

CENTRAL OREGON COMMUNITY COLLEGE

2011–2012 Catalog

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photo by David Morris

WELCOME TO COCC

Central Oregon Community College's mission is to "be a leader in regionally and globally responsive adult, lifelong, postsecondary education for Central Oregon." For more than 60 years, COCC has accomplished this by providing a wide range of learning opportunities for the citizens of the COCC District, a geographic area that covers more than 10,000 square miles.

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 was built in 1963.

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 is now president.

OUR DISTRICT

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

OUR CAMPUS

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 23 buildings with a total of 453,982 square feet under roof. The newest building, the Campus Center, opened in 2009.

On the 25-acre Redmond Campus, there are three buildings, housing College administration, classrooms, a computer lab and the manufacturing program.

Following voter approval of a bond measure in 2009 and legislative allocations for construction, COCC will soon be constructing a new classroom wing and two instructional buildings on the Bend campus, a technology center in Redmond and facilities for new campuses in Madras and Prineville.

BOARD VISION AND GOALS

Mission statement

COCC will be a leader in regionally and globally responsive adult, lifelong, postsecondary education for Central Oregon.

Vision statement

Because of COCC, Central Oregonians will . . .

- be a districtwide community that holds and promotes lifelong postsecondary education and ongoing professional growth and personal development for adults as values;
- be able to connect actively with other communities, the state, the nation and the world in order to attain both locally strong and globally responsible perspectives;
- view education as integral to a sense of well-being, security and responsibility; and
- look to COCC to lead the region in achievement of these ends.

Ends statements/goals

Because of COCC, Central Oregon communities will...

- have an adult population with the proficiencies and learning skills necessary for lifelong employment at a family wage level;
- have an adult population with academic achievements and learning skills necessary to successfully pursue education at and beyond the community college level;
- work collaboratively to achieve shared purposes;
- have wide-ranging opportunities to enhance learning, wellness, quality of life, and cultural appreciation; and
- support diversity, and interact effectively with state, regional, national and global communities.

CORE THEMES

As stated in the COCC Vision Concept Paper, the College is dedicated to "serving students by providing opportunities for individual learners to grow. The College will continue its primary focus on serving adult learners in its traditional community college programs: associate degree and transfer programs; applied degrees and certificates; adult basic and developmental education; and a wide range of community education offerings."

In accordance with these considerations, the Board adopted four core themes at the Board Retreat. These themes manifest the essential elements of COCC's mission as articulated in the Board Goals. 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.



photo by Joe Viola

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

Noncredit 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

Noncredit 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.

BOARD PRIORITIES FOR 2009-11

The COCC Board of Directors expects tangible progress across a broad spectrum of the Strategic Plan. It expects College staff to make significant focused progress on the following priorities and, relative to these priorities, expects communication, assessment and identification of policy issues which require further Board review.

Access and Success

Strengthen student and community access to educational opportunity and success.

- By expanding access in outlying communities including strategies for educational services in geographic areas which may be underserved.
- By expanding strategies which respond to students' scheduling challenges and diverse learning styles.
- By refining and implementing a Strategic Enrollment Management plan with data-driven enrollment targets.
- By supporting enrollment of student groups that have been traditionally underserved.
- By minimizing financial barriers to the extent possible.

To achieve targeted progress with access and success, the Board believes that strategic partnerships will be increasingly important. Therefore, the Board expects continuing progress in partnerships with:

- K-12 partners
- University partners - improve partnerships and articulation with OSU-Cascades and explore appropriate partnerships with other universities
- Regional employers
- Regional organizations, state agencies and the Oregon Community College system

Design and implement systems for tracking and strengthening student retention and achievement of academic goals.

Facility Development

Expand and improve institutional facilities to support enrollment growth, enable innovative programming in response to community/student needs, strengthen the sense of campus community and link with the broader community.

- Finalize bond construction project plans and implement construction of the Health and Science Centers, Technology Education Center, Madras and Prineville campuses, and renovations for expanding general purpose classrooms - including appropriate project staff to ensure project success and long-term cost effectiveness.
- Finalize plans and construct the Culinary Center and the related Campus Village project.
- Evaluate options for improved and expanded student housing and establish and implement a construction plan if the Board endorses the project.
- Design and construct sustainable institutional facilities and establish third-party sustainability certification as appropriate.
- Assess and implement, as appropriate, partnerships to support facility initiatives.
- Attract alternative financial contributions to support priority facility initiatives.

Assessment

Develop and implement comprehensive planning and assessment systems that define institutional direction, assess student learning, and modify programs, systems and activity based on that assessment.

- Integrate planning and assessment into accreditation activities and potential programs sponsored under pending federal legislative support for community colleges. Articulate Core Themes and develop the broad objectives and indicators for measuring performance as consistent with new Northwest Commission on Colleges and Universities standards.

Institutional Viability

- Develop and implement sustainable systems which balance comprehensive quality programs and services with appropriate tuition and fee levels.
- Develop alternative revenue streams for the College.
- Ensure efficient and cost-effective operations.
- Work to maximize to the extent possible fiscal and other support from the state.

Respond to regional student and business needs.

Maintain open communication with various community groups and businesses.

