiological differences between selected species. Lab includes the use of skeletons, models, virtual anatomy tools and dissection of cadavers. This course provides instruction in histology, cellular biology, gross anatomy and physiology of the integumentary system, bones and muscles, with emphasis on the comparative aspects between species. Corequisites: VT 101, VT 102, VT 103.

Credits: 4 Lecture: 3 Lab: 3

VT 118**VETERINARY ANATOMY & PHYSIOLOGY II**

This is the second of two courses covering the form and function of animal bodies and their anatomical and physiological differences between selected species. This course will focus on body systems and special senses, emphasizing comparing and contrasting between common domestic species. The student will understand the inter-relationships of body systems and how they might influence disease. Prerequisites: VT 101, VT 102, VT 103, VT 117. Corequisites: VT 108, VT 110, VT 114.

Credits: 4 Lecture: 3 Lab: 3

VT 188**SPECIAL STUDIES VET TECHNICIAN**

Special studies for Veterinary Technician.

Credits: 1 to 4

VT 201**ANESTHESIOLOGY AND SURGERY**

This course introduces veterinary technology students to the principles and practices of veterinary anesthesia and surgical assistance. Prerequisites: VT 112, VT 113, VT 111 and VT 116 with a grade of "C" or better. Corequisites: VT 203, VT 206, VT 212.

Credits: 4 Lecture: 3 Lab: 3

VT 202**VETERINARY SPECIAL PROCEDURES**

This course focuses on veterinary dentistry and special veterinary diagnostic procedures. Veterinary technology students will learn to perform a thorough dental prophylaxis on multiple species, utilize and perform basic tooth extraction techniques, recognize and report different stages of tooth decay and damage, and correctly medically chart all information. In addition, the student will gain an understanding of why and how specialized diagnostic tests are performed, including

Ultrasonography, MRI, CT and Endoscopy. Students will become familiar with maintenance and operation of the Ultrasound machine and flexible and rigid Endoscopes. Prerequisite: VT 201, VT 203, VT 206, VT 212 with a "C" or better. Corequisites: VT 204, VT 211.

Credits: 4 Lecture: 3 Lab: 3

VT 203**ANIMAL NURSING III**

This is the third part of a four-part series in Animal Nursing. This course will focus on large animal and exotic animal nursing techniques. Prerequisites: VT 111, 112, 113 and 116. Corequisites: VT 201, VT 206, VT 212.

Credits: 4 Lecture: 3 Lab: 3

VT 204**VETERINARY RADIOLOGY**

This course introduces students to the field of veterinary radiography, including principles of x-ray production, the operation and uses of x-ray machines, the care and development of films, and radiographic positioning of animals. Radiation and safety principles involved in using x-ray machines is emphasized. Prerequisites: VT 201, VT 203, VT 206 and VT 212 with a grade of "C" or better. Corequisites: VT 202 and VT 211.

Credits: 4 Lecture: 3 Lab: 3

VT 206**ANIMAL DISEASES**

This course introduces the veterinary technician student to the more common disease conditions of the individual body systems of companion animals and select large animals. The etiology, diagnosis, treatment, prevention, public health significance and the role of the veterinary technician will be covered. Prerequisites: VT 111, VT 112, VT 113 and VT 116. Corequisites: VT 201, VT 203, VT 212.

Credits: 4 Lecture: 4

VT 211**ANIMAL NURSING IV**

This is the fourth course in a sequence of courses and is an advanced course in Animal Nursing for veterinary technicians. Emphasis will be on setting up for and collection of laboratory samples including arthrocentesis, bone marrow collection, thoraco- and abdomencentesis, fine needle aspiration, endotracheal washes, etc. This course will also contain a comprehensive review of Animal Nursing in preparation for the National Veterinary Technician Examination. Prerequisites: VT 201, VT 203, VT 206 and VT 212 with a grade of "C" or better. Corequisites: VT 202, VT 204.

Credits: 4 Lecture: 3 Lab: 3

VT 212**CLINICAL PATHOLOGY III**

This is the third in a three-part series in Veterinary Clinical Pathology. This module will focus on clinical microbiology as it relates to veterinary technology including cellular, bacterial, viral and microbial defenses. Prerequisites: VT 112, VT 113, VT 111 and VT 116 with a grade of "C" or better. Corequisites: VT 203, VT 201, VT 206.

Credits: 4 Lecture: 3 Lab: 3

VT 280**CLINICAL PRACTICUM**

This course develops career objectives by linking coursework with off-campus learning experiences in business, industry and/or the public sector. Focus is on office/receptionist skills, animal nursing and restraint laboratory procedures, pharmacology, radiography, surgical preparation and assistance and anesthesia. This course is designed to give the student hands-on experience by working on actual animal cases in a clinical veterinary setting. Students will be able to gain confidence in their abilities and develop increased proficiency in these clinical rotations. Students are matched to a veterinary hospital or clinic for the course practicum. The match is determined by the program director. Each

student is expected to attend 300 total hours at the clinical site. Prior to taking this class, students must have successfully completed all other courses in the Veterinary Technology program with a grade of "C" or better.

Credits: 10 Other: 30

VT 288

SPECIAL STUDIES VET TECHNICIAN

Special Studies for Veterinary Technician.

Credits: 4

WILDLAND FIRE/FUELS MANAGEMENT

WF 100

INCIDENT COMMAND SYSTEMS

This course introduces students to the principles of the Incident Command System (ICS) associated with incident-related performance. Topics include: leadership and management, delegation of authority and management by objectives, functional areas and positions, briefings, organizational flexibility, transitions and transfers.

Credits: 3 Lecture: 3

WF 101

INTRODUCTION TO FIRE BEHAVIOR AND FIREFIGHTER TRAINING

The purpose of this course is to train new firefighters in basic firefighting skills and the basic fire behavior factors that will aid them in the safe and effective control of wildland fires. Students will receive NWCG certification in S-130, S-190, L-180 and S-133.

Credits: 3 Other: 6

WF 131

S-131 ADVANCED FIREFIGHTER

Firefighter Type 1, S-131, is designed to meet the training needs of the Firefighter Type 1 (FFT1). This course is designed to be interactive in nature. It contains several tactical decision games designed to facilitate learning the objectives and class discussion. Topics include fireline reference materials, communications, and tactical decision making. Recommended preparation: WF 100, WF 101.

Credits: 1 Lecture: 1

WF 134

S-134 LOOKOUTS, COMMUNICATION, ESCAPE ROUTES, SAFETY ZONES

Students become engaged in the process of designing their own safety program. The small group exercises will discuss and develop the L, C, E, S, creating a list of performance standards. The entire class will then work together to produce and edit a contract, based on consensus, which guides performance.

Credits: 2 Lecture: 2

WF 181

L-180 HUMAN FACTORS-FIRELINE

Establishes an awareness of human performance issues and how those issues can impact fireline job performance. Addresses human performance content that relates to the individual, including situation awareness, communication, decision making, risk management and teamwork skills. Improves awareness of human performance issues on the fireline so that individual firefighters can integrate more effectively into teams/crews working in dynamic, high-risk environments. Recommended preparation: WF 101, WF 100.

Credits: 1 Lecture: 1

WF 188

SPECIAL STUDIES: WILDLAND FIRE

Credits: 1 to 4

WF 199

SELECTED TOPICS: WILDLAND FIRE

Credits: 4

WF 200

S-200 INITIAL ATTACK INCIDENT COMMAND

Designed to meet the training needs of the ICT4. Presented in a lecture/discussion format and supplemented with group exercises. The six instructional units cover: readiness and mobilization; size up, planning and ordering; deployment and containment; administrative requirements; and post-fire evaluation.

Credits: 2 Lecture: 2

WF 201

NFPA INSTRUCTOR 1

NFPA Instructor 1 is an intensive, instructional methodology program. It addresses the job performance requirement of the National Fire Protection Agency, 1041 Standard for Fire Service Instructor Professional Qualifications and the National Wildfire Coordinating Group. The course prepares students for planning instruction, using a variety of instructional methods, teaching diverse learners, and evaluating course outcomes. The course also provides guidelines for addressing the critical issues of safety and the legal issues of training, and it provides opportunities for participants to participate in application activities.

Credits: 3 Lecture: 3

WF 203

S-203 INTRODUCTION TO INCIDENT INFORMATION

Provides students with the knowledge and skills they need to serve as public information officers (PIOF). Touches on virtually all aspects of establishing and maintaining an incident information operation, from communicating with internal and external audiences to handling special situations. Format of the course is lecture and exercises with a final simulation.

Credits: 3 Lecture: 3

WF 210

FI-210 WILDFIRE ORIGIN/CAUSE

The primary purpose of this course is to provide a consistent knowledge and skill base for the wildland fire origin and cause determination investigator (INVF). The concepts taught in this course will help an INVF perform at an acceptable level on a national basis without regard to geographic boundaries. The course is presented by lectures, electronic presentations, field exercises and class discussion.

Credits: 3 Lecture: 3

WF 211

S-211 PORTABLE PUMPS

This is an instructor-led course intended to be presented at the local level. The course consists of three skill areas: supply, delivery and application of water. Students will be required to demonstrate their knowledge of correct water use, basic hydraulics and equipment care. The field exercise requires set up, operation and maintenance of pump equipment. To receive credit for this course, students must have field work observed and approved, and take a closed-book written final examination. Recommended preparation: WF 100, WF 101.

Credits: 2 Lecture: 2

WF 212

S-212 WILDFIRE POWER SAWS

This is an instructor-led course intended to be presented at the local level. The course lessons provide introduction to the function, maintenance and use of internal combustion engine-powered chain saws, and their tactical wildland fire application. Field exercises support entry-level training for firefighters with little or no previous experience in operating a chain saw, providing hands-on cutting experience in surroundings similar to fireline situations. Recommended preparation: WF 131, WF 134.

Credits: 3 Lecture: 2 Lab: 3

WF 215**S-215 FIRE OPERATIONS IN THE URBAN INTERFACE**

This course is designed to assist structure and wildland firefighters who will be making tactical decisions when confronting wildland fire that threatens life, property, and improvements, in the wildland/urban interface. Instructional units include interface awareness, size-up, initial strategy and incident action plan, structure triage, structure protection tactics, incident action plan assessment and update, follow-up and public relations, and firefighter safety in the interface. Recommended preparation: WF 100, WF 101.

Credits: 3 Lecture: 3

WF 230**S-230 CREW BOSS**

Designed to produce student proficiency in the performance of duties associated with the single resource boss position from initial dispatch through demobilization to the home unit. Topics include: operational leadership, preparation and mobilization, assignment preparation, risk management, entrapment avoidance, safety and tactics, offline duties, demobilization and post incident responsibilities.

Credits: 3 Lecture: 3

WF 231**S-231 ENGINE BOSS**

Skill course designed to produce student proficiency in the performance of all duties associated with the single resource engine boss. Topics include tactical use and safety precautions required to establish an effective engine operation on a large incident.

Credits: 2 Lecture: 2

WF 232**S-232 DOZER BOSS**

Skill course designed to produce proficiency in the performance of all duties associated with the single-dozer boss (DOZB). Primary considerations are tactical use and safety precautions required to establish and maintain an effective dozer operation.

Credits: 2 Lecture: 2

WF 234**S-234 IGNITION OPERATIONS**

This is an entry-level course providing training in the functional roles and responsibilities connected with firing operations. The course covers planning, ignition procedures and techniques, and equipment applicable to wildland and prescribed fire. This course addresses the role of the ignition specialist or firing boss as the organization manages escalation from a noncomplex to a complex fire situation. Note: This course is not intended to qualify or certify any personnel in the use or transport of any firing device; rather, it is to provide the potential firing boss a description of available equipment and the requirements specific to each such device. Department approval required.

Credits: 2 Lecture: 2

WF 244**S-244 FIELD OBSERVER**

Provides students with the necessary skills to perform as a field observer (FOBS) and/or a prescribed fire effects monitor (FEMO). Topics include: identifying and interpreting maps, making map calculations, using observation aids and instruments, performing field observations and communicating information. There will be a daylong field trip.

Credits: 2 Lecture: 2

WF 260**S-260 INTERAGENCY INCIDENT BUSINESS MANAGEMENT**

Covers the following incident business management practices: rules of conduct for incident assignments, recruitment of casuals, pay provisions, timekeeping, commissary, travel compensation for injury, acquisition of equipment, supplies, services, property management, types and the necessity of cooperation agreements, reporting, investigating, documenting accidents and claims. Recommended to be taken with WF 100, WF 101.

Credits: 2 Lecture: 2

WF 261**S-261 APPLIED INTERAGENCY INCIDENT BUSINESS MANAGEMENT**

This course is designed to provide the prerequisite skills/knowledge necessary to perform the tasks of the entry-level finance positions, i.e., commissary manager, personnel time recorder, equipment time recorder, compensation for injury specialist, and claims specialist, in the Incident Command System (ICS). It is designed to be taken after completion of Interagency Incident Business Management (S-260).

Credits: 2 Lecture: 2

WF 270**S-270 BASIC AIR OPERATIONS**

Covers aircraft types and capabilities, aviation management and safety, tactical and logistical uses of aircraft, and requirements for helicopter take-off and landing areas. Recommended preparation: WF 131, WF 134.

Credits: 2 Lecture: 2

WF 281**L-280 FOLLOWERSHIP/LEADERSHIP**

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.

Credits: 2 Lecture: 2

WF 284**I-400 ADVANCED ICS**

This course directs the student towards an operational understanding of large single-agency and complex multi-agency/multi-jurisdictional incident responses. Topics include: Fundamentals review for command and general staff, major and/or complex incident/event management, area command, and multi-agency coordination. This course was developed in conjunction with the US Fire Administration (H467) and the Emergency Management Institute (G400). These courses are built on the same lesson objectives and content as the NWCG I-400 course and are interchangeable; they are all National Incident Management System (NIMS) compliant. Department approval required.

Credits: 2 Lecture: 2

WF 286**PACIFIC NORTHWEST ENGINE ACADEMY**

Students attending the Pacific Northwest Engine Academy will receive training utilizing a variety of methods and techniques, which will provide information about water handling and will improve engine operation skills. These skills are applicable to both fuels management and fire suppression activities. The student will be instructed using ICS terminology.

Credits: 3 Lecture: 2 Lab: 3

WF 288**SPECIAL STUDIES: WILDLAND FIRE**

Credits: 1 to 4

WF 290**S-290 INTERMEDIATE WILDFIRE BEHAVIOR**

This is a classroom-based skills course designed to prepare the prospective fireline supervisor to undertake safe and effective fire management operations. It is the second course in a series that collectively serves to develop fire behavior prediction knowledge and skills. Fire environment differences are discussed as necessary; instructor should stress local conditions. Recommended preparation: WF 131, WF 260, WF 134.

Credits: 3 Lecture: 3

WF 291**I-300 INTERMEDIATE INCIDENT COMMAND SYSTEMS**

This course is designed to meet the training needs of the incident commander type 3 (ICT3). The focus is on the lessons of leadership and command as they relate to the ICT3 position. It is presented in participative lecture format with multiple tactical decision games for students to practice new knowledge. The seven instructional units cover foundation skills, situational awareness, command and control, managing the incident, transitional activities, post-fire activities and a final simulation. There is also an optional staff ride activity (Unit 8) if instructors choose to include it. Department approval required.

Credits: 2 Lecture: 2

WF 292**RX-300 PRESCRIBE BURN BOSS**

Designed to prepare the student for the use of fire to accomplish resource objectives by evaluation and implementation of a prescribed fire. Development of a burn plan is the primary product of this course which includes: developing resource management objectives; safety and monitoring; operational criteria; legal liabilities; use of fire and fire effects; smoke management and prescription design.