- Define potential new or modified programs and services.
- Assess the operational and fiscal viability of such programs and services.
- Implement as possible within fiscal and operational capacity.
- Link College staff and initiatives to the community through support and leadership roles in organizations and community 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 contains more than 76,400 book titles and 400 periodical titles—print and electronics—and an open-stacks collection of audio-visual materials including videos, DVDs, CDs and audiotapes. The Library is a selective depository for U.S. federal documents and databases. In addition, it offers a wide array of electronic resources, all accessible through the main Library Web page at <http://campuslibrary.cocc.edu/>.

The Barber Library offers a variety of research tools via the Web. These include general and subject-specific periodical databases (most of which provide full-text articles), electronic encyclopedias, statistical databases, and a variety of other online tools. There are more than 200 electronic resources accessible from its databases Web page. The Barber Library collection also includes many electronic journals and books, as well as a growing collection of streaming video. Students can access most of these resources off campus via the Internet.

COCC is a member in the Orbis Cascade Alliance, a consortium of college and university libraries in the Northwest that provides services such as the Summit Union Catalog, Summit Borrowing, and database licensing opportunities. Summit



photo by GradTrak

Catalog is accessible from the main Library Web page at <http://campuslibrary.cocc.edu/>. Current, credit-enrolled students, faculty and staff of COCC and OSU-Cascades may search and self-initiate loan requests for most of the 25 million Summit items. Once patrons identify material that they want to borrow, they simply follow the on-screen instructions. Materials are then delivered for pickup at the Library circulation desk within a few working days.

The Barber Library is equipped to provide wireless network access to registered users including COCC and OSU-Cascades patrons as well as community patrons and campus visitors. For more information, please refer to the Wireless Network Web page at <http://its.cocc.edu/services/wireless/>

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

ACCREDITATION

Central Oregon Community College is accredited by the Northwest Commission on Colleges and Universities. Accreditation was most recently reaffirmed in 2002. COCC is in the process this year of completing its self study for a comprehensive evaluation in Spring 2012.

Accreditation is a voluntary process of recognizing educational institutions for performance, integrity and quality that entitles them to the confidence of the educational community and the public. This recognition is extended largely through nongovernmental, voluntary professional associations that have responsibility for establishing criteria, evaluating institutions against the criteria, and approving institutions that meet the criteria.



photo by Eugen Helmbrecht

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 110 full-time faculty members, 45 adjunct faculty (semi-permanent faculty on annual contracts) and approximately 200 part-time instructors. 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, 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, close to 3,000 full-time and 3,500 part-time students enrolled. While half of the students are under the age of 24, another quarter are 32 and older. About 40 percent of the students enroll in career and technical education programs and take career-oriented courses of study. The remainder enrolls in courses which 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

The COCC Foundation's purpose, as stated in the articles of incorporation, is to exist exclusively for the benefit of Central Oregon Community College, its faculty and students in the furtherance of the educational and charitable activities of the College. It does so through providing financial assistance to students, fiscal support for college programs, and running campaigns in support of needed college capital improvements.

The COCC Foundation is the oldest community college foundation in Oregon. Its assets have grown significantly over the years, from the first gift of \$500 in 1955 to nearly \$11 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 2009-2010, the Foundation awarded more than 540 scholarships totaling more than \$750,000. For more information, call 541-383-7225.

COMMUNITY LEARNING

Community Learning offers a wide variety of innovative, high-quality, community-driven, affordable classes and events to adults throughout the District. Classes include opportunities to stay current with job skills, engage in a new hobby or expand outdoor activities. Information at: <http://noncredit.cocc.edu>

COCC Community Learning also provides high-quality and interactive online class opportunities. Every course offered has been carefully engineered to provide quick and easy access to all course materials.

Community Learning noncredit 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.

Registration

Registration times and locations are provided on the Community Learning website, <http://noncredit.cocc.edu>, and in the Community Learning class schedule, 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.

Contact information

Community Learning can be reached at 541-383-7270, by email at ceinfo@cocc.edu or online at <http://noncredit.cocc.edu>.

SMALL BUSINESS DEVELOPMENT CENTER

The Small Business Development Center helps build businesses by providing management assistance and resources to the business community, including:

- confidential business advising
- the expertise of area business people
- practical short-term workshops and other education and training opportunities

The annual, yearlong Small Business Management program combines education and training (monthly workshops) with on-site business counseling to help small businesses reach their goals.

Information: phone, 541-383-7290; online, <http://noncredit.cocc.edu>; email, bdc@cocc.edu.

CUSTOMIZED TRAINING OPTIONS

Businesses achieving success in today's highly competitive environment require continual development and refinement of their most important asset: their employees. COCC provides quality employee training courses for businesses in Central Oregon to help them reach their potential.

For training customized to suit individual business needs: phone, 541-383-7270, or email, ceinfo@cocc.edu.

PROFESSIONAL AND CAREER DEVELOPMENT

Whether pursuing new careers, seeking knowledge to stay competitive professionally, or needing to meet requirements for continuing education, the public can find a variety of high-quality professional education courses at COCC that include: Sustainability, Building and Energy, Accounting, Computers, Educators and Nonprofits, Graphic and Web Design, Health Care and Wellness Careers, Landscaping, Leadership and Management, Online classes, and Yoga Teacher Training.

Information for businesses and organizations: 541-383-7270 or <http://noncredit.cocc.edu>

ADULT BASIC SKILLS (ABS)

The Adult Basic Skills program provides basic skills instruction in reading, writing, math, study skills and basic computer skills to prepare students for the General Education Development (GED) test and for college credit classes. Students can take online high school courses leading to a COCC Adult High School Diploma (AHSD). English Language Learning (ELL) classes are offered for those students who speak little or no English. Assessments are available to help students determine current skill levels and learning styles. Students may attend day or evening sessions. Students usually sign up for classes in class during the first two weeks of each term. Please call the ABS office, 541-504-2950, or see the website at <http://abe.cocc.edu> for exact times and locations.



ABS programs are designed to lead students to college entry-level skills and knowledge in all secondary subject areas including reading, writing, math, study skills and basic computer skills. Students may be assigned trained volunteer tutors who assist the instructor and provide individual attention. Adults may earn high school diplomas by combining previously earned high school credits, online AHSD courses and college credit classes. English language classes focus on listening and speaking skills and advance to reading and writing.

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

REDMOND CAMPUS

COCC's Redmond Campus is located across from the Redmond airport. It lies in the center of the northern region of COCC's service district, a short commute from Prineville, Madras, Bend and Sisters. The Redmond Campus offers a variety of credit classes designed to provide general education requirements leading toward an Associate of Arts Oregon Transfer (AAOT) degree or related training for specialized degrees. Through instructional excellence, innovative programs and responsive services, the campus also provides classes in Manufacturing Technology, Structural Fire Science, Wildland Fire Science, Business, personal enrichment, basic skills development, English Language Learning, computer and job training, as well as Small Business Development services.

Student services available at the Redmond Campus include admissions information, placement testing, financial aid assistance and Foundation scholarship information, registration, cashiering, academic advising, tutoring, career services, a drop-in computer lab, and COCC bookstore.

Food and coffee service to go is available Monday through Thursday at a walkup kiosk located on the campus. For more information about programs, services and computer lab hours at COCC's Redmond Campus, call 541-504-2900 or visit the website at <http://redmondcampus.cocc.edu/>.

OREGON STATE UNIVERSITY-CASCADES

Oregon State University-Cascades is led by Oregon State University, the only Oregon university to hold the Carnegie Foundation’s prestigious designation reserved for universities with “very high research activity.” OSU is also Oregon’s land, sea, sun and space grant university. OSU-Cascades, the state’s only branch campus, is a unique partnership between OSU and Central Oregon Community College. It offers an affordable and personal experience for students seeking an undergraduate or graduate degree. Faculty members pursue a teaching philosophy that encourages graduates to make a difference in their communities and in the world. Many faculty have been recognized for excellence in research, teaching and community service.

Designed for those starting, transferring or returning to college, OSU-Cascades is located on the Bend campus of COCC. The university offers OSU degree programs. Referred to as Oregon’s “transfer university,” OSU-Cascades is an ideal next step after community college and for returning students. It is also a welcome haven for local high school students, who can be admitted as freshmen and, under the guidance of an OSU-Cascades advisor, take lower-division courses at COCC then transition to OSU-Cascades to complete their degree. 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
American Studies BA/BS	English Minor	Natural Resources BS/Minor	Counseling MS
Art BA/BS/BFA/Minor	General Science BA/BS	<ul style="list-style-type: none"> Natural Resource Policy Option Natural Resource Conservation Option 	<ul style="list-style-type: none"> Clinical Mental Health Counseling School Counseling
Art History Minor	Geology Minor	Political Science Minor	Education MAT
Biology Minor	History Minor	Psychology BA/BS/Minor	<ul style="list-style-type: none"> Early Childhood/Elementary School Authorization Middle/High School Authorization
Business Administration BA/BS	Human Development and Family Sciences BA/BS	Speech Communication Minor	
<ul style="list-style-type: none"> General Business Option Hospitality Management Option International Business Option 	<ul style="list-style-type: none"> Child Development Option Human Services Option 	Tourism and Outdoor Leadership BS/Minor	
Business and Entrepreneurship Minor	International Studies BA	<ul style="list-style-type: none"> Adventure Leadership and Education Option Eco and Adventure Tourism Option International Ecotourism Option 	
Chemistry Minor	Liberal Studies BA/BS	Visual Arts Minor	
Early Childhood Development and Education Minor	Pre-Education Option Themes		
Energy Engineering Management BS	<ul style="list-style-type: none"> Community, Identity and Place Law and Politics Gender and Politics Social Science 		
	Mathematics Minor		
	Military Science Minor		

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, degree/certificate evaluation, student records, grade reports and transcript requests. Most services are also available at COCC's Redmond Campus.

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 <http://new.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, in the Boyle Education Center and at the Redmond Campus. Note: All new students (those who have never taken credit courses at COCC) are required to submit a \$25 nonrefundable 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

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. Noncertificate/nondegree-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's, bachelor's or higher-level college degree and have submitted a copy of their transcript prior to advising and registration;
- have completed reading, writing and math courses with a "C" or better at another regionally accredited college and have submitted a copy of their transcript 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, pp 191-294 in this catalog.