Credits: 4 Lecture: 4

WF 293**RX-340 (RX-310) FIRE EFFECTS**

Provides the student with the knowledge and skills to recognize basic fire regimes, the results of fire treatment on first order fire and fire effects, and to manipulate fire treatments to achieve desired first order fire effects.

Credits: 3 Lecture: 3

WF 294**S-300 IC EXTENDED ATTACK**

Meets the training needs of the incident commander, type 3 (ICT3). Presented in a lecture/discussion format and supplemented with group exercises. There are six instructional units that cover information gathering, planning, supporting organization, operations, transitioning, and demobilization/administrative requirement.

Credits: 2 Lecture: 2

WF 295**S-330 TASK FORCE/STRIKE TEAM LEADER**

Prepares the student to perform in the role of task force leader (TFLD) or any strike team leader. Examples and exercises are specific to wildland fire suppression. If the student is expected to perform in another risk area, applicable examples and exercises area will be added.

Credits: 3 Lecture: 3

WF 296**S-336 SUPPRESSION TACTICS**

Meets training requirements in the Operations Section of the Incident Command System. Examples, simulations, and exercises in this course are specific to wildland fire suppression.

Credits: 3 Lecture: 3

WF 297**S-339 DIVISION GROUP SUPERVISOR**

Prepares student to perform in the role of division/group supervisor. Provide 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.

Credits: 2 Lecture: 2

WF 298**S-390 FIRE BEHAVIOR CALCULATION**

This is an NWCG (National Wildfire Coordinating Group) Certified course. This course is designed to introduce fire behavior calculations by manual methods, using nomograms and the Fire Behavior Handbook Appendix B. Students gain an understanding of the determinants of fire behavior through studying inputs (weather, slope, fuels, and fuel moisture). Students also learn how to interpret fire behavior outputs, documentation processes, and fire behavior briefing components. Department Approval Required.

Credits: 3 Lecture: 3.2

WF 299**SELECTED TOPICS: WILDLAND FIRE**

Credits: 1 to 4

WRITING**WR 060****RHETORIC AND CRITICAL THINKING I**

First course in a two-course series of instruction in developmental writing and reading. The writing process is examined from invention to final draft; reading instruction includes vocabulary development, distinguishing between ideas and evidence, and summarizing. Students read, analyze and evaluate texts of varying lengths that show each stage of the process. The course focuses on expository essays. Recommended preparation: Reading and Writing placement test scores that place the student in WR 60.

Credits: 4 Lecture: 4

WR 065**RHETORIC AND CRITICAL THINKING II**

Second course in a two-course series of instruction in developmental writing and reading. Students will study one long text and shorter selections from varying points of view representing the three major academic disciplines of humanities, science, and social science. Mirroring the reading and writing skills used in college, students read and write about the primary ways of thinking across the disciplines. Recommended preparation: Reading and Writing placement test scores that place the student in WR 65; or a grade of "C" or higher in WR 60.

Credits: 4 Lecture: 4

WR 095**BASIC WRITING II**

Provides instruction and practice in basic essay structures and development. Students learn effective options for introductions, transitions, body paragraphs and conclusions. Includes brief review of sentence mechanics and paragraphing principles within the context of student's own writing. Also provides practice and instruction in the writing process, including peer review and analysis. WR 95 is an optional course in the developmental writing sequence for students who need or want additional preparation for WR 121. This course is not suitable for students who place into WR 60 or WR 65. Recommended preparation: Reading placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65.

Credits: 3 Lecture: 3

WR 121**ENGLISH COMPOSITION**

This transfer course emphasizes text-based academic writing and develops skills in expository and persuasive writing incorporating analytical reading, critical thinking and credible sources. Students compose several essays using a variety of strategies to support a thesis. Prerequisite: Students are placed into WR 121 based on Writing and Reading placement test scores; or a grade of "C" or higher in WR 65 or WR 95.

Credits: 4 Lecture: 4

WR 122**ENGLISH COMPOSITION**

Using critical reading, observation or investigation to explore topics in depth, students learn to incorporate, accommodate or refute other voices, use evidence and persuasion and follow patterns of reasoning to support their positions. WR 122 focuses on the research process for producing a substantial, documented research essay. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

WR 170**DOCUMENTATION**

Instruction emphasizes what constitutes plagiarism and how to avoid it by applying college-level documentation practices, using accepted discipline-appropriate academic and professional styles, in research-based writing assignments across the curriculum.

Credits: 1 Lecture: 1

WR 188**SPECIAL STUDIES: WRITING**

Credits: 1 to 3

WR 199**SELECTED TOPICS: WRITING**

Credits: 1 to 3

WR 214**BUSINESS COMMUNICATIONS**

Introduces students to prevailing practices of written and oral communication in business organizations, with special attention to audience-adaptation strategies and developing a jargon-free style. Includes instruction in formatting techniques, document design, graphics, research strategies and documentation, as well as practice in the collaborative skills required for workplace writing. Recommended preparation: WR 121.

Credits: 3 Lecture: 3

WR 227**TECHNICAL WRITING**

This transfer course emphasizes forms of writing appropriate in the workplace rather than academic essays. This course addresses the following topics: evaluation of audiences, writing situations, and sources; document design; research processes; visual aids all contributing to a major research project. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

WR 240**INTRODUCTION TO CREATIVE WRITING: NONFICTION**

Introduces students to writing creative nonfiction, adapting the personal essay to multiple purposes, such as science or nature writing, travel writing, memoir, biography and journalistic essay. Prose craft exercises, critical reading of published authors and responding constructively to other student work are essential learning processes. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

WR 241**INTRODUCTION TO CREATIVE WRITING: FICTION**

Practical study of effective strategies for creating vivid, dramatic stories. Students learn the basic craft of generating conflict and plot, openings that grab the reader, complications that build tension, and details that reveal character. Critical reading of published authors, prose craft exercises and responding constructively to other student work are essential learning processes. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

WR 242**INTRODUCTION TO CREATIVE WRITING: POETRY**

Introduces students to the craft of poetry through study of the poetry and notebooks of established writers for writing techniques, forms, styles and work processes and through the writing and submission of approximately one complete poem per week for class discussion and analysis. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

WR 243**INTRODUCTION TO CREATIVE WRITING: SCRIPTWRITING**

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. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

WR 288**SPECIAL STUDIES: MAGAZINE WRITING**

Credits: 1 to 3

WR 299**SELECTED TOPICS: WRITING**

Credits: 1 to 4

GLOSSARY OF ACADEMIC TERMS

The **academic year** consists of three terms (or “quarters”) of approximately 11 weeks each. Students may enter at the beginning of any term, but it may be advantageous to enter in the fall due to course sequence requirements. Summer is considered a separate, “stand-alone” term.

Credit load is the number of credits taken each term. Students may not take more than 19 credit hours per term without permission from Enrollment Services - Admissions and Records.

A **course** is an instructional program in which students study a subdivision of a subject such as U.S. History or English Literature, etc.

A **credit** usually represents three hours of the student’s time each week (approximately one hour in class plus two hours of outside preparation) for one term. This time may be assigned to work in a classroom or laboratory or for outside preparation. The number of lectures, recitations, laboratory, studio, or other periods per week for any course is listed in the course descriptions in the catalog. The typical amount of scheduled time for a non-laboratory academic class is 50 minutes per week for each credit hour. Laboratory and activity courses usually require more than one hour of class time per week for each hour of credit.

The COCC **credit class schedule** is a listing of the coming term’s classes and registration instructions. The schedule is available online at www.cocc.edu.

Curriculum is an organized program of courses and study arranged to provide definitive cultural or professional preparation.

An **enrolled student** is one who has satisfied all of the institutional requirements for attendance at the institution, a special admission/concurrent student, or any other student participating in credit or non-credit programs, and who is registered for the current term.

A **full-time student** is defined as one enrolled in 12 or more credits for federal financial aid, veterans and Social Security purposes. Half-time enrollment is defined as 6-8 credits and three-quarter time as 9-11 credits.

Lower-division courses are freshman- and sophomore-level courses numbered 100-299.

An academic **program** is any institutionally established combination of courses and/or requirements leading to a degree or certificate.

Upper-division courses are junior- and senior-level courses offered through four-year colleges and universities. Generally they are numbered 300-499.

A **subject** is a designated field of knowledge (e.g., history or English).



BOARD OF DIRECTORS

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Madras, term expires 2017

LAURA CRASKA COOPER (ZONE 2)

Prineville, term expires 2017

ANTHONY DORSCH (ZONE 3)

Redmond, term expires 2017

DAVID E. FORD (ZONE 4)

Bend, term expires 2017

CHARLEY MILLER (ZONE 5)

Bend, term expires 2015

BRUCE ABERNETHY (ZONE 6)

Bend, term expires 2015

VIKKI RICKS (ZONE 7)

La Pine, term expires 2015

PRESIDENT

JAMES E. MIDDLETON

President (Retirement scheduled September 2014)

B.A. in European Literature and Thought, 1969, University of Iowa; M.A. in English Literature, 1973, University of Leeds; M.A., Educational Specialist in Community College Teaching English, 1976, University of Iowa; D.A. in English Language and Literature, 1983, University of Michigan. At COCC since 2004.

SHIRLEY METCALF

Interim President (Beginning September 2014)

B.Ed. in Business Education, 1973, University of Hawaii; M. Ed., in Business Education, 1974, University of Hawaii; Ed.D. in Management, 1990, Northern Illinois University. At COCC since 2011.

VICE PRESIDENTS

CHARLES ABASA-NYARKO

Vice President for Instruction

B.S. in Political Science, 1979, University of Ghana; M.S. in Political Science, 1984, Brigham Young University; Ph.D. in International Studies, 1988, University of South Carolina. At COCC since 2013.

MATTHEW J. McCOY

Vice President for Administration

B.A. in Political Science, 1982, University of Arizona; J.D. College of Law, University of Arizona, 1986. At COCC since 1998.

CHIEF FINANCIAL OFFICER

KEVIN E. KIMBALL

Chief Financial Officer

B.S. in Accounting, 1977, Brigham Young University; M.S. in Organizational Development, 2008, Central Washington University. At COCC since 2009.

DEANS

MICHAEL P. FISHER

Dean of Workforce and Industrial Technology

A.S. in Forest Technology, 1990, Central Oregon Community College; B.S. in Forest Management and Rangeland Resource, 1993, Oregon State University; M.S. in Rangeland Resource Management, 1996, Oregon State University; Ph.D. in Rangeland Resources, 2004, Oregon State University. At COCC since 1998.

CHAD HARRIS

Dean of Health Sciences

B.S. in Physical Education, 1985, Cal Poly State University; M.S. in Physical Education 1987, Kansas State University; Ph.D. in Human Performance, 1994, Oregon State University. At COCC since 2014.

SHIRLEY METCALF

Extended Learning Dean

B.Ed. in Business Education, 1973, University of Hawaii; M. Ed., in Business Education, 1974, University of Hawaii; Ed.D. in Management, 1990, Northern Illinois University. At COCC since 2011.

ALICIA MOORE

Dean of Student and Enrollment Services

B.A. in Speech Communication/Spanish, 1991, Willamette University; M.S. in College Administration, 1995, Colorado State University. At COCC since 1997.

JENNIFER NEWBY

Dean of Arts and Social Sciences

B.A. in Spanish Language and Literature, 1992, Whitman College; M.A., Spanish Language and Literature, 1995, Washington State University; Ph.D. in Education, Oregon State University, 2013. At COCC since 2011.

PRESIDENT EMERITUS

ROBERT L. BARBER

A.B. in Economics, 1966, Cornell University; M.A. in Education, 1973, State University of New York at Albany; Ph.D. in Education Administration, 1980, University of Connecticut. At COCC from 1990 to 2004.

FREDERICK H. BOYLE

B.A. in English, 1955, Western State College; M.Ed. in Mathematics and Physics, 1958, Harvard University; Ed.D. in Junior College Administration, 1965, University of Florida. At COCC from 1967 to 1990.

VICE PRESIDENT EMERITUS

JAMES JONES

B.S. in Business Administration, 1974, Oregon State University; M.B.A., 1992, Oregon State University. At COCC from 1985 to 2009.

LOUIS BARTELS QUEARY

B.A. in Rhetoric, 1968, University of California at Berkeley; M.A. in Rhetoric, 1970, University of California at Berkeley; Ph.D. in Rhetoric, 1973, University of California at Berkeley. At COCC from 1979 to 2002.

KATHY WALSH

B.A. in English, University of Maryland, 1969; M.A. in English, San Diego State University, 1973; M.A. in Reading, San Diego State University, 1975; Ph.D. in English Language and Literature, University of Virginia, 1990. At COCC from 1990 to 2010.

DEAN EMERITUS

DIANA K. GLENN

B.S. in Business Education, 1970, Oregon State University; Ed.M. in Business Education, 1979, Oregon State University. At COCC from 1986 to 2011.

DONALD LAWS

B.S. in Political Science-History, 1969, Portland State University; M.A. in Political Science, 1971, Portland State University. At COCC from 1972 to 1997.

CAROL P. MOOREHEAD

A.A., Green River Community College, 1975; B.A. in Education, 1977, Evergreen State College; M.Ed. in Adult Education, 1985, Oregon State University. At COCC from 1989 to 2011.

RICHARD THOMPSON

B.S. in Geology, 1966, University of Oregon; M.S. in Geology, 1968, University of Oregon. At COCC from 1984 to 2006.

FACULTY

CORA AGATUCCI

Professor of English

B.A. in English, 1977, San Diego State University; M.A. in Literature, 1979, University of California, San Diego; Ph.D. in Literature, 1987, University of California, San Diego. At COCC since 1988.

JACOB AGATUCCI

Assistant Professor II of English

B.A. in English, 1999, University of Oregon; M.A. in English, 2001, University of Oregon. At COCC since 2001.

DAN ALBERGHETTI

Associate Professor of Computer and Information Systems

B.A. in Art, 1991, University of California; M.A. in Art, 2000, California State University. At COCC since 2013.

STEPHANIE V. ANDRE

Assistant Professor II of Composition

B.A. in English, 2001, University of Notre Dame; M.A. in English, 2006, Rutgers University. At COCC since 2011.

KARL BALDESSARI

Assistant Professor I of Aviation/Program Director

B.S. in Government, 1982, U.S. Coast Guard Academy; At COCC since 2011.

THOMAS J. BARRY

Professor of Sociology

B.A. in Communication Studies, 1989, University of Kansas; M.A. in Speech Communication, 1992, California State University, Fullerton; M.S.W., 1995, University of Kansas; Ph.D. in Sociology, 2006, Kansas State University. At COCC since 2004.

JERRY BEAN

Assistant Professor I of Aviation

B.S. in History, 1972, Oregon State University; M.A. in Business Administration-Aviation, 2002, Embry Riddle Aeronautical University. At COCC since 2012.

ARTHUR N. BENEFIEL

Professor of Forest Technology/Program Director, GIS

A.S. in Forestry, 1977, Mt. Hood Community College; B.S. in Forest Resources (Forest Management), 1983, University of Washington; M.F.R. in Forest Resources, 1984, University of Washington. At COCC since 1988.

RONALD W. BOLDENOW

Professor of Forest Resources Technology

B.S. in Biology, 1978, Calvin College; M.S. Forestry, 1987, Humboldt State University; Ph.D. in Wildland Resource Science, 1996, University of California, Berkeley. At COCC since 1999.

JUSTIN BOROWSKY

Assistant Professor II of Speech

A.A. in Liberal Arts, Communication, 2003, Raritan Valley Community College; B.A. in Communication, 2005, Rutgers University; Masters of Communication and Information Studies, 2007, Rutgers University; Ph.D. in Interpersonal and Family Communication, 2010, University of Denver. At COCC since 2010.

JON BOUKNIGHT

Professor of Speech and Writing

B.A. in English, 1982, University of California, Berkeley; M.A. in English, 1987, University of New Mexico; Ph.D. in Speech Communication, 1994, University of Washington. At COCC since 1998.

BRIAN BUBAK

Assistant Professor I of Emergency Medical Services

B.S. in Business Administration, 1982, University of Oregon; M.A. in Photographic Communication, 1994, Ohio University. At COCC since 2012.

PETER DICKINSON CASEY

Professor of Computer and Information Systems

B.A. in Secondary Education, 1981, University of Arizona; A.A., 1982, Central Oregon Community College; M.S. in Computer Science Education, 1987, University of Oregon. At COCC since 1983.

EMMA CHAPUT

Assistant Professor II of Biology

B.A. in Biology, 1995, Johns Hopkins University; Masters in Public Health, 2001, Yale University. At COCC since 2011.

MONTE CHENEY

Associate Professor of Mathematics

B.S. in Mathematics, 1994, Walla Walla University; M.S. in Mathematics, 1994, Washington State University; M.S. Statistics, 1998, Washington State University. At COCC from 1998 to 2006; returned in 2010.

ELIZABETH COLEMAN

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B.A. in Mathematics, 1990, Humboldt State University; M.S. in Environmental Systems with an emphasis in Math Modeling, 1998, Humboldt State University. At COCC since 2009.

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B.S. in Industrial and Management Engineering, 1985, Montana State University; M.B.A., 1992, Seattle University. At COCC since 1998.

WILLIAM CRAVIS

Assistant Professor I of Fine Arts - Sculpture and 3D Design

B.A. in Ceramics, 2002, California College of the Arts; M.A. in Fine Arts, 2006, Carnegie Mellon University. At COCC since 2012.

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Assistant Professor I, Health and Human Performance

B.S. in Exercise Sport Science, 1996, Colorado State University. At COCC since 2004.

DEBORAH S. DAVIES

Professor of Dental Assisting/Program Director

A.A. in Dental Hygiene, 1987, Pueblo Community College; B.S. in Biology, 1975, University of Southern Colorado; holds Oregon Dental Hygiene License and certification by the National Dental Hygiene Board. At COCC since 1997.

MICHELE D. DECKER

Associate Professor of Nursing/Program Director

B.S. in Community Health Education, 1979, Oregon State University; B.S. in Nursing, 1983, and M.S. in Nursing Education and Administration, 1991, Oregon Health Sciences University; M.Ed. in Adult Education, 2002, Oregon State University. At COCC since 2005.

STACEY L. DONOHUE

Professor of English

B.A. in English, 1985, University Center at Binghamton, State University of New York; Ph.D. in English, 1995, City University of New York. At COCC since 1995.

KRISTIN DORSEY**Assistant Professor I of English**

B.A. in English Literature, 1996, Reed College; M.A. in Children's Literature, 1998, Simmons College; M.A. in English Literature, 2002, Portland State University. At COCC since 2014.

JULIE DOWNING**Professor of Health and Human Performance**

B.S. in Corporate and Community Fitness, 1989, North Dakota State University; M.S. in Exercise Physiology, 1991, St. Cloud State University; Ph.D. in Human Performance, 2002, Oregon State University. At COCC since 1991.

MARK W. EBERLE**Professor of Biological Sciences**

B.A. in Bacteriology, 1972, University of California, Davis; Ph.D. in Entomology, 1981, University of California, Davis. At COCC since 1988.

JAMES H. ELLIS**Associate Professor of Accounting/General Business**

B.S. in Behavioral Science, 1976, Westminster College; A.A. in Accounting, 1982, Salt Lake City Community College; B.S. in Accounting, 1984, and M.B.A. in Business, 1997, Westminster College; M.S. in International Business, 2004, Southern New Hampshire University. At COCC since 2006.

CINDY ELSTON**Assistant Professor II of Veterinary Technology**

B.A. in Microbiology, 1991, Miami University; Doctor of Veterinary Medicine, 1995, Ohio State University; Master of Public Health, 2013, University of Louisville. At COCC since 2014.

BRUCE L. EMERSON**Professor of Physics**

B.S. in Physics, 1979, Montana State University; Ph.D. in Physics, University of Utah, 1992. At COCC since 1992.

THOR ERICKSON**Temporary Instructor of Culinary**

A.A. in Hospitality Management, 1990, Columbia Community College. At COCC since 2011.

JOSHUA EVANS**Assistant Professor II of Spanish**

B.A. in International Studies, 2002, Bowling Green State University; M.A. in Spanish, 2004, Bowling Green State University. At COCC since 2010.

CATHERINE L. FINNEY**Professor, Associate College Librarian, Collections and Acquisitions**

B.A. in English, 1983, Carleton College; M.L.S. in Library Science, 1988, University of Washington. At COCC since 1992.

REBECCA FRANKLIN**Temporary Instructor of Forest Resources Technology**

B.S. in Forestry, 2003, Humboldt State University; Ph.D. in Geosciences, 2012, University of Arizona. At COCC since 2013.

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B.A. in Business Economics, 1983, UCLA; M.B.A., 1987, Pepperdine University. At COCC since 2007.

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A.A. in Math/Science, 1988, Bryn Athyn College; B.S. in Botany, 1992, University of Maryland; M.S. in Ecology, Evolution, and Behavior, 1998, University of Minnesota. At COCC since 2011.

MICHAEL C. GESME**Professor of Music**

B.A. in Music, 1992, Luther College; M.M. in Orchestral Conducting, 1994, University of Missouri-Columbia; M.A. in Music History, 1996, University of Missouri-Columbia. At COCC since 1996.

JESSICA GIGLIO**Assistant Professor I of Mathematics**

B.A. in Mathematics, 2003, Lake Forest College; M.S. in Mathematics, 2005, Oregon State University. At COCC since 2013.

MURRAY GODFREY**Assistant Professor I of History**

A.A.S. in Intelligence Operations, 2004, Cochise College; B.A. in History, 2007, Texas State University; M.A. in History, 2010, Texas State University. At COCC since 2012.

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B.S. in Civil Engineering, 1997, Montana State University; M.S. in Chemical Engineering, 1999, Montana State University. At COCC since 2005.

LAURA HAGEN**Temporary Instructor of Culinary**

B.A. in English, 1991, Western Washington University. At COCC since 2013.

ANNEMARIE HAMLIN**Associate Professor of English**

B.A. in English and French, 1988, Pacific Union College; M.A. in English, 1991, Claremont Graduate School; Ph.D. in English, Claremont Graduate School, 1998. At COCC since 2010.

JESSICA HAMMERMAN**Assistant Professor I of History**

B.A. in History and Comparative Literature, 1999, Washington University in St. Louis; M.A. in Philosophy, Modern European History and Jewish History, 2007, City University of New York; Ph.D. in Modern European History and Jewish History, 2012, City University of New York. At COCC since 2013.

MICHAEL HANSEN**Assistant Professor I of Business**

B.S. in Business Administration, 1985, California State University, Sacramento; M.B.A., 1991, California State University, Sacramento. At COCC since 2014.

AMY E. HARPER**Associate Professor of Anthropology**

B.A. in Anthropology and Germanic Languages and Literature, 1992, University of Montana; M.A. in Anthropology, 1995, University of Massachusetts; Ph.D. in Anthropology, 2002, University of Massachusetts. At COCC since 2002.

CARSON E. HAURY**Professor of Computer and Information Systems**

B.A. in Biology, 1975, State University of New York; M.S. in Information Systems, 1988, Naval Postgraduate School. At COCC since 1998.

M. SCOTT HAYS**Associate Professor of Business Administration**

A.A. in Business Administration, 1982, Bakersfield Community College; B.S. in Business Administration/Accounting, 1984, California State University, Chico; M.B.A., 1995, California State University, Bakersfield; Ph.D. in Education, 2005, University of Idaho. At COCC since 2002.

KAREN HECKERT**Assistant Professor II of Health and Human Performance**

B.A. in French Literature and Political Science, 1972, Colorado University; M.S.W. in Human Services Management and Community Organization, 1982, University of Michigan; M.P.H. in Health Education and Health Behavior, 1983, University of Michigan; Ph.D. in Health Systems and International Health Promotion, 1993, Walden University. At COCC since 2014.

FRANZ HELFENSTEIN**Professor of Mathematics**

B.S. in Mathematics, 1979, Colorado State University; M.S. in Mathematics, 1982, Oregon State University; Ph.D. in Applied Mathematics, 1986, Oregon State University. At COCC since 1990.

SARA HENSON**Assistant Professor II of Human Development/Program Director**

B.A. in Asian & International Studies, 1993, University of Oregon; M.Ed. in Higher Education & Student Affairs Administration, 1998, University of Vermont. At COCC since 2011.

CAROL HIGGINBOTHAM**Professor of Chemistry**

B.A. in Chemistry, 1992, Central College; Ph.D. in Biochemistry, 1996, Montana State University. At COCC since 1999.

JULIE F. HOOD GONSALVES**Associate Professor of Human Biology**

B.S. in Human Nutrition, 1979, Oregon State University; Licensed Dietitian, 1990, Oregon State Board of Licensed Dietitians; Registered Dietitian, 1983, American Dietetic Association; M.S. in Nutrition, 1983, Oregon State University; Ed.D., 2009, Lewis and Clark College. At COCC since 1988.

WILLIAM HOPPE**Professor of Art**

B.A. in Art, 1967, St. John's University; M.F.A., Art/Painting, 1973, University of Washington. At COCC since 2000.

AMY VAN DUSEN HOWELL**Associate Professor of Education/Program Director, Early Childhood Education**

B.A. in Psychology, 1997, Willamette University; Ph.D. in Educational Psychological Studies, 2007, University of Colorado. At COCC since 2004.

MERIDETH HUMPHRIES**Assistant Professor I of Biology**

B.S. in Zoology, 1986, Oregon State University; M.S. in Entomology, 1994, University of California at Davis; Ph.D. in Biochemistry, 2001, University of Queensland. At COCC since 2014.

CHARLES R. HUTCHINGS**Associate Professor of Spanish**

B.A. in Spanish, 1986, California State University, Stanislaus; M.A. in Spanish, 1991, California State University, Fresno. At COCC since 1992.

BEVERLEE R. JACKSON**Associate Professor of Health Information Technology/Program Director**

A.S. in Medical Record Technology, 1980, Central Oregon Community College; B.A. in Interpersonal Communications, 1986, Marylhurst College. At COCC from 1990-94 and since 2002.

EDWARD W. JOHNSON**Professor of Human Biology**

B.S. in Biology, 1974, City College of New York; M.S. in Zoology, 1981, University of Vermont; Ph.D. in Anatomy and Neurobiology, 1988, Colorado State University. At COCC since 2002.

JULIE A. KEENER**Professor of Mathematics**

B.S. in Elementary Education, 1979, Oregon College of Education, now Western Oregon State College; M.S.T. in Mathematics, 1990, Portland State University. At COCC since 1990.

MARA KERR**Assistant Professor II of Nursing**

A.A.S. in Nursing, 1981, Columbia Basin College; B.S. in Nursing, 1996, University of Portland; M.S. in Nursing, 2003, University of Portland. At COCC since 2011.

JAMES W. KNOX**Associate Professor of Music**

B.S. in Music, 2000, Portland State University; M.M. in Choral Conducting, 2003, Portland State University. At COCC since 2003.

TERRY KRUEGER**Professor of English**

B.A. in English, 1976, University of Montana; M.F.A. in English, 1981, University of Iowa.; Ph.D. in English, 1987, University of Iowa. At COCC since 1990.

JASON LAMB**Assistant Professor I of Art History**

B.F.A. in Painting, 2006, University of Illinois, Urbana-Champaign; B.F.A. in Art History, 2006, University of Illinois, Urbana-Champaign; M.A. in Art History, 2010, Northern Illinois University. At COCC since 2013.

DAWN LANE**Assistant Professor II of Nursing/Program Director, CNA**

A.D. in Nursing, 1980, White Bear Lake Community College; B.S. in Nursing, 2005, Oregon Health Sciences University; M.S. in Nursing, 2009, Gonzaga University. At COCC since 2011.

JOHN LICCARDO**Assistant Professor II of Health and Human Performance**

B.S. in Exercise Physiology and Anthropology, 1995, University of Utah; M.S. in Exercise Physiology and Anthropology, 1998, University of Utah. At COCC since 2012.

LILLI ANN LINFORD-FOREMAN**Professor of Speech/Theatre**

A.B. in Drama, 1982, Stanford University; M.F.A. in Theatre, 1987, Pennsylvania State University. At COCC since 1987.

DAVID H. LIU**Associate Professor of Mathematics**

B.A. in Chinese Language and Literature, 1984, Beijing Normal University; M.A. in Teaching, 1991, Pacific University. At COCC since 2006.

ERIC MAGIDSON**Assistant Professor II of Computer Information Systems**

A.A.S. in Computer and Information Systems, 2002, Central Oregon Community College; B.S. in Information Technology, 2004, Oregon Institute of Technology. At COCC since 2008.

ROBIN MARTINEZ**Associate Professor of Spanish**

B.A. in Spanish, 1996, Colorado State University; M.A. in Spanish, 1998, Colorado State University. At COCC since 2004.

KENNETH W. MAYS**Professor of Automotive Technology/Program Director**

A.S. in Automotive Technology, 1977, Southwestern College. At COCC since 1990.

KATHLEEN M. McCABE**Associate Professor of Criminal Justice/Program Director**

B.A. in Criminal Justice, 1980, Michigan State University; M.A. in Guidance and Counseling, 1987, Oakland University. At COCC since 2004.

MICHAEL McCANN**Assistant Professor II of Geography**

B.A. in Foreign Language, 1980, Berry College; M.A. in Geography, 1990, Georgia State University. At COCC since 2007.

BRET L. MICHALSKI**Professor of Forest Resource Technology/Program Director**

B.S. in Wildlife Management, 1988, Humboldt State University; M.S. in Wildlife Science, 1994, Oregon State University. At COCC since 1994.

JAMES D. MOODIE**Professor of General Biology**

B.S. in Biology, 1980, Saint John's University; M.S. in Zoology, 1983, University of Idaho; Ph.D. in Zoology, 1999, University of Oklahoma, Norman. At COCC since 2001.

JANE MORROW**Associate Professor of Nursing**

B.A. in Nursing, 1983, Augustana College; M.N. and F.N.P., 2001, Washington State University. At COCC since 2003.

OWEN MURPHY**Assistant Professor II of Health & Human Performance**

B.S. in Exercise Physiology, 1997, California State University, Chico; M.S. in Health & Human Development, 2001, Montana State University, Bozeman. At COCC since 2011.

LYNN L. MURRAY**Associate Professor of Dental Assisting**

Registered Dental Assistant License, Radiation Certification, Certified Dental Assistant, Expanded Functions Dental Assistant. At COCC since 1997.

CHARLES T. NAFFZIGER**Professor of Mathematics**

B.S. in Mathematics Education, 1987, University of Oregon; M.S. in Mathematics, 1991, University of Arizona. At COCC since 1995.

DOUGLAS D. NELSON**Professor of Mathematics**

B.S. in Wood Science and Technology, 1983, Colorado State University; M.S. in Pure Mathematics, 1990, Northern Arizona University. At COCC since 1998.

MATTHEW NOVAK**Assistant Professor II of Psychology**

B.S. in Psychology, 1993, University of Washington; Ph.D. in Developmental Psychology, 2002, University of Washington. At COCC since 2011.

SANDOR D. (SEAN) PALAGYI**Professor of Computer Aided Drafting and Design**

B.S. in Political Science, 1988, Central Oregon Community College; Coursework in Drafting Technology and GIS., 1997, University of Oregon. At COCC since 1998.