See the COCC website, www.cocc.edu ("Prospective Students," "Getting Started"), 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 student online services 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, 541-383-7200.

Note: Current students may choose to be self-advised, meaning 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, <http://cap.cocc.edu>.

REGISTRATION

After submitting an application for admission, taking the placement test and meeting with an advisor (if applicable), students may register for courses based on the dates and times listed in the COCC website. Students' 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

High school students 15 years and older are eligible to register in up to 11 credits at COCC. High school students 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 members of the College staff can provide academic advising, they cannot interpret high school requirements or act in a supervisory role.

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

Concurrent enrollment

High school students who wish to take college courses while still attending high school may take up to 11 credits each term. The student is responsible for all tuition, fees, books and related expenses.

Special admission

High school students who wish to take more than 11 credits must meet with and receive permission from the director of Admissions/registrar or designee prior to registering for courses. Requirements for gaining special admission status include minimum placement test scores and support of their high school counselor. Special admission is for students who demonstrate excellent preparation and unqualified readiness for college-level work.

College Now/CTE

The College Now/CTE program is an opportunity for high school students to complete and receive COCC credit for certain COCC career-technical education courses completed in high school. COCC currently offers classes through in-district high schools in allied health, automotive, business, criminal justice, culinary,



drafting, computer information systems, dental assisting, forestry, manufacturing and nursing. There is a fee of \$10 per course. Courses offered vary by high school and are designed for high school juniors and seniors. For more information, call COCC's College Now office at 541-504-2930, contact the high school counseling office or visit the College Now/CTE Web page at <http://dualcredit.cocc.edu/cte>.

College Now/Transfer

COCC works with area high schools to offer college-level general education transfer courses in the high schools, taught by high school instructors, exclusively for high school students. The fee is \$15 per credit, a savings of more than \$200 for a COCC four-credit course. Classes can be used to meet COCC certificate or degree requirements, as well as for transfer to community colleges and most universities across the U.S. For complete details and a listing of courses offered in a specific high school, contact the high school counselor, call 541-504-2930 or visit the College Now/Transfer website at <http://dualcredit.cocc.edu/transfer>. Courses are limited to high school juniors and seniors.

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 concurrent enrollment form at the time of registration. See <http://new.cocc.edu/hsoptions> 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 10 for summer term, by Nov. 9 for fall term, by Feb. 29 for winter term and by May 23 for spring term. A \$50 late fee is charged for payments made after the deadline.

TUITION FOR CREDIT COURSES

For 2011-2012

In district	\$76 per credit hour
Out of district	\$101 per credit hour
Out of state ¹	\$206 per credit hour
Audit	same as for credit
<i>(¹CA, ID, NV and WA residents are charged out-of-district tuition)</i>	

Check the COCC credit class schedule for courses that require additional tuition and fees. There are program fees in the following areas: art, aviation, career/life planning, culinary, dental assisting, emergency medical services, health and human performance, massage therapy, nursing 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

ASCOCC fee (max. \$21 per term)	\$1.50 per credit
Technology fee (max. \$45 per term)	\$3 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)	\$16
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

Adult Basic Skills courses ²	\$20
English Language Learning classes ²	\$20
GED prep classes ²	\$20 per class
High school completion ²	\$100 per half credit
<i>(²Proposed fees pending approval)</i>	

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 payee) will be required to pay tuition and fees with cash for one year.

COLLECTIONS POLICY

If a student fails to pay his/her tuition and fees by the end of the term, the balance due amount will be turned over to the Oregon Department of Revenue 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.

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.

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, may 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. Students who are unable to attend the first class meeting 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.

ADDING AND AUDITING COURSES/ WAIT LISTS

Courses may be added until 7 a.m. on the day of the first class session. After this time, an instructor's permission is required to add a course. Students may add courses via their student online services account (with electronic instructor approval) or in person at the Boyle Education Center or at the Redmond Campus. 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 online. 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. 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 course session. If a seat is available, the instructor must sign the registration form that the student then submits in person to Enrollment Services within two days. Alternatively, the instructor can submit electronic instructor approval so the student can add the class via the student online services account or call Enrollment Services to process the registration.

DROPPING COURSES/COMPLETE WITHDRAWAL

Students registered in courses are considered 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, complete the drop section on a registration form and submit it in person at the Boyle Education Center or at the Redmond Campus. Drop forms may not be mailed or faxed, but students may call Admissions and Records, 541-383-7500, and 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 COCC website for specific dates. Note that different deadlines exist for short-term courses; contact Admissions and Records, 541-383-7500, for details.

Complete withdrawal

Students receiving federal financial aid may owe a repayment if they completely withdraw from courses. See Enrollment Services – Financial Aid (pages 16-19) for details.

TUITION REFUNDS FOR CREDIT COURSES

To qualify for a refund, the student is responsible for submitting a drop form to Enrollment Services 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," available by logging into the student's online services account.) Any debt owed 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 13 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, and late payment fees will be charged to their account.

Students with federal financial aid may owe a repayment if they completely withdraw from courses. See Enrollment Services - Financial Aid, pages 16-19, for details.