BETH PALMER**Assistant Professor I of Veterinary Technology**

A.A.S. in Veterinary Technology, Portland Community College, 2004. At COCC since 2013.

PAUL PELLY**Assistant Professor I of Automotive Technology**

A.S. in Automotive Technology, Portland Community College, 1980. At COCC since 2008.

MARGARET A. PETERSON**Professor of Allied Health/Health and Human Performance**

B.A. in Anthropology, 1977, University of North Dakota; M.S. in Physical Education, 1979, University of North Dakota; Ed.D in Higher Education Administration, 1988, Montana State University. At COCC since 1988.

TIM PETERSON**Assistant Professor II of Outdoor Leadership/Health and Human Performance**

B.A. in History, 1993, Bucknell University; Outdoor Leadership Certificate, 1998, Greenfield Community College. At COCC since 2008.

RALPH R. PHILLIPS**Associate Professor of Computer and Information Systems**

B.A. in Finance, 1995, and M.A. in Business/Office Education, 1999, University of South Florida. At COCC since 2005.

REBECCA J. PLASSMANN**Professor of Mathematics**

A.B. in Mathematics, 1983, Bryn Mawr College; M.A. in Mathematics, 1988, Bryn Mawr College; M.A. in Education in Mathematics Science and Technology, 1992, University of California at Berkeley. At COCC since 1995.

FLEUR PRADE**Assistant Professor I of French**

B.A. in French Studies and Italian Studies, 2001, University of Delaware; M.A. in French, 2002, Middlebury College. At COCC since 2013.

DONNA RAYMOND**Assistant Professor II of Mathematics**

B.S. in Economics and Math, 1990, University of Hartford; M.S. in Statistics, 1991, University of Cambridge; M.A. in Statistics, 1996, University of New Mexico. At COCC since 2006.

TINA REDD**Associate Professor of English**

B.S. in Communications (Drama), 1990, University of Missouri; M.A. in English Literature and Composition, 1993, Southern Illinois University; Ph.D. in Theatre History and Criticism, 1996, University of Washington. At COCC since 2008.

ROBERT W. REYNOLDS**Professor of Geology**

B.S. in Geology, 1973, Penn State University; M.S. in Geology, 1991, University of Idaho; Ph.D. in Geology, 1994, University of Idaho. At COCC since 1994.

CHRISTIE RUBIO**Assistant Professor II of Composition**

B.A. in Journalism, 1984, California State University; M.A. in English, 1988, California State University. At COCC since 2009.

SEAN RULE**Associate Professor of Mathematics**

B.A. in Mathematics Education, 1996, University of Delaware; M.Ed. in Mathematics Education, 2001, University of Delaware. At COCC since 2004.

JESSICA RUSSELL**Assistant Professor II of Outdoor Leadership**

B.S. in Therapeutic Recreation, 1998, Middle Tennessee University; M.A. in Environmental Studies, 2010, Prescott College. At COCC since 2011.

TONY RUSSELL**Assistant Professor II of English**

A.A. in French, 2000, Ricks College; A.A. in English, 2000, Ricks College; B.A. in English, 2002, Northern Kentucky University; M.A. in English, 2005, Purdue University; Ph.D. in English, 2010, Purdue University. At COCC since 2010.

ALISA SCHNEIDER**Assistant Professor I of Nursing-Nurse Educator**

A.A. in Nursing, 1989, Portland Community College; M.A. in Nursing Administration, 2005, George Mason University. At COCC since 2014.

DENNIS SIMENSON**Temporary Instructor of Manufacturing Technology**

A.A.S. in Manufacturing Processes Technology, 1991, Central Oregon Community College. At COCC since 1996.

KIRI A. SIMNING**Professor of Nursing**

B.S. in Nursing, 1983, University of North Carolina, Chapel Hill; M.S. in Nursing, 1990, Loma Linda University. At COCC since 1998.

PAULA A. SIMONE**Temporary Instructor of Wildland Fire Science/Program Director**

A.A., 1998, Central Oregon Community College; B.S. in General Science, 2000, University of Oregon; M.A. in Safety, Security and Emergency Management, 2012, Eastern Kentucky University. At COCC since 1999.

KATHY SMITH**Professor of Mathematics**

B.A.S. in Mathematics and Philosophy, 1994, University of California, Davis; M.S. in Mathematics, 1997, Oregon State University; Ph.D. in Mathematics, 2000, Oregon State University. At COCC since 2001.

ERIC A. SPIETH**Assistant Professor II of General Business/Program Director, CEED**

B.A., in Art, 2004, California State University, Channel Islands; M.B.A. in General Business Management, 2005, Humboldt State University. At COCC since 2011.

ELEANOR SUMPTER-LATHAM**Professor of Developmental Writing and Composition**

B.A. in English, 1975, University of British Columbia; M.A. in English, 1978, University of British Columbia; M.A. in English, 1985, University of Victoria; Ph.D. in English, 1993, University of Washington. At COCC since 1994.

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B.S. in Health Information Management, 1996, East Central University;
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A.D.N. in Nursing, 1983, Contra Costa College; B.S.N. in Nursing, 1992,
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University. At COCC since 2006.

FORREST TOWNE**Assistant Professor I of Chemistry**

B.S. in Chemistry, 2002, George Fox University; Ph.D., in Chemistry,
2009, University of Montana. At COCC since 2012.

MARGARET TRIPLETT**Associate Professor of Reading**

B.S. in English, 1971, Iowa State University; M.A. in English, 1976, Iowa
State University; M.A. in Education (Reading), 1992, California State
University. At COCC since 1993.

MONICA VINES**Associate Professor of Human Development/Program Director,
Addictions Studies**

B.S. in Psychology, 1995, Washington State University; M.A. in
Counseling Psychology, 1997, John F. Kennedy University. At COCC since
2004.

RICKY VIRK**Professor of Health and Human Performance**

B.A. in Biology, 1989, University of Texas at Austin; M.S. in Nutrition
Science, 1992, Oregon State University; Ph.D. in Nutrition Science,
1994, Oregon State University. At COCC since 2001.

REBECCA L. WALKER-SANDS**Professor of Psychology**

B.S. in Psychology, 1977, Southern Oregon State College; M.A. in
Experimental Psychology, 1982, University of Nevada, Reno; Ph.D. in
Psychology, 1995, University of North Carolina at Greensboro. At COCC
since 1995.

SHANNON WALLER**Assistant Professor I of Pharmacy Technician Education**

Pharmacy Technician Diploma, 1999, Apollo College; A.A. in Liberal
Arts, 2006, Solano Community College; B.A. In Education, 2012,
Western Governors University. At COCC since 2012.

WENDI WAMPLER**Assistant Professor I of Engineering and Physics**

B.S. in Chemical Engineering, 2004, Purdue University; B.S. in Physics,
2006, Purdue University; Ph.D. in Physics with specialization in Physics
Education, 2013, Purdue University. At COCC since 2014.

SIOBHAN WATSON**Temporary Learning Resource Center Coordinator of Nursing**

B.A. In Geography, 1986, University of Liverpool; M.A. in Geography,
1988, Indiana University; B.S. in Nursing, 1993, State University of New
York at Stony Brook. At COCC since 2011.

JEFF WILHITE**Assistant Professor I of Manufacturing Technology**

A.A. in Engineering Technology, 1991, Northwest Nazarene University;
B.S. in Machine Tool Technology, 2003, Boise State University. At COCC
since 2014.

MALINDA M. WILLIAMS**Assistant Professor I of Writing**

B.A. in English and Biblical Studies, 1997, Hope International University;
M.A. in English, 2001, California State University, Chico; Ph.D. in
English, 2011, University of Denver. At COCC since 2013.

JONATHAN WOLF**Assistant Professor I of Economics**

B.A. in Sociology and Economics, 1985, Claremont Men's College; M.A.
in Economics, 1990, Claremont Graduate School. At COCC since 2014.

ANDRIA J. WOODELL**Associate Professor of Psychology**

B.A. in Psychology, 1999, University of Arkansas; M.A. in Experimental
Psychology, 2002, University of Arkansas; Ph.D. in Experimental
Psychology, 2004, University of Arkansas. At COCC since 2004.

WAYNE YEATMAN**Assistant Professor I, Culinary Arts, Chef Instructor**

A.S. in Culinary Arts, 1988, Newbury College; B.S. in Hotel Restaurant
Management, 1994, University of Massachusetts; M.B.A. in Business
Administration, 2001, Southwest Texas State University. At COCC since
2012.

ZELDA ZIEGLER**Associate Professor of Chemistry**

B.S. in Chemistry, 1981, Idaho State University; Ph.D. in Analytical
Chemistry, 1989, Purdue University. At COCC since 2002.

FACULTY ACHIEVEMENT AWARD RECIPIENTS

The Faculty Achievement Award recognizes excellence in teaching. It is awarded each year at the College's faculty convocation ceremony. Those who have been honored are:

1986 Bruce Nolf, Professor of Geology
1987 Jack R. McCown Jr., Professor of Mathematics
1988 C. Wayne Eshelman, Professor of Biological Sciences
1989 Millie MacKenzie, Professor of Office Administration
1990 Raymond R. Hatton, Professor of Geography
1991 Michael A. Sequeira, Associate Professor of Mathematics
1992 Ellen M. Howe, Associate Professor of Nursing
1993 Darla J. Quesnell, Professor of Psychology
1994 Bruce W. McClelland, Professor of Chemistry
1995 E. Robert Powell, Professor of Physical Science and Chemistry
1996 Diana Glenn, Associate Professor of Office Administration
1997 Cora Agatucci, Associate Professor of English
1998 Mark E. Eberle, Associate Professor of Biological Sciences
1999 Patricia O'Neill, Associate Professor of History
2000 Bruce L. Emerson, Associate Professor of Physics
2001 Terry Krueger, Professor of English
2002 Gloria Ahern, Professor of Health Information Technology
2003 Julie A. Keener, Professor of Mathematics
2004 Rebecca L. Walker-Sands, Associate Professor of Psychology
2005 Charles T. Naffziger, Associate Professor of Mathematics
2006 Michael C. Gesme, Associate Professor of Music
2007 Robert W. Reynolds, Professor of Geology
2008 Stacey L. Donohue, Professor of English
2009 Karen Huck, Professor of Speech
2010 Julie F. Downing, Professor of Health and Human Performance
2011 Julie F. Hood, Associate Professor of Human Biology
2012 Kathleen M. McCabe, Associate Professor of Criminal Justice
2013 Deborah S. Davies, Professor of Dental Assisting
2014 Carol Higginbotham, Professor of Chemistry

RETURNING ADJUNCT FACULTY

TRAVIS ALLEN
 Adjunct Instructor of Fine Arts/Music
MIKE ARTUS
 Adjunct Instructor of Fine Arts
MICHELLE BUTCHER
 Adjunct Instructor of Mathematics
PATRICIA CAGNEY
 Adjunct Instructor of Nursing
AMBER CLARK
 Adjunct Instructor of License Massage Therapy
JACQUE COE
 Adjunct Instructor of Mathematics
ANGIE COLE
 Adjunct Instructor of Social Science/Early Childhood Education
RODNEY CROSS
 Adjunct Instructor of Allied Health, Science
SUSAN DIXON
 Adjunct Instructor of Business
STEVE EDWARDS
 Adjunct Instructor of Science
KAREN ELLIS
 Adjunct Instructor of Fine Arts
TARA ENDRIES
 Adjunct Instructor of Health and Human Performance/Health
CAROLYN ESKY
 Adjunct Instructor of Human Development/Study Strategies
LANCELOT FALCON
 Adjunct Instructor of Human Development
KATHERINE FRAZER
 Adjunct Instructor of Writing
SARAH GALLUP
 Adjunct Instructor of Writing
JANET GESME
 Adjunct Instructor of World Languages and Cultures
BRYAN GRISET
 Adjunct Instructor of Computer Information Systems
PATRICIA HAMMER
 Adjunct Instructor of Mathematics
JIM HAWES
 Adjunct Instructor of Writing
DEBBIE HAYNES
 Adjunct Instructor of Health and Human Performance
BECKY HEINRICK
 Adjunct Instructor of Health and Human Performance
KATHERINE HILST
 Adjunct Instructor of Aviation
CATHERINE HORINEK
 Adjunct Instructor of Nursing
BRENDA HOWE
 Adjunct Instructor of Nursing
JULIA HUNI
 Adjunct Instructor of Computer Information Systems
GARY KELLY
 Adjunct Instructor of Computer Information Systems

SOLANA KLINE
 Adjunct Instructor of World Languages and Cultures/
 Anthropology
PETER MEYER
 Adjunct Instructor of Art
MEGAN MICHELL
 Adjunct Instructor of Nursing
SUSAN MILLER
 Adjunct Instructor of Nursing
DANIEL MONTOYA
 Adjunct Instructor of Health and Human Performance
MICHELE MORRIS
 Adjunct Instructor of Culinary
MAREN NELSON
 Adjunct Instructor of Nursing
ALAN NUNES
 Adjunct Instructor of Allied Health/LMT
JANEEN PARKER
 Adjunct Instructor of Humanities/Writing
MAEVE PERLE
 Adjunct Instructor of Business
SCOTT PILSNER
 Adjunct Instructor of Humanities/Writing
JILL PLATTNER
 Adjunct Instructor of Mathematics
LEANN ROWLEY
 Adjunct Instructor of Writing
JULIE SCHMIDT
 Adjunct Instructor of Mathematics
DAN SHEAHAN
 Adjunct Instructor of Psychology
KELLYN SMYTHE
 Adjunct Instructor of Mathematics
JIM STEDMAN
 Adjunct Instructor of Writing
TERRY STEELE
 Adjunct Instructor of Automotive
ROXIE SUPPLEE
 Adjunct Instructor of Social Science/Criminal Justice
GREGG TERHAAR
 Adjunct Instructor of Health and Human Performance
JANE THIELSEN
 Adjunct Instructor of Humanities/Writing
MICHAEL THILLE
 Adjunct Instructor of Biology and LMT
DAVID TRASK
 Adjunct Instructor of Culinary
HEATHER VANDIEST KOLB
 Adjunct Instructor of Criminal Justice
AMY WHEARY
 Adjunct Instructor of Nursing
THERESA WILSON
 Adjunct Instructor of Science/Chemistry
JANE YOUNGS
 Adjunct Instructor of Nursing

TEACHING AWARD FOR PART-TIME AND ADJUNCT FACULTY

Central Oregon Community College recognizes excellence in teaching. The teaching award for part-time and adjunct faculty is presented each year to an outstanding member of the College's part-time and adjunct faculty. Those who have been honored are:

2010 Carolyn Esky, Adjunct Instructor of Human Development
 2011 Peter Meyer, Adjunct Instructor of Art
 2012 Patricia Hammer, Adjunct Instructor of Mathematics
 2013 Carl Cavallo, Adjunct Instructor of Automotive
 2014 Jim Stedman, Adjunct Instructor of Writing

ADULT BASIC SKILLS INSTRUCTORS

S. BLAIR BRAWLEY

A.A. in Language Arts, 1973, Mitchell College; B.A. in English, 1975, University of North Carolina, Charlotte; M.Ed. in Adult Education, 2003, Oregon State University. At COCC since 2003.

KAREN LEEP

B.A. in Secondary Education, 1975, Western Oregon State College. At COCC since 1995.

MELISSA POTTER

B.S. in Liberal Studies, 1993, Eastern Oregon University; M.Ed. in Adult Education, 1996, Oregon State University. At COCC 1986-1987 and since 1991.

ANGELINA PTOMEY

B.S. in Human Development and Family Science, 2011, Oregon State University. At COCC since 2012.

AMY STINARD

B.S. in Business/Marketing, 1996, Ball State University. At COCC since 1997.

CYNTHIA VILES

B.A. in History, 1994, University of Oregon. At COCC since 2007.

FACULTY EMERITUS

GLORIA AHERN, R.R.A.

Professor of Health Information Technology

B.A. in Medical Record Administration, 1969, Carroll College; Certificate in Medical Record Science, 1969, Providence Hospital, Seattle; AHIMA registration, 1969. At COCC from 1980 to 2002.

ROBERT BROOKOVER

Professor of Business Equipment Service Technology

B.A. in Industrial Arts, 1970, San Francisco State University; M.Ed. in Vocational Education, 1979, Oregon State University. At COCC from 1972 to 1997.

BILL BUCK

Professor of English

B.A. in English, 1984, California State University at Fullerton; M.A. in English, 1985, California State University at Fullerton; Ph.D. in English Literature, 1990, University of California, Riverside. At COCC from 1989 to 2004.

THOMAS M. CARROLL

Professor of Economics

B.S. in Economics, 1970, University of Idaho; M.S. in Agricultural and Resources Economics, 1980, Oregon State University. At COCC from 1980 to 2014.

BOB COOPER

Professor of Forestry

B.S. in Forest Management, 1966, Oregon State University; M.F.R. in Forestry, 1971, University of Washington. At COCC from 1986 to 1998.

FORREST M. DANIEL

Professor of Music

B.A. in Music, 1960, Adams State College; M.A. in Music, 1961, Adams State College. At COCC from 1978 to 1995.

DANIEL EARLY

Professor of Anthropology and Sociology

A.A., 1964, San Francisco City College; B.A. in Anthropology and Sociology, 1966, University of California, Berkeley; M.A. in Anthropology and Sociology, 1970, Catholic University; Ph.D. in Anthropology, 1978, Catholic University. At COCC from 1978 to 2002.

J. ALLEN EHL

Associate Professor of Automotive Technology

B.Ed in Trade and Industrial Education, 1962, Colorado State University; M.Ed in Administration and Supervision of Vocational Education, 1966, Colorado State University; General Motors S.E.T. Certification. At COCC from 1969 to 1990.

C. WAYNE ESHELMAN

Professor of Biological Sciences

B.S. in Biology, 1956, College of Idaho; M.A. in Zoology, 1962, University of South Dakota. At COCC from 1965 to 1994.

DONALD L. GALLAGHER

Professor of Mathematics

B.S. in Secondary Education, 1961, Northern Montana; M.A.T. in Mathematics, 1965, University of Montana. At COCC from 1969 to 1994.

ROGER D. GILDERSLEEVE

Professor of Physical Education

B.S. in Biology, 1957, Albion College; M.A. in Education and Psychology, 1959, Western State College, Colorado. At COCC from 1969 to 1991.

RAYMOND R. HATTON

Professor of Geography

B.S. in Education, 1961, University of Idaho; M.Ed. in Secondary Education, 1966, University of Idaho; M.A. in Geography, 1969, University of Oregon; Ph.D in Geography, 1989, University of Oregon. At COCC from 1969 to 1993.

CHARLES R. HEIDEN

Professor of Music

B.M., Northwestern University, 1952; M.F.A., 1956, Ohio University; D.M., Northwestern University. At COCC from 1981 to 1994.

DUANE HOUGHT

Associate Professor of Business and Accounting

B.S. in Business Administration, 1968, University of Nevada; M.S. in Business Education, 1985, Oregon State University. At COCC from 1979 to 2002.

ELLEN M. HOWE

Associate Professor of Nursing

B.S. in Nursing, 1965, Mount Marty College for Women; M.S. in Nursing, 1985, University of Portland. At COCC from 1981 to 2002.

MARJORIE HOYE

Professor of Composition and Technical Writing

B.S. in English Education, 1976, West Chester State University; M.A. in Teaching English as a Second Language, 1982, San Francisco State University; Ph.D. in Applied Linguistics, 1988, University of Texas at Austin. At COCC from 1991 to 2013.

KAREN HUCK

Professor of Speech

B.A. in Journalism, 1976, Idaho State University; M.A. in Speech/Theatre, 1984, Idaho State University; Ph.D. in Communication, 1993, University of Utah. At COCC from 1988 to 2014.

RODNEY A. KOHLER

Professor of Mathematics

B.S. in Math, Science Education, 1962, Eastern Oregon College; M.S. in Mathematics, 1966, University of Oregon. At COCC from 1966 to 1998.

SARA L. KREMPEL**Professor of Art**

B.A. in Art and Philosophy, 1974, University of Wisconsin; B.F.A. in Art, 1980, University of Wisconsin; M.F.A. in Art, 1985, University of Wisconsin. At COCC from 1990 to 2011.

JAMES L. KRESS**Professor of Business**

B.B.A. in Business, 1976, University of Oregon; M.B.A. in Business Administration, 1993, Portland State University. At COCC from 1988 to 2014.

LOWELL H. LAMBERTON**Professor of Business**

B.A. in English, 1966, Walla Walla College; M.A. in English, 1968, University of Nebraska; M.B.A. in Business Management, 1977; Advanced Professional Certificate in Management, 1987, Suffolk University. At COCC from 1981 to 2011.

GREGORY T. LYONS**Professor of English**

B.A. in English, 1972, Rice University; M.A. in English and American Literature, 1976, University of Washington; Ph.D. in Rhetoric and Composition, 1988, The University of Texas at Austin. At COCC from 1991 to 2011.

MILLIE MACKENZIE**Professor of Business**

B.S. in Finance and Business Environment, 1965, University of Oregon; M.S., Personnel and Industrial Management, 1968, University of Oregon; Certified Professional Secretary, 1982. At COCC from 1978 to 1999.

BRUCE W. MCCLELLAND**Professor of Chemistry**

B.S. in Chemistry, 1966, University of California, Berkeley; Ph.D. in Chemistry, 1971, Oregon State University. At COCC from 1974 to 2003.

JACK R. McCOWN, JR.**Professor of Mathematics**

B.S. in Math Education, 1970, Eastern Oregon College; M.S. in Mathematics, 1972, Idaho State University. At COCC from 1976 to 2004.

RICHARD NIEDERHOF**Professor of Forestry**

B.S. in Forest Management, 1967, Clemson University; M.S. in Forestry and Industrial Management, 1969, Clemson University. At COCC from 1972 to 1999.

BRUCE NOLF**Professor of Geology**

B.A. in Geology, 1954, University of Iowa; M.S. in Geology, 1955, California Institute of Technology; Ph.D. in Geology, 1966, Princeton University. At COCC from 1966 to 1993.

LORETTA NOLL**Professor of Nursing**

B.S.N., Nursing, 1972, Southern Illinois University; M.S.N., Nursing, 1976, Texas Women's University. At COCC from 1978 to 1999.

STEVE O'BRIEN**Professor/Counselor**

B.A. in Philosophy and Government, 1970, Boston University; M.S. in Counseling/ Recreation/Community Education, 1975, University of Oregon. At COCC from 1977 to 2003.

PATRICIA O'NEILL**Professor of History**

B.A. in European History, 1972, University of Pennsylvania; M.A. in Asian History, 1975, State University of New York at Buffalo; Ph.D. in History, 1995, University of Washington. At COCC from 1985 to 2013.

CHRISTINE OTT-HOPKINS**Professor of Plant Biology**

B.S. in Biology, 1966, Whitworth College; M.A. in Botany, 1968, Southern Illinois University; Ph.D. in Botany, 1974, Miami University. At COCC from 1993 to 2013.

MARGARET A. PETERSON**Professor of Allied Health/Health and Human Performance**

B.A. in Anthropology, 1977, University of North Dakota; M.S. in Physical Education, 1979, University of North Dakota; Ed.D in Higher Education Administration, 1988, Montana State University. At COCC from 1988 to 2014.

E. ROBERT POWELL**Professor of Physical Science and Chemistry**

A.A., 1959, Central Oregon Community College; B.S. in General Science, 1961, Oregon State University; M.S. in Natural Science, 1965, New Mexico, Highlands. At COCC from 1967 to 1999.

DARLA J. QUESNELL**Professor of Psychology**

B.A. in Psychology, 1965, University of California, Berkeley; Ph.D. in Psychology, 1978, University of California, Berkeley. At COCC from 1975 to 1995.

MICHAEL A. SEQUEIRA**Professor of Mathematics**

B.S. in Mathematics, 1968, Stanford University; M.S. in Mathematics, 1969, Northwestern University. At COCC from 1982 to 2004.

VIRGINIA M. SHRAUGER**Professor of Reading and Study Skills**

B.S. in Education, 1954, University of Nebraska; M.Ed in Reading, 1969, University of Arizona. At COCC from 1970 to 1988.

DOUGLAS CAMPBELL SMITH**Professor of Art**

B.A. in Art, 1962, California State University, San Jose; M.A. in Art, 1967, California State University, San Jose. At COCC from 1973 to 1995.

WILLIAM P. SMITH**Professor of Machine Shop**

A.A., 1987, Fullerton College; A.S., Industrial Technology, 1989, COCC; CMfgE. At COCC from 1984 to 2003.

GENE TAYLOR**Professor of Computer and Information Systems**

B.S. in Business Administration, 1979, Portland State University; M.S.T. in Education, 1986, Portland State University. At COCC from 1984 to 2003.

TOM TEMPLE**Associate Professor of Art**

B.S. in Art Education, 1962, University of Oregon; M.S. in Art Education, 1963, University of Oregon. At COCC from 1971 to 1990.

R. LYNELLE THOMAS**Associate Professor of Health and Physical Education**

B.S., 1950, Abilene Christian College; M.S. in Health, P.E. and Recreation, 1954, North Texas University. At COCC from 1970 to 1994.

H. WARD TONSFELDT**Professor of English**

B.A. in English, 1964, Portland State College; M.A. in English and Comparative Literature, 1966, Occidental College; Ph.D. in Comparative Literature, 1975, University of California, San Diego. At COCC from 1975 to 2001.

BERN WISNER**Professor of Business**

B.A. in Economics, 1956, Duke University; M.B.A., 1975, California State University, Dominguez Hills. At COCC from 1982 to 2002.

JEROME J. YAHNA**Professor of Music**

Ph.B. in Music, 1959, University of North Dakota; M.A. in Music, 1964, University of Northern Colorado. At COCC from 1970 to 1993.

NANCY L. ZENS**Professor of History**

B.A. in American History, 1983, Washington State University; M.A. in American History, 1984, Washington State University; Ph.D. in History, 1988, Washington State University. At COCC from 1989 to 2011.

ADMINISTRATION

SHARLA ANDRESEN

Director of Contracts and Risk Management

B.S. in Business, 1988, Lewis and Clark College; M.B.A., 2004, Marylhurst University. At COCC since 1991.

JOHN ARMOUR

Curriculum and Workforce Data Coordinator

B.A. in Political Science, 1988, Washington State University; M.A. in Human Relations, 1998, University of Oklahoma; Masters in Military Operational Art and Sciences, 2003, Air University. At COCC since 2012.

KAREN AYLWARD

Nancy R. Chandler Visiting Scholar Program Coordinator

A.B., 1987, Stanford University; M.A.L.D., 1989, Fletcher School of Law and Diplomacy. At COCC since 2005.

SEANA BARRY

Assistant Director of Admissions and Records

B.A. in Communication Studies, 1990, University of Kansas. At COCC since 2008.

TUCKER BAUMAN

Welding Program Coordinator, DRCI

At COCC since 2008.

SHARON BELLUSCI

Student Services Technology Coordinator

B.S. in Computer Science/Mathematics, 1987, University of Puget Sound. At COCC since 2010.

MIKE BEAULIEU

Campus Services Operations Supervisor

B.S. in Outdoor Recreational Management, 1979, Utah State University. At COCC since 2013.

JAMES BENNETT

Security Coordinator

A.A. in Business Administration, 1991, College of San Mateo. At COCC since 2010.

MEGAN BERNARD

Residence Director

A.A./Oregon Transfer Degree in General Science, 2012, Central Oregon Community College. At COCC since 2013.

PAMELA BEYER

Financial Aid Technical Specialist

B.S. in Forest Biology, 1979, Colorado State University. At COCC from 1998 to 2001 and since 2005.

LISA BLOYER

Accounting Director

B.S. in Business, 1983, Portland State University; M.P.A. 2003, Portland State University. At COCC since 1996.

MICHAEL BOWLING

Institutional Systems Analyst

B.S. in Computer Information Systems, 1992, Athens State College. At COCC since 2007.

LAURA BOEHME

Assistant ITS Director/Infrastructure Manager

B.A. in Spanish Translation, 1990, Brigham Young University; B.A., in International Relations, 1990, Brigham Young University; Ed.M in Adult Education, 2004, Oregon State University. At COCC since 2010.

AARON BOONE

ITS Systems Administrator

A.S. in Information Systems, 2001, Central Oregon Community College. At COCC since 2013.

RICHARD BRECKE

Construction Project Manager

B.S. in Construction Engineering Management, 2003, Oregon State University. At COCC since 2010.

TANYA BRUCE

Grant Coordinator

B.A. in Political Science, 1995, Lewis and Clark College; M.A. in Liberal Studies, 2000, Hollins University. At COCC since 2012.

DIANNE CAPOZZOLA

Assistant Director of Human Resources; Title IX/EEO Officer

B.A. In Sociology and English, 1987, University of Oregon; M.A. in Human Resources and Industrial Relations, 1996, University of Oregon. At COCC since 2012.

DANIEL CECCHINI

Director of Information Technology

B.A. in Computer Science, B.S. in Biology, 1978; M.B.S. in Science, 1995, University of Colorado; M.B.A. in Business Administration, 2001, Regis University. At COCC since 2006.

WILLAN CERVANTES

Latino College Preparation Program Coordinator

B.S. in General Science, 1996, Oregon State University; M.A. in Philosophy/Anthropology, 2006, Oregon State University. At COCC since 2012.

JOHN CHAVEZ

Academic Advisor

A.A., 2007, Chemeketa Community College; B.A. in Sociology, 2009, Willamette University. At COCC since 2011.

CARRIE COIL

Accountant, COCC Foundation

B.S. in Accounting, 1980, Oregon State University. At COCC since 2007.

STEVEN CURLEY

Director of Small Business Development Center

A.S. of Computer Science, 1985, Broome Community College; B.S. in Business Management, 2003, Linfield College. At COCC since 2014.

JULIAN DARWIN

Program Director of Culinary

Hotel and Restaurant Cookery, Theory and Practice, 1968-71, City and Guilds of London Institute. At COCC since 2009.

WADE DEBRAAL

Assistant Network Administrator

GNU/Linux OS, Cisco Systems IOS, HTML/PHP/Perl/C Language. At COCC since 2006.

MICHELE DESILVA

Emerging Technologies Librarian

B.A. in Liberal Studies, Humanities, 2007, Oregon State University; M.L.I.S., 2009, University of Washington. At COCC since 2006.

DAVID DONA

Associate Chief Financial Officer

B.S. in Business, 1980, Southern Oregon University; M.B.A., 1981, Southern Oregon University; C.P.A., State of Oregon, 1989. At COCC since 2007.

SCOTT DONNELL

Web Designer

B.A. in Business/Marketing, 1988, Oregon State University. At COCC since 2008.

WILLIAM DOUGLASS

Director of Club Sports and Intramural Coordinator

A.A. in Liberal Arts, 1979, Central Oregon Community College; B.S. in History, 1989, University of Oregon. At COCC 1975-87 and since 1995.

TRACY DULA

Career Services Coordinator

A.A. in Liberal Arts, 1988, Ocean County College; B.A. in Special Education, 1990, Georgian Court College. At COCC since 2009.

WESLEY DYMOND**Information Security Administrator**

A.S. in Electronic Engineering, 1993, ITT Technical Institute; B.S. in Automated Manufacturing, 1994, ITT Technical Institute. At COCC since 2013.