COCC TRANSCRIPTS

Transcripts must be requested by students via their secure online student account, in person in the Enrollment Services office, or in writing. Transcript requests to be held until after grades or degrees are posted must be requested in person or in writing (option not available via the Web). 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 Campus 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 owns property (or if under the age of 24, whose parent/guardian owns property) or who has maintained a permanent and continuous residence in the district for one full year prior to the beginning of credit courses 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 has maintained a permanent and continuous residence in the state of Oregon but outside of the COCC district during the year prior to the beginning of credit courses, or if under the age of 24, whose parent/guardian has maintained such residence, 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 (WA, ID, NV, CA 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/files/residencepolicies.pdf.

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 <http://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. Tuition waiver forms will not be accepted after the tuition deadline.

Native American students

Students who are enrolled members of federally recognized tribes of Oregon or of a Native American tribe which 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 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 <http://current.cocc.edu/tuition>. 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.

MATRICULATION/ABILITY-TO-BENEFIT

Matriculation status is awarded to registered students who have earned a high school diploma or GED, or who demonstrate "ability to benefit" by earning the following minimum scores on the Accuplacer test: Reading Comprehension, 55; Sentence Skills, 60; Arithmetic, 34.

Non-matriculated students may attend courses and earn credits, but may not receive financial aid until matriculation criteria are satisfied. Contact Admissions and Records, 541-383-7500, for further information.

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:

- Institutional information: name of accrediting associations, services for disabled students, cost of attendance and additional program costs, refund policy, withdrawal policy and associated financial aid implications, degree programs, GED options, transfer credit policy, retention rates, vaccinations, copyright infringement, improving academic programs, placement statistics, campus academic facilities, faculty and staff contact information, academic warning standards, study abroad financial aid opportunities, deferment options for Peace Corp and related service organizations;
- Financial aid information: types of aid, how to apply for aid, how aid is disbursed, rights and responsibilities of students receiving aid, work-study terms and conditions, loan repayment terms and schedule, academic progress criteria, FEEL disclosure;
- Campus Crime Report/Safety, Alcohol/Drug Policy, Fire and Safety Standards, Emergency Procedures;
- COCC graduation and transfer rates;
- Students' rights under the Family Education Rights and Privacy Act (FERPA).

Student Right-To-Know information is available on the College's website.

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 website at <http://finaid.cocc.edu>. 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 noncitizens with appropriate documentation;
- have a high school diploma, a GED certificate, or meet “ability to benefit” provisions;
- 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 disbursed 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 standard

To maintain eligibility for financial aid, a student must comply with the following standard. 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 2.00 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 even if a certificate/degree is not earned. As soon as it is clear that a student cannot graduate within this period, he/she becomes ineligible for aid. Change of major or program may not be sufficient reason to extend the credit limit. Students pursuing more than one program at COCC will need to submit an appeal and documentation of its necessity if the maximum limit is reached.

Measurement point/times standard applied

The financial aid academic eligibility standard will be evaluated at the end of each term for financial aid applicants. Eligibility for receipt of financial aid can be denied at any measurement point if the standard is not met.

Good standing status

Financial aid applicants who meet a cumulative GPA of 2.00 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 and loans.

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 of why the

student failed to make Satisfactory Academic Progress (SAP) and documentation of the circumstances. The appeal must also include 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. All appeals are referred to an appeal committee. 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. Credits that do not apply will be excluded from the requirements for the new program and the student will be given 150 percent of the amount of remaining credits to finish the requirements for the new program.

Students returning after an extended absence 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 coursework will be limited to a 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 Writing 60 through Writing 95, Math 10 through 95, and CIS 70.

WITHDRAWAL PENALTY/REPAYMENT REQUIREMENTS

Students who receive federal financial aid and subsequently completely withdraw, are expelled or cease to attend 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 complete 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 affects 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 academic year. Students are encouraged to apply before March 1 because some funding is limited. Students apply on the Web at www.fafsa.ed.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, <http://finaid.cocc.edu>;
- send an email to coccfinaid@cocc.edu;
- send a letter to COCC Financial Aid, 2600 NW College Way, Bend, OR 97701;
- 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

The purpose of a scholarship program is to encourage academic excellence and to recognize achievement. The scholarship program at COCC is comprised of three gift-aid programs: COCC Foundation scholarships, honor scholarships and private scholarships.

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 at <http://finaid.cocc.edu> 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: <http://finaid.cocc.edu> 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 federal Department of Education and the state of Oregon.

Federal Pell Grant

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 2010-2011 ranged from \$555 to \$5,550 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 \$360 in 2010-11 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 Assistance 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 <http://finaid.cocc.edu/loan>.)

Two specific types of Direct Loans are available:

Subsidized Federal Direct Stafford 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. Loans are interest-free until repayment begins. 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 a 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 need-based Subsidized Federal Direct Stafford loans or who are not eligible for the full Subsidized Federal Direct Stafford loan amount. 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 a 10-year repayment time limit.

Federal PLUS (Parent Loan to Undergraduate Students) program

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 variable, capped at 9 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 <http://finaid.cocc.edu/loan/plus>.

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/careerservices/.

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 <http://finaid.cocc.edu/workstudy>.

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 the veterans coordinator 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.

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 applicable 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 have not been received by COCC. Veterans may also be eligible for credit from their military training. Documentation must be provided to Enrollment Services–Admissions and Records.

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 unsatisfactory progress will be reported to the Department of Veterans Affairs (VA) and he/she will not be eligible for veterans educational benefits.

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 required credits with a 2.0 GPA or better in each class, paying for the courses at their own expense. Upon completion of 12 required credits with a 'C' grade or better in each class, student can then submit a Veterans petition requesting reinstatement of Veterans benefits. If all courses apply toward the degree or certificate with the 'C' grade, 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

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 SUPPORT SERVICES

Students can take advantage of COCC's academic support services in these areas:

- Academic Advising (CAP Center)
- Bookstore
- Career Services (CAP Center)
- Computer labs
- Copy Center/Mail Services
- Counseling (CAP Center)
- Developmental/Transitional Studies
- Services for Students with Disabilities
- Library
- Multicultural Center
- Native American Program
- Student email/network account
- Study Abroad Program
- Tutoring and Testing Center

ACADEMIC ADVISING (CAP CENTER)

Academic advising at COCC is provided by both the CAP Center (Career services, Academic advising, and Personal counseling) and by 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 contact information. Students are encouraged to meet with their advisor to develop long-range academic and career plans and are required to do so before the next term's registration. All CDS students are required to meet with an advisor prior to registration (1) if they participated in a group advising session the previous term or (2) as determined by the advisor and at least once a year.

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 online services account. To do so, go to www.cocc.edu and select "My 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.

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 beverage items. 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 North 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.

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, <http://cap.cocc.edu>.

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 <http://cap.cocc.edu> for more information.

COMPUTER LABS

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

Drop-in computer labs are located on the Bend campus in the Barber Library, Pioneer Hall and Cascades Hall and on the Redmond Campus in Building 3. There are computer labs specific to Networking, Computer-Aided Drafting and Design, Science, and Geographic Information Systems on the Bend campus and additional computer classrooms located on both 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 Campus student ID card or COCC print card.

COPY CENTER AND MAIL SERVICES

The Copy Center, located in the Bookstore 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 <http://cap.cocc.edu>. 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.

DEVELOPMENTAL/TRANSITIONAL STUDIES

For those who find that their basic skills need sharpening, the College maintains a Developmental Studies program designed to equip students with the basic writing, mathematics and reading skills needed to succeed at the college level. Using placement test results, advisors will recommend courses that will provide the most help; some of these courses may be pre-college level. These courses are nontransferable but may be extremely valuable for those who need preparation for success in retraining or re-entry into academic studies. See page 35 for more information.

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 <http://campuslibrary.cocc.edu/>. The Library catalog and research databases 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 L-Net's 24/7 chat service. (See the "Ask a Librarian" link on the Library Web page, <http://campuslibrary.cocc.edu/>.)

Computer workstations and wireless access

The Barber Library has 40 networked computer workstations available to students for their own research, as well as wireless accessibility for registered users including COCC and OSU-Cascades patrons, community patrons and campus visitors. For more information, refer to the Wireless Network Web page, <http://its.cocc.edu/services/wireless/>. The Library also houses an electronic classroom and a 38-workstation computer lab.

Library collection

The Barber Library collection consists of reference sources, print and electronic books, print and electronic journals, magazines, DVDs, Web resources and online databases supporting COCC and OSU-Cascades academic programs.

Multimedia equipment

Students, faculty and staff may also check out laptops, 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 provides access to approximately 33 million books, audio-visual materials and more. It is accessible from the main Library Web page, <http://campuslibrary.cocc.edu/>. 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 for materials not available in Summit or for journal articles not found in the Library or on the Library's full text database.



Materials on reserve for classes

Print reserves are available at the circulation desk at the front of the Library. Students also may retrieve a number of reserve materials 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. The Library also collects material related to the history and culture of Central Oregon.

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.

Library events

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

MULTICULTURAL CENTER

The Multicultural Center is located in Room 217, Campus Center Building. The Center fosters cross-cultural understanding and respect by providing a welcoming setting for learning, sharing and connection. It is open to the public and offers cultural activities and information during the academic year.

Visit the Multicultural Center website at www.cocc.edu/mcc. For more information, contact Karen Roth, director of multicultural activities, at 541-383-7412, or krth1@cocc.edu.

NATIVE AMERICAN PROGRAM

The Native American Program provides academic support and mentorship to all Native Americans seeking to further their educational goals. The three main goals of the Native American Program are recruitment, retention, and enrichment for Native American students. The program coordinator offers students individualized assistance as they navigate academic and administrative aspects of student life.

The Native American Program works in conjunction with various campus events aimed at supporting campus diversity and college success including Campus Mosaic, College 101, various on- and off-campus recruiting events, and the Diversity Program's "Season of Nonviolence." The Native American Program also works in partnership with the Educational Committee of the Confederated Tribes of Warm Springs. The Native American program coordinator acts as advisor to the Native American Club. The club members provide their volunteer efforts in the Native American community and the Central Oregon community at large.

For more information, contact the Native American program coordinator at 541-318-3782. The Native American Program operates September through June and maintains a website at <http://nativeamerican.cocc.edu>.

SERVICES FOR STUDENTS WITH DISABILITIES

The Services for Students With Disabilities 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. For more information, visit the SSD website at <http://disability.cocc.edu> or drop in to the office at the Boyle Education Center, Rooms 123-125.