CHRISTOPHER EGERTSON**Research Analyst**

B.S. in Biology and Environmental Science, 1996, Mankato State University; M.S. in Animal Ecology, 2003, Iowa State University. At COCC since 2006.

SETH ELLIOTT**Campus Public Safety Supervisor**

B.S. in Psychology, 2004, Eastern Oregon University; M.B.A. in Management, 2012, Corban University. At COCC since 2012.

SHAWNA ELSBERRY**Director of Student Retention**

B.S. in Psychology, 1992, Eastern Oregon University. At COCC since 2004.

JEFFREY FLOYD**Senior Network Administrator**

Attended Central Washington University. At COCC since 2010.

COURTNEY FORD**Director of Admissions and Registrar**

B.A. in Psychology, 2003, Humboldt State University; M.S. in Educational Counseling, 2007, National University. At COCC since 2012.

KALEA FRIANT**Career Coach**

B.A. in Social Science, 2003, California State University; M.A. in Social Science, 2008, California State University. At COCC since 2013.

EUGENE FRITZ**Culinary/Elevation, Program Director**

A.O.S. in Culinary Arts, 1994, Culinary Institute of America; B.A. in Hospitality Business Management, 1997, Washington State University; M.A. in Higher Education Administration, 1998, Washington State University. At COCC since 2011.

JASON FROST**Assistant Director of Admissions and Records, Curriculum & Technology**

B.A. in Organizational Management, 2012, Alaska Pacific University. At COCC since 2011.

CAREN GRAHAM**Continuing Education Marketing and Operations Manager**

B.S. in Society, Health and Aging, 2007, The City University of New York; M.A. in Public Administration, 2012, The City University of New York. At COCC since 2013.

DEBORAH GREGOIRE**CAP Center Academic Advisor, Pre-Nursing**

B.A. in Political Science, 1995, Lewis & Clark College. At COCC since 2013.

CHRISTA GUNNELL**Human Resources Employment Supervisor**

B.S. in Business Management, 2011, Marylhurst University. At COCC since 2011.

DEBORAH HAGAN**Director of Secondary Programs**

B.A. in Journalism, 1981, University of Oregon; B.A. in English, 1983, Eastern Oregon University; Ed.M. in Adult Education and Distance Learning, 2004, University of Phoenix. At COCC since 1989.

DAVID HAGENBACH**Interpreter**

Interpreter Certification, American Sign Language, State of Hawaii. Attended Ohlone Jr. College, Genesis Bible College and Santa Rosa Junior College. At COCC since 2004.

RICK HAYES**Construction Project Manager**

B.S. in Construction Engineering Management, 1990, Oregon State University. At COCC since 2010.

TYLER HAYES**Financial Aid Advisor**

A.A., North Idaho College, 2004; B.S. in Mathematics, San Diego Christian College, 2006; M.S. in Academic Advising, Kansas State University, 2011. At COCC since 2010.

SHELLEY HUCKINS**Payroll Supervisor**

A.A. of Applied Science in Accounting Technology, 1986, Oregon Institute of Technology; B.S. in Management, Accounting Option, 2005, Oregon Institute of Technology. At COCC since 2004

TINA HOVEKAMP**Director of Library Services**

B.A. in English, 1985, Aristotelian University, Greece; M.L.S. in Library Science, 1986, Kent State University; Ph.D. in Library Science, 1993, University of North Carolina-Chapel Hill. At COCC since 1997.

CYNTHIA JEFFREYS**Systems Integrator**

A.A.S. in Business Administration Management Information Systems, 1992, Central Oregon Community College. At COCC since 1999.

ANNIE JENKINS**Disability Services Coordinator**

B.A. in Education, 1999, Eastern Washington University; M.S. in Physical Education, 2000, Eastern Washington University. At COCC since 2000.

DREW JONES**Assistant Director of Admissions and Records, Recruitment and Outreach**

B.A. in Industrial Organization Psychology, 2008, Point Loma Nazarene University; Masters of Education, 2010, Point Loma Nazarene University. At COCC since 2011.

BONNIE JORDAN**Academic Advisor**

B.A. in Communication, 1991, Southern Oregon University. At COCC since 2011.

NANCY E. JUMPER**Program Manager, Continuing Education**

B.S. in Communications, 1982, Southern Oregon State College. At COCC since 1997.

DIANA KALANQUIN**Academic Advisor, Allied Health**

A.A., Central Oregon Community College, 2005; B.S. in Psychology, University of Oregon, 2008. At COCC since 2009.

RACHEL KNOX**Program Manager, Community Learning**

B.A. in English/British Literature, Oakland University, 1989. At COCC since 2003.

SUZANNE KRISTENSEN**Campus Administrator, Prineville**

B.A. in Psychology, 1993, Pacific University. At COCC since 2011.

GLENDA L. LANTIS**Program Manager, Continuing Education**

B.S. in Home Economics Education, 1987, Oregon State University; M.S. in Family Studies, 1990, Oregon State University. At COCC since 2003.

STEPHANIE MANRIQUEZ**Licensed Massage Therapy Program Director**

A.A.A. in Massage Therapy; B.S. in Liberal Studies, 2012, Eastern Oregon University. At COCC since 2004.

JESSIE MATSUMURA**Applications Analyst/Programmer**

A.A. in General Education, 1978, Monterey Peninsula College; B.S. in Business Administration, 1981, California Polytechnic State University. At COCC since 2005.

DARREN McCREA**IT Bond Technology Project Manager**

B.A. in English, 2005, California State University. At COCC since 2011.

AIMEE METCALF**Assistant Director of College Relations**

B.A. in Political Science, 1993, Pacific University. At COCC since 1999.

CHRISTINA MILLS**Student Module Manager/Analyst**

A.A.S. in Computer and Information Systems, 2002, Central Oregon Community College. At COCC since 2004.

JULIE MOSIER**Purchasing Coordinator**

A.A. in Liberal Arts/Liberal Studies, 2006, Central Oregon Community College; B.S. in Social Science, 2014, Portland State University. At COCC since 1998.

KEVIN MULTOP**Director of Student Financial Aid**

B.S. in Humanities, 1993, Western Baptist College; M.C.S. in Theology, 2001, Regent College, Vancouver, BC. At COCC since 2001.

JANET NARUM**Director of Corrections Education at Deer Ridge Correctional Institution**

B.A. in English, 1979, Washington State University. At COCC since 2013.

SUSAN NEUBAUER**Distance Learning Coordinator, Adult Basic Skills**

B.S. in Biology-Agriculture, 1981, Colorado State University. At COCC since 2011.

BRITTANY NICHOLS**Development Officer**

B.S. in Business Administration, 2008, University of Oregon. At COCC since 2012.

PAUL NISWONGER**Linux Systems/Oracle Database Administrator**

A.A.S. in Computer Information Systems, 1993, Umpqua Community College. At COCC since 2010.

LEON PANTENBURG**Student Newspaper Advisor**

B.A. in Journalism and Communications, 1976, Iowa State University. At COCC since 2011.

RONALD S. PARADIS**Director of College Relations**

B.S. in Journalism, 1977, University of Oregon; M.B.A., 1990, Plymouth State College. At COCC since 1991.

LESLIE PARISI**Writing Center Coordinator**

B.A. in English, 2002, California State University; M.A. in English, 2007, California State University. At COCC since 2011.

FRANK PAYNE**Assistant Director of the Bookstore**

Certificate of Industrial Video Production, 1988, Portland Community College. At COCC since 2013.

JEFFREY PEDERSON**Systems Administrator**

Attended the University of Washington and Embry-Riddle Aeronautical University. Microsoft Certified Professional, Systems Administrator for Windows 2000 and Messaging-Windows 2000. At COCC since 2001.

BRYNN E. PIERCE**Director of Institutional Effectiveness**

B.S. in Biology, 1995, Oregon State University; M.P.H., 1999, The George Washington University School of Public Health and Health Services. At COCC since 2001.

GORDON PRICE**Director of Student Life**

A.A. in General Studies, 1998, Truckee Meadows Community College; B.A. in Interdisciplinary Studies, 2004, Western Oregon University. At COCC since 2004.

JEFFREY L. RICHARDS**Engineering Systems Coordinator**

A.A. in Theology, 1989, Ambassador College. At COCC since 2000.

REGINA RICKETTS**Native American Program Coordinator**

B.A. in English, 1981, University of Oregon; M.A. in Humanities/Secondary Education, 1991, University of Oregon. At COCC since 2011.

BARRY ROGERS**Senior Web Developer**

AIX System Administrator Certified and IBM TCP/IP Networking Certified. At COCC since 2012.

KRISTINE ROSHAU**Instructional Technical Systems Specialist/Trainer**

B.A. in English, 2009, Concordia University; M.A. in Library and Information Science, 2012. At COCC since 2013.

KAREN ROTH**Director of Multicultural Activities**

B.S. in Math, 1978, University of Wisconsin; M.A. in Guidance and Counseling, 1982, University of Wisconsin. At COCC since 2008.

NANNETTE ROY**Senior Business Systems Programmer**

Computer Science courses, 1978, West Valley Junior College. At COCC since 2011.

EVELIA SANDOVAL**Latino Student Program Coordinator**

B.S. in Biology, Washington State University, 2007; M.Ed. in Higher Education Administration, 2009, University of Kansas. At COCC since 2010.

GERALD A. SCHULZ**Director of Continuing Education**

A.A. in Liberal Arts, 1975, El Camino Community College; B.S. in Chemistry, 1978, University of California. At COCC since 2010.

EDWARD SEA**Assistant Director/MIS Manager**

B.S. in Industrial Technology, 1985, Bemidji State University; B.S. in Computer Science, 2000, Oregon State University. At COCC since 2010.

JENNIFER SHEW**HRIS/Business Module Manager**

B.A. in Business Management, 1996, Western Washington University. At COCC since 2014.

KELLIE L. SMITH**Tutoring and Testing Center Director**

B.S. in Political Science, 1984, Oregon State University; M.A. in History, 1989, Northern Arizona University. At COCC since 1997.

TARAN SMITH**Student Activities Coordinator**

B.S. in General Agriculture, 2005, Oregon State University. At COCC since 2006.

COURTNEY SNEAD**Campus Administrator, Madras**

B.S. in Political Science, 2003, Arizona University; Certificate of Public Management, 2006, Northern Arizona University; Masters of Public Administration, 2006, Northern Arizona University. At COCC since 2011.

SALLY SORENSON**Director of Human Resources**

B.A. in Management and Human Relations, 1997, Trevecca Nazarene University. At COCC since 2013.

NICK SPHATT**Director of Emergency Medical Services and Structural Fire**

Technical Diploma, EMT-P, 1999, Wisconsin Technical College; B.S. in Public Administration/Fire Management, 2003, Mount Senario College. At COCC since 2011.

PAUL STENNETT**Program Manager, Community Learning**

B.A. in Psychology, 1980, Campbell University; M.Div, 1984, Southeastern Seminary. At COCC since 2006.

RYAN STOCK**Facilities Maintenance Manager**

At COCC since 2014.

BREANA SYLWESTER**Assistant Director of Financial Aid**

A.A. in General Studies, 1999, Central Oregon Community College; B.S. in Psychology, 2005, University of Oregon; Master's in Business Administration, 2011, Concordia University. At COCC from 2000 to 2003 and since 2008.

SILAS TOWNE**Supervisor of Science Lab Technicians and Tutors**

B.S. in Chemistry, 2003, George Fox University; M.S. in Chemistry, 2005, University of Oregon; M.E. in Secondary Education, 2011, Grand Canyon University. At COCC since 2012.

VICKERY VILES**Director of CAP Center**

B.A. in Art History, 1985, Mt. Holyoke College; Ed.M. in Adult Education, 2002, Oregon State University. At COCC since 1989.

JOSEPH VIOLA**Director of Campus Services**

B.S. in Business, 1980, University of Connecticut. At COCC since 2008.

JAMES F. WEAVER**Executive Director, COCC Foundation**

B.A. in Speech Communication, 1977, San Diego State University. At COCC since 2002.

PAUL WHEELER**Housing Coordinator**

B.S. in Mathematics, 2000, University of Idaho; M.Ed. in Counselor Education: Human Relations, 2006, Plymouth State University. At COCC since 2007.

JAMES W. WILCOX**Business Development Center, Counselor**

A.A. 1976, West Shore Community College; B.S. in Business Administration, 1991, Portland State University; M.B.A. 1993, Portland State University. At COCC since 1998.

LORI A. WILLIS**Director of Bookstore and Auxilliary Services**

B.A. in Business Administration, 1992, Briar Cliff College; M.B.A., 2004, Marylhurst University. At COCC since 1997.

BETH WRIGHT**Placement Test Coordinator**

A.A.O.T., 2011, Central Oregon Community College. At COCC since 2008.

ADMINISTRATOR EMERITUS**DAVID D. BILYEU****College Librarian**

B.A. in Philosophy, 1976, University of California at Santa Cruz; M.L.S. in Library Science, 1985, Syracuse University. At COCC from 1993 to 2013.

ERIC BUCKLES**Director of Human Resources**

A.A., 1975, Danville Area Community College; B.S. Liberal Arts and Sciences, Psychology, 1977, University of Illinois. At COCC from 1998 to 2013.

HELEN PRUITT**Registrar**

A.A. in Liberal Studies, 1950, Mt. San Antonio College; B.A. in Liberal Studies, 1993, Oregon State University. At COCC from 1982 to 2003.

SARA PAULSON**Director of Information Technology**

B.S. in Mathematics, 1965, University of Northern Iowa. At COCC from 1983 to 2004.

WILLIAM P. SIMPKINS**Database Administrator**

B.A. in Social Science, 1971, Biola College; M.A. in Linguistics, 1975, California State College at Fullerton. At COCC from 1983 to 2013.

MICHAEL SMITH**Director of Student Life**

B.A. in Recreation Administration, 1974, Chico State College. At COCC from 1982 to 2007, and 2012 to 2013.

GENE R. ZINKGRAF**Director of Campus Services**

B.A. in Business, 1980, Western State College. At COCC from 1987 to 2012.