If the need for accommodation exists, it is the student's responsibility to inform the College by contacting the SSD office in a timely manner in order to arrange the specific accommodation(s). Students exhibiting difficulties who have not previously utilized assistance through the Rehabilitation Act may not know of the existence of the SSD office. We encourage referral of students by staff and faculty to the SSD office for consultation and determination of need. Contact Services for Students with Disabilities by calling 541-383-7583 or visit the office in the Boyle Education Center.

STUDENT EMAIL ACCOUNT

All students receive a free COCC email account when they apply for admission. 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. Once logged into a COCC computer, students are also logged into their COCC email accounts.

For off-campus account login, visit the COCC homepage at www.cocc.edu and click the "My Login" button in the upper right-hand corner, then click "Login Now" next to "Web Email." Once logged into the student's COCC email account, the student's personal network folder can also be opened.

Students can find information about their user names and passwords at www.cocc.edu by clicking on the “My Login” button in the upper right-hand corner, then “Login Now” next to Student and Staff Online Services. 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 here along with a comment including the initial password for campus computers, email and Blackboard. The information will not include the correct password if it has been changed. Passwords are case sensitive.

The COCC email account and network account use the same user name and password.

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 also use this account when accessing a wired or wireless connection with their personal computer. Students are responsible for reading and understanding COCC’s Acceptable Use of Technology Resources policy. See <http://cocc.edu/AUP/>.

STUDY ABROAD

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

- Fall Quarter in Florence, Italy. Students experience Italian life, language and culture while living and studying in Florence, the heart of Tuscany. The program offers an unparalleled opportunity for students of art, history and literature to explore a wealth of museums, churches and culture in this most walkable of cities.
- Spring Quarter in London. 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.



- Summer three-week Spanish language immersion program in Guanajuato, Mexico. Students study the language at level 101, 102, 103, 201, 202, 203, 211, 212 or 213 (depending on placement), experience cultural programs and a home stay with a Mexican family in this charming mountain city, a United Nations World Heritage site.
- 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 Greg Lyons, 541-383-7526, glyons@cocc.edu; or Jon Bouknight, 541-330-4394, jbouknight@cocc.edu.

TUTORING AND TESTING CENTER

The Tutoring and Testing Center is located in the lower level of the Library with the Tutoring Annex in the back of the first floor of the Library. The hours of operation are available at <http://tutortest.cocc.edu>. Math tutoring occurs when the COCC Library is open, proctored testing starts a half-hour after the building opens and ends a half-hour before the building closes.

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, 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. Math and computer science and writing tutoring are available at the Redmond Campus. The Writing Center is located adjacent to the Tutoring and Testing Center in the lower level of the Library. Students are encouraged to bring in their writing assignments for one-on-one help with any stage of the writing process. Tutoring sessions for anatomy and physiology, auto-CAD, emergency medical services, forestry, and automotive technology are held in those subject-specific labs.

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 Virtual University Enterprise (www.pearsonvue.com), Prometric APTC (www.prometric.com) and Computer Assisted Testing Service (www.catstest.com/html/silvercats/index.html) FAA test site, the Testing Center’s mission is to provide opportunities for Central Oregonians to obtain academic, professional and standardized testing locally. 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 <http://tutortest.cocc.edu>.

STUDENT SUPPORT SERVICES

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 Student Life office in the Campus Center, 541-383-7590 or visit <http://studentlife.cocc.edu>.

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, <http://ascocc.cocc.edu/>, to find out about current activities and how to get more involved with the student council.

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 2,500 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.

Each year The Broadside offers dozens of students opportunities in reporting, editing, design and layout, 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.

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, snowboarding, soccer (indoor and outdoor), swimming, volleyball and running.



photo by Eugen Helmbrecht

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 <http://sports.cocc.edu> 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 constitution. 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, <http://ascocc.cocc.edu/clubsandprograms>.

FOOD SERVICE

Quality food service is available across campus, with the main campus dining services available in the Campus Center. Visit the Food Service website at <http://www.coccdining.com> for details on locations, prices and options.

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, go to the Student Life Web page, <http://studentlife.cocc.edu/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 541-383-7593, or visit <http://residencelife.cocc.edu> for more information.

Space in Juniper Hall is limited. Students seeking accommodations are encouraged to submit a Housing Application and Contract at their earliest convenience. All paperwork and deadline dates are available online. Upon signing a Housing Application and Contract, students must be prepared to pay a security deposit to guarantee a space in the hall. The room and board rate for the 2011-2012 academic year (fall, winter, spring) is \$8,228 for double occupancy.

Room and Board Package for Juniper Hall

2011-2012	Fall	Winter	Spring	Total
double occupancy	\$ 3,356	\$ 2,996	\$ 1,876	\$ 8,228

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 Student Life office accepts postings electronically on its website from the community for off-campus housing. Available housing options include apartments for rent, rooms for rent in homes, and homes for rent.

To view current submissions, visit http://studentlife.cocc.edu/services/Housing/Off_Campus. 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 our students; however, it does not assume responsibility for screening rentals.



photo by Eugen Helmbrecht

SHUTTLE BUS

A free campus shuttle services the campus during fall, winter and spring terms. 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 or online at <http://campusservices.cocc.edu/shuttle>.