ADMINISTRATOR OF THE YEAR

2014 Vickery Viles, Director of CAP Center

CONFIDENTIAL/SUPERVISORY STAFF

Chris McCoy, Custodial Supervisor, Night Shift

Stephen Newcombe, Administrative Assistant, Vice President for Instruction

Jennifer Peters, Administrative Assistant, Vice President for Administration

Julie Smith, Executive Secretary, President's Office and COCC Board of Directors

CLASSIFIED STAFF

Alma Aguiar, Admissions and Records
 Brian Allison, Information Technology Services
 Brett Ammann, Campus Services
 Linda Andrus, Business Administration
 Lisa Bacon, Financial Aid
 Brad Barnett, Campus Services
 Otis Bass, Library
 Kimberly Bessling, COCC Foundation
 Nancy Blair-Madison, Disability Services
 Terri Botts, Office of Dean of Students
 Daura Bowman, Nursing
 Michael Boyd, Campus Services
 Renee Brazeau-Asher, Mathematics
 Cheryl Britton, Deer Ridge Correctional Institute
 Albert Brooks, Jr., Campus Services
 William Bryan, Campus Services
 Lindsay Buccafurni, Student Life
 Roxanne Burger-Wilson, Bookstore
 Harley Burnett, Campus Services
 Nancy Butler, Admissions and Records
 Jodi Cashman, Financial Aid
 Lisa Chitwood, Bookstore
 Stephanie Clark, CAP Center
 Katharine Condon, Small Business Development Center
 Kathie Conley, Fiscal Services
 Deena Cook, Cascade Culinary Institute
 Tracy Crockett, Redmond Campus
 Ken Davis, Campus Services
 Charles Debo, Campus Services
 Donald Doughty, Campus Public Safety
 Julia Dumas, Bookstore
 Kristi Dunlap, Social Science
 Kristine Elkin, College Relations
 Zebulun Evelhoch, Library
 Jared Fain, Campus Services
 Jo Fief, College Relations
 Janis Fisher, Fiscal Services
 Brian Flener, Campus Services
 Susan Galecki, Admissions and Records
 Theo Giannioses, Natural and Industrial Resources
 Patricia Givens, Library
 Stephanie Goetsch, Information Technology Services
 Katie Graham, Human Resources
 Miu Green, Redmond Campus
 Matthew Greenleaf, Health and Human Performance
 Mary Beth Hamilton, Library
 Konnie Handschuch, Instructional Deans' office
 Derwyn Hanney, Campus Services
 Jan Colette Hansen, Campus Services
 Kenneth Harmon, Information Technology Services
 Krissa Harris, CAP Center
 Lynne Hart, Library
 Denise Hatch, Admissions and Records
 Karl Heeren, Campus Services
 Eugen Helmbrecht, Information Technology Services
 Charles Hendrix, Campus Services
 Caitlyn Henry, Campus Services
 Lydia Hernandez, Health and Human Performance
 Malissa Hice, Financial Aid
 Brady Hickman, Information Technology Services
 Ryan Hildenbrand, Information Technology Services
 Steven Huddleston, Copy Center and Mail Services
 Kevin Hughes, Campus Services
 Cady-Mae Hunt, Campus Public Safety
 Carol Hussion, Fiscal Services
 Yasuko Jackson, E-Learning

Steven Johnston, Campus Services
 Jennifer Jordan, Computer and Information Systems
 Steven Julian, Campus Services
 Laurel Kent, Admissions and Records
 Dianne Kristiansen, Humanities
 Kim Landin, Community Learning
 Kevin Lanier, Campus Public Safety
 Deborah Lehto, Financial Aid
 Andrea Lennon, College Relations
 Tina Leslie, Tutoring and Testing
 Caitlin Lewis, Science
 Scott Lewis, Cascade Culinary Institute
 Samantha Loza, Admissions and Records
 Allen Lucas, Campus Services
 Stella Mackey, Admissions and Records
 Christopher March, Campus Public Safety
 Carrie McCormick, Madras Campus
 Marcia McCullough, Information Technology Services
 Floyd Mergel, MATC - Redmond Campus
 Raquel Meyers, Allied Health
 Jessica Michaels, Payroll
 Andrew Middleton, Admissions and Records
 Kate Miles, Fine Arts and Communication
 Kevin Miller, Natural and Industrial Resources
 Melissa Monette, Admissions and Records
 Adam Neider, Campus Public Safety
 Mary Nelson, Instructional Dean's Office
 Molly O'Neal, Bookstore - Redmond
 Juan Olmeda-Chavez, Information Technology Services
 Catherine Perez, Science
 Cheryl Pitkin, Health and Human Performance
 Michael Podell, Campus Services
 Kevin Quick, Campus Services
 Marla Railey, Admissions and Records
 Tom Reed, Campus Services
 Darrin Reynolds, Campus Services
 Steve Ribeca, Information Technology Services
 Julie Riel, Deer Ridge Correctional Institution
 Peter Roberts, Campus Services
 J.C. Root, Information Technology Services
 Ashlee Sanders, Institutional Research
 JoAnn Seeley, Copy Center and Mail Services
 Jan Siegrist, Health Information Technology
 Elaine Simay-Barton, Science
 Linda Skladal, Library
 Emily Smith, Science
 Ethan Smith, Campus Services
 Layla Solar, Financial Aid
 Craig Starnes, Campus Services
 Jared Starnes, Campus Services
 Cristi Steiert, Community Learning
 Bonnie Steiner, Campus Services
 Leilani (Lani) Sykes, Redmond Campus
 Gail Tague, Bookstore
 Ramiro Terrazas, Campus Services
 Bruce Thompson, Information Technology Services
 Julie Townsend, Community Learning
 John Traylor, Campus Services
 Brenda Turner, World Languages and Cultures
 Moises Viramontes, Campus Services
 Kent Vogel, Campus Services
 Erica Waldbillig, Office of the CFO
 Eric Weller, Admissions and Records
 Adrian White, Aviation
 Carl Williams, Campus Services
 Linda Williams, College Relations
 Ruth Wolfe, Adult Basic Skills
 Susan Wood, Continuing Education
 Erika Wooler, Admissions and Records

CLASSIFIED EMPLOYEE OF THE YEAR

Central Oregon Community College recognizes one Classified Association employee each year for outstanding service to COCC and its students.

Those who have been honored are:

2006 DeAnna Metcalf, Enrollment Services

2007 Jan Fisher, Fiscal Services

2008 Sallie Wetherbee, Social Sciences

2009 Michele DeSilva, Library

2010 Bonnie Steiner, Campus Services

2011 Renee Brazeau-Asher, Math/Computer Science

2012 Dianne Reingold, Enrollment Services

2013 Clifford Reid, Campus Services

2014 Marcia McCullough, Information Technology Services

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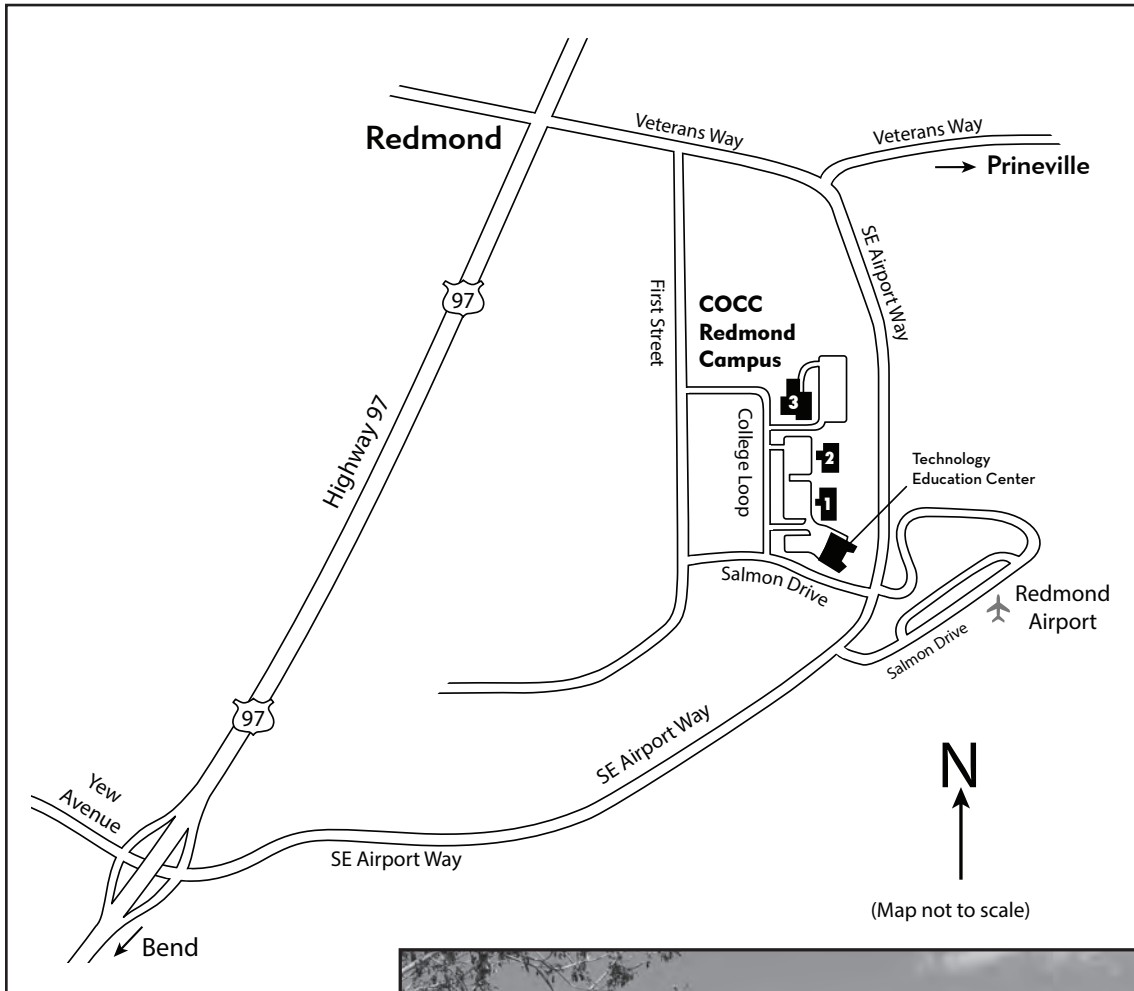
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MAPS TO COCC LOCATIONS THROUGHOUT THE COCC COLLEGE DISTRICT

REDMOND CAMPUS
2030 SE College Loop
Redmond, Oregon 97756

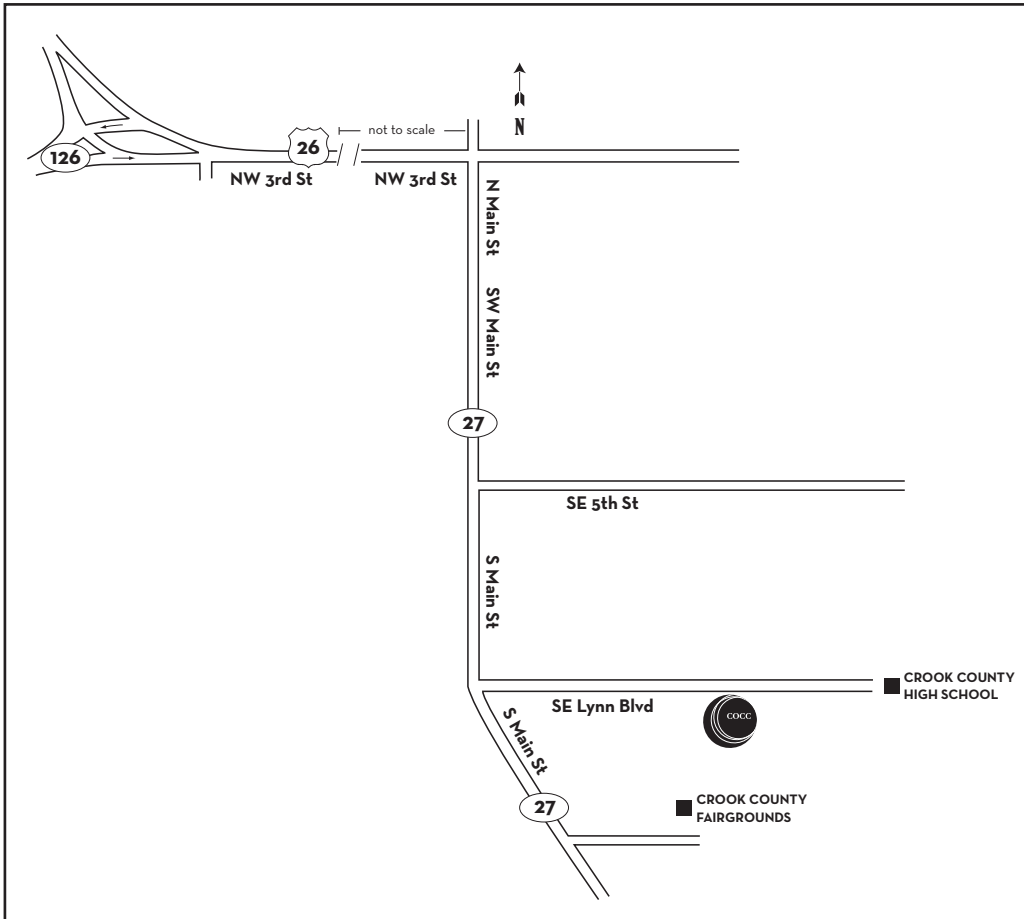


MAPS TO COCC LOCATIONS THROUGHOUT THE COCC COLLEGE DISTRICT

CROOK COUNTY OPEN CAMPUS

510 SE Lynn Blvd

Prineville, Oregon 97754

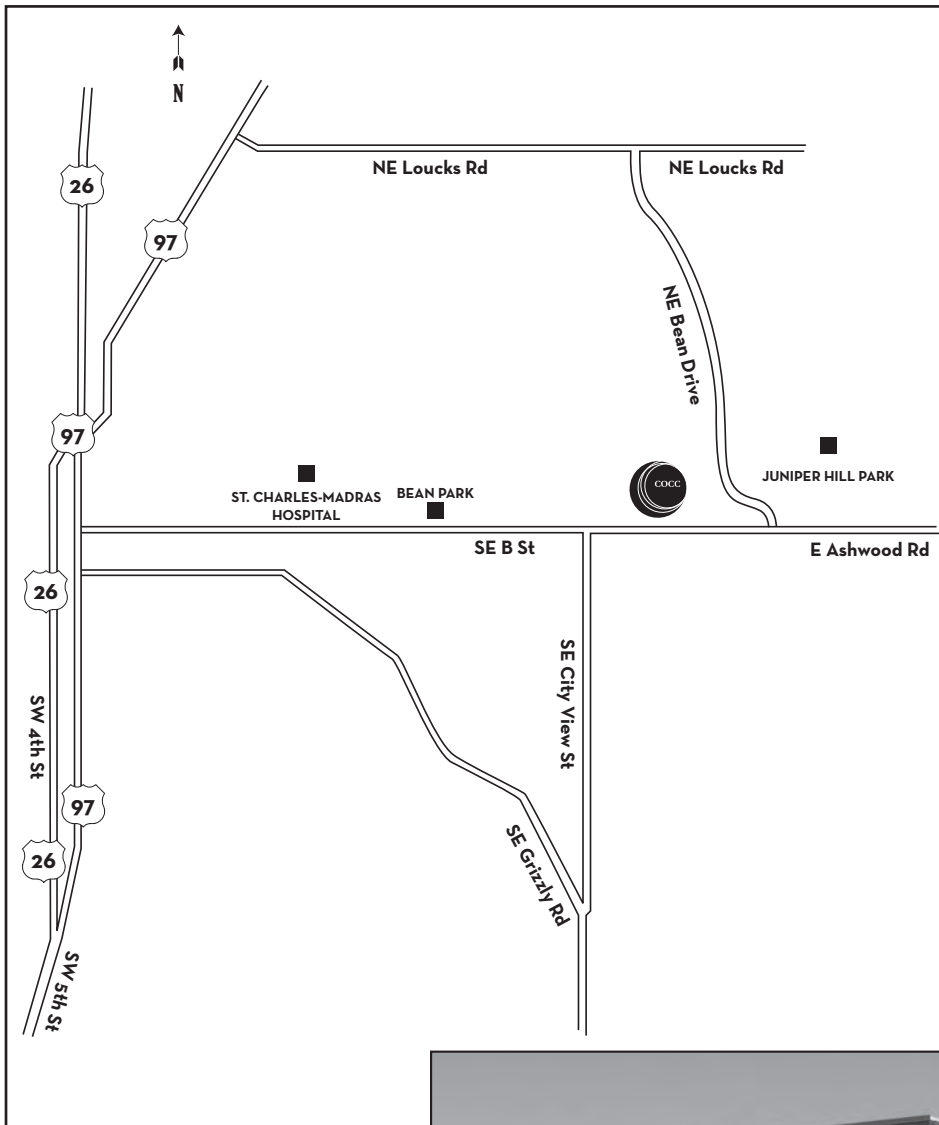


MAPS TO COCC LOCATIONS THROUGHOUT THE COCC COLLEGE DISTRICT

MADRAS CAMPUS

1170 E Ashwood Road

Madras, Oregon 97741



CAMPUS BUILDING DIRECTORY

1. Boyle Education Center	Humanities	18. Track
Admissions	Social Science	19. Physical Plant
COCC Foundation	William Robinson Room	Custodial Services
Cashier	World Languages & Cultures	Maintenance
Christiansen Board Room	8. Jefferson	20. Campus Services
College Relations	Classrooms/Faculty Offices	Facility scheduling
Disability Services	9. Pinckney Center	21. Barber Library
Enrollment Services	Art Gallery	CAP Center
Financial Aid	10. Pence	Classrooms/Faculty Offices
Grants	Classroom/Faculty Offices	Computer Lab
Information Office	Fine and Performing Arts	Digital Production Services
Institutional Effectiveness	Photography Lab	Max Merrill Conference Room
President's Office	11. Juniper Hall	Oregon Rooms
(Campus) Public Safety	Residence Hall	Louis B. (Bart) Queary Room
Registration/Student Records	12. Grandview	Tutoring & Testing Center
THECOLLEGEPLACE	Business Administration	22. Cascades Hall
VP for Administration	Classrooms/Faculty Offices	Oregon State University-Cascades
2. Ponderosa	Mathematics	Computer Lab
Career and Technical	S.M.A.R.T. Math Lab	23. Campus Center
Education programs	13. Ochocho Annex	Construction Office
Classrooms/Faculty Offices	14. Ochocho	Dean of Student & Enrollment Services
3. Mazama	Classrooms/Faculty Offices	Food Service
Classrooms/Faculty Offices	15. Pioneer	Latino Program
Dance Studio	Classrooms/Faculty Offices	Multicultural Center
Fitness Center	Computer and Information Systems	Native American Program
Gymnasium	Computer Lab	Student Government
Health & Human Performance	Information Technology	Student Life Office
4. Physiology Lab	Health Information Technology	<i>The Broadside</i> , student newspaper
5. Metolius	Hitchcock Auditorium	Wille Hall
Adult Basic Skills Office	16. Newberry	24. Health Careers Center
Classrooms	Bookstore	Allied Health
Fiscal Services	Chief Financial Officer	Classrooms/Faculty Offices
Instructional Deans	Copy Center	John Overbay Conference Room
VP for Instruction	Human Resources	Nursing
6. Des Chutes	Mail Services	25. Science Center
Classrooms/Faculty Offices	Payroll/Purchasing	Classrooms/Faculty Offices
7. Modoc	17. Tennis Courts	Science
Classrooms/Faculty Offices		

PHONE DIRECTORY

Campus Switchboard 541-383-7700

Adult Basic Skills/GED	541-504-2950
ASCOCC Student Government...	541-383-7595
Broadside Student Newspaper ...	541-383-7252
CAP Center	
(Career services, Academic advising and Personal counseling)	541-383-7200
Club Sports/Intramurals	541-383-7794
COCC Foundation	541-383-7225
College Information Office.....	541-383-7596
Community Learning	541-383-7270
Dean of Student and Enrollment Services Office	541-383-7211
Enrollment Services	541-383-7500
Financial Aid	541-383-7260
Fine Arts and Communication....	541-383-7510
Human Resources (personnel/employment)	541-383-7216
Latino Student Program	541-318-3726
Library	541-383-7560
Multicultural Activities.....	541-383-7412
Native American Program.....	541-318-3782
Oregon State University-Cascades	541-322-3100
President's Office	541-383-7201
(Campus) Public Safety.....	541-383-7272
Services for Students with Disabilities.....	541-383-7583
Spanish language phone	541-318-3723
Student Life Office.....	541-383-7590
Testing and Tutoring Center	541-383-7539

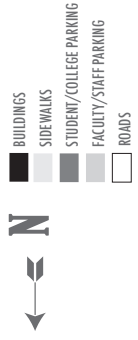
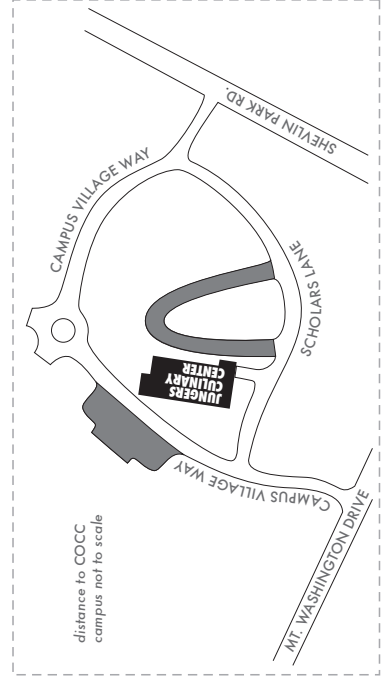
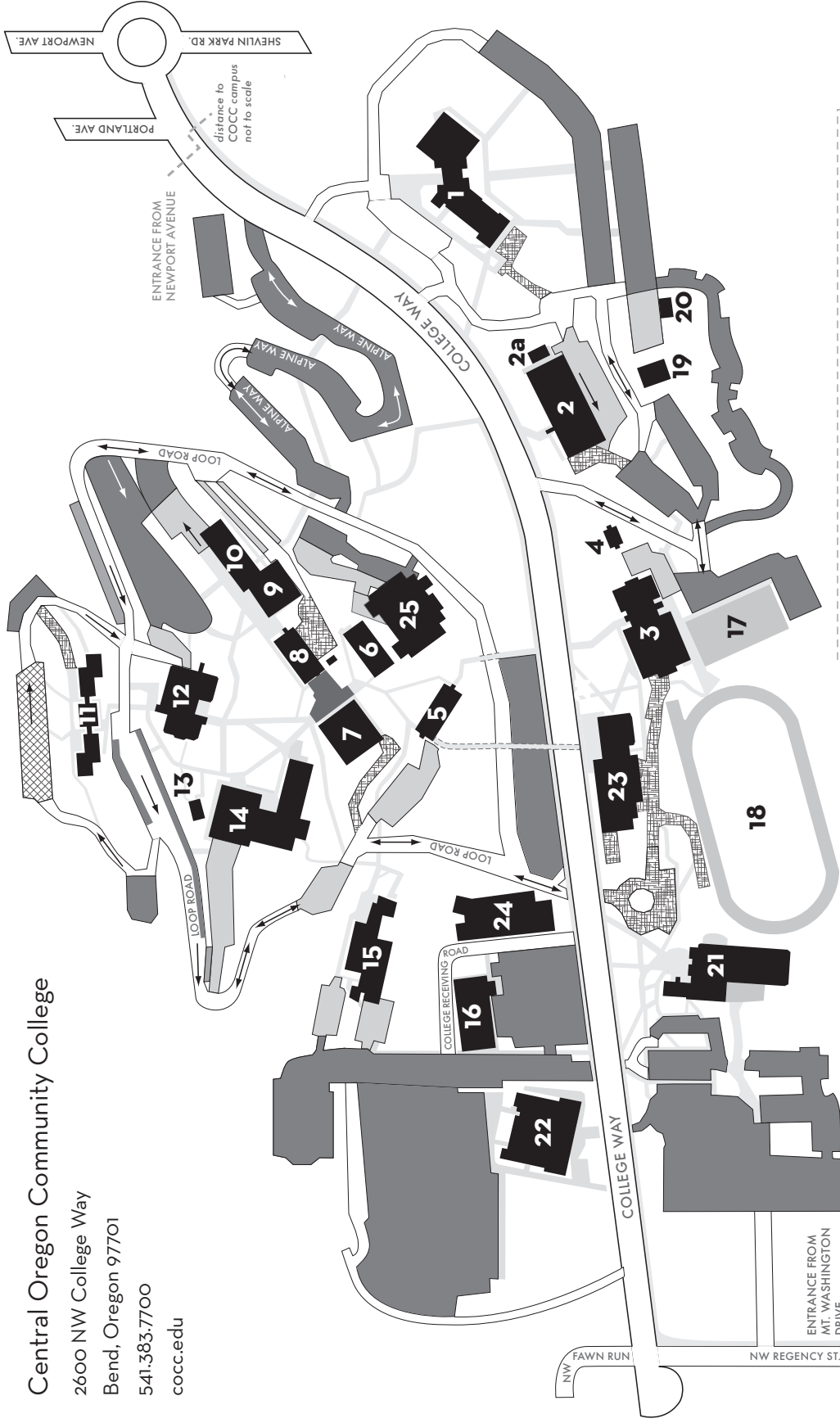
Central Oregon Community College

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2014–2015 COCC Catalog Addendum

Addendum: The below statement has been added to Dropping Courses/Complete Withdrawal Policies for clarification regarding class cancellations on page 9.

Class Cancellation

The college reserves the right to cancel or postpone a class. However, every effort will be made to cancel the class well in advance of the intended start date allowing students to reschedule or make other arrangements. Students registered in classes that become cancelled will be notified via their COCC email account and issued a full refund.

Addendum: The below statement is an update to the residency policy for military personnel found on page 11. Veteran students do not have to be receiving veteran benefits to be eligible of discounted tuition.

Military personnel

Out-of-district or out-of-state veteran students will be classified as “non-resident veteran” students for residency/tuition classification purposes. Veteran students not receiving veteran benefits at COCC must submit supporting documentation of veteran status, such as a DD 214.

The non-resident veteran tuition rate will be calculated to be the in-district tuition rate plus 50 percent of the difference between COCC’s in-district rate and out-of-district/border state rate and complies with Oregon legislation. In order to receive this benefit, veteran students must have submitted all required paperwork to the COCC veteran student coordinator by the Friday prior to the term’s start. Requests received after this date will be considered for the following term. 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.

Residency status will be determined using the same criteria as the Oregon University System residency policy for armed forces personnel. For details, visit the OUS website at www.ous.edu.

Addendum: The below AP exam equivalencies reflect an update to the list published on page 24. The course prefix has been corrected from CIS (Computer Information Systems) to CS (Computer Science).

Advanced Placement Exams (AP)

Credit will normally be awarded following approved guidelines from COCC academic departments. Typically, credit is considered only when it is equivalent to regular course offerings at COCC and when it is not duplicated Advanced Placement (AP) will be evaluated at COCC as listed below.

AP Comp Science A, score 4+ CS 161
 AP Comp Science AB, score 3 CS 161
 AP Comp Science AB, score 4+ CS 161, 162

Addendum: The below statement reflects an update to the cost of the IC3 exam published on page 25.

Computer competency requirement

Some COCC associate degrees (AS, AAS and AGS) require students to demonstrate basic computer skills prior to graduation. To meet this requirement, students must successfully complete CIS 120 Computer Concepts, or pass Key Application and either LivingOnLine or Computer Fundamentals of the IC3 exams.

The IC3 exams may be taken at the COCC Tutoring and Testing Center or any authorized Certiport Testing Center. Locally, appointments can be made through the Tutoring and Testing Center located in the lower level of the Barber Library. A \$35 fee is charged for each test; one free retake is included in the \$35 fee. If a student needs to retake the exam a third time, another \$35 fee is charged. Successfully passing all three exams will award 4 credits for CIS 120. 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. Students who have proof they have previously received the IC3 certification will also receive a notation that the competency requirement has been met (documentation must be submitted to the Admissions and Records office).

Note: CIS courses may be required in some AS or AAS programs and the competency test will not substitute for that requirement. See individual program descriptions for details.

Addendum: The below statement reflects an update to the graduation requirements to reflect automatic degree awarding procedures, originally found on page 26.

GRADUATION REQUIREMENTS

COCC will automatically award certificates or degrees upon completion of the requirements in the student’s declared program of study. 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/planning year and certificate or degree they are pursuing.

Students who wish to be awarded a certificate or degree that is not their declared program of study must complete the

Application for Degree no earlier than their final term. The application is located online at www.cocc.edu/admissions/graduation-and-honors/graduation/.

COCC provides advising toward its certificates and degrees; however, students are ultimately responsible for being informed about degree requirements and for selecting appropriate classes.

A certificate or degree will be awarded when the student meets the appropriate course requirements listed in this catalog and has met the following guidelines:

- ❑ Complete the minimum number of credits required for the degree (see pages 34-42)
- ❑ Earn a minimum 2.0 cumulative grade-point average at COCC
- ❑ Owe no debt to the College
- ❑ Complete at least 24 degree-applicable residency credits for an associate's degree; 18 certificate-applicable residency credits for a certificate
- ❑ Meet at least one of the following criteria:
 1. Students have three years to complete their program under the catalog in which they began or any subsequent catalog.
 - a. The student's default catalog year is the year the student is admitted to COCC and the student may graduate under that default catalog year or either of the next two catalog years.
 - b. If the student has a break in enrollment for four consecutive terms, the student must reapply to COCC and the default catalog year will be the year the student is readmitted.
 - c. The student's choice of catalog years will be limited to two catalog years prior to the student's year of graduation. If the student does not graduate within three catalog years of student's admittance, the default catalog year will be updated yearly to the subsequent catalog year.
 2. The student transfers back to COCC other college credit and meets degree requirements listed in the current college catalog or the previous two catalog years.

When a student's completion of degree requirements coincides with the last term attended, the degree will be posted in that term. When the student uses transfer credit after an absence from the College, the degree will be posted in the term in which the degree evaluation is successfully completed, and when it has been determined that all degree requirements have been met.

Multiple/concurrent degrees

Students applying for multiple or concurrent degrees must meet the degree requirements outlined above and as listed for each degree on the following pages. For each additional degree, students must complete at least 15 COCC credits that are different from those used for the other degree(s) and are

applicable to the additional degree requested, and complete the Application for Degree no earlier than their final term.

Addendum: The following courses are additional options to the Discipline Studies Course list originally published on pages 44-45.

DISCIPLINE STUDIES COURSES

The following COCC courses have been approved by the College's Curriculum Committee for use as General Education Discipline Studies courses for the AAOT, AS, AAS and AGS degrees.

Science/Math/Computer Science discipline studies course options

**PSY 204 Research Methods

Social Sciences discipline studies course options

*ED 216 Structure and Function of Education in a Democracy

*ED 219 Multicultural Issues in Education Settings (3 credits)

*ES 213 Intro Chican@/Latin@ Studies

(*Counts as a cultural literacy course **Counts as a lab science course)

Addendum: The below statement is an update to the Aviation Program, Cost of Program information as published on page 57.

Students will no longer be dropped from flight lab course(s) if fees are not paid on time.

Addendum: The following is a correction to the overall credit count for the Dental Assisting program as originally published on pages 94-95.

DENTAL ASSISTING CERTIFICATE OF COMPLETION

67-73 credits

Addendum: The following is an update to the overall credit count for the Early Childhood Education program as originally published on page 96.

EARLY CHILDHOOD EDUCATION- AAS DEGREE

89-95 credits

Addendum: The following is a course correction to the Outdoor Leadership AS degree as originally published on page 154.

OUTDOOR LEADERSHIP- AS DEGREE

OL 162 is updated to read: OL 160

Addendum: The following statement has been updated to provide definition of "prerequisite with concurrency" originally published on page 187.

HOW TO READ A COURSE DESCRIPTION

Prerequisites, if any, are listed by the course number after the course description. It is important to note prerequisites prior to registering. A prerequisite is a course that should be completed with a "C" grade or higher prior to enrolling in the selected course. A **prerequisite with concurrency** is a course which must be completed prior to or while attending the selected course. A **corequisite** is a course which must be completed while attending the selected course.

Addendum: The below course description originally published on page 215 is an update to include placement option for math prerequisite.

CHEMISTRY

CH 104

INTRODUCTION TO CHEMISTRY I

Introduces basic principles of general chemistry, including atomic theory, chemical formulas and equations, bonding, stoichiometry, acid/base chemistry, and solutions. Supporting laboratory work included. Prerequisite: MTH 95 or higher, or math placement test score that places the student into MTH 111 or above. Not designed for science majors.

Credits: 5 Lecture: 4 Lab: 3