TRANSPORTATION

In addition to the free campus shuttle bus, the City of Bend offers local transit service for the general public, Bend Area Transit (BAT). For more information: www.bendareatransit.com.

SAFETY AND SECURITY SERVICES

The COCC Department of Safety and Security provides 24/7 patrol response to calls for assistance, as well as enforcement of parking and traffic regulations. Evening escorts as well as injury, crime and accident reporting services, are provided by state-certified security officers.

Monday - Friday, 8 a.m. to 5 p.m., 541-383-7733
 After hours, weekends and emergencies, 541-480-2418

All students who park on campus must register their vehicles and display registration decals. Parking permits can be obtained in the Boyle Education Center at either the Safety and Security office or in the Information office. There is no charge for this service. Certain parking areas on campus are reserved for guests, staff and vehicles displaying valid disabled parking decals.

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.

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, 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.

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 concurrent student, special admission student, or any other student participating in credit or noncredit 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 designated as 6-8 credits; three-quarter time, 9-11 credits.

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.

A **subject** is a designated field of knowledge (e.g., history or English).

Lower-division courses are freshman- and sophomore-level courses numbered 100-299.

Upper-division courses are junior- and senior-level courses offered through four-year colleges and universities. Generally they are numbered 300-499.



photo by David Morris

COURSE NUMBERING

Courses with subject names (e.g., Math 111) and numbered **100-299** are designed to meet COCC certificate or degree requirements.

Courses with subject names (e.g., Math 065) and numbered **below 100** do not normally transfer to four-year institutions.

Adult continuing education courses are nontransferable 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.

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 online services 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
<i>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.</i>		
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.



photo by David Morris

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. Additionally, if an instructor does not submit a grade, the Enrollment Services - Admissions and Records office will assign an "IP" grade.

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.



photo by David Morris

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 reflects discrimination in some form, the student has recourse through the College's grade appeal procedure.

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.

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 will have an asterisk by their name in the annual commencement program.

REPEAT GRADE POLICY

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

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. If students wish to use the grade repeat policy for music or theater performance, studio art, Cooperative Work Experience and HHP activity classes, they must complete a student petition and submit it to the Admissions and Records office; the course repeat policy will automatically happen for all other coursework. 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).

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 mailed a letter 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 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.) They 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).

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 pages 15-16.)

If students are preregistered and fail to complete the petition, their registrations will be voided and a full-tuition 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 may appeal their suspension, in writing, to COCC’s vice president for instruction, as outlined in the College’s Concerns Procedure (see page 34).
3. Students on academic warning may not be self-advised, and students who were self-advised must meet with an advisor.
4. Students may not change advisors while on academic warning.

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 which 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 degree.

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 <http://visitors.cocc.edu/About/Procedures/> and select "Academic Procedures" for complete details.

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 evaluate the transcript toward the certificate or degree listed on the student's admission



photo by Andy Tullis

application. The evaluation will be placed in the student's permanent file for use when a degree audit is requested, and a copy will be mailed to the student.

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.

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).

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.

Military credit

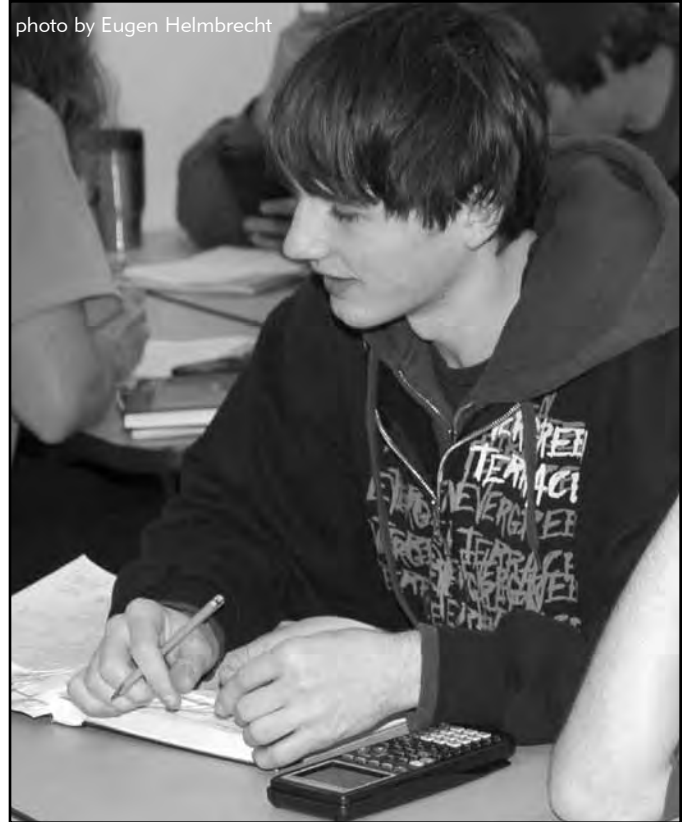
Military credit will be evaluated as follows:

- The ACE guidelines will be used with discretion 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.

Advanced Placement (AP), the College Level Examination Program (CLEP) and International Baccalaureate

CLEP and International Baccalaureate (IB) results and international credentials will be evaluated as follows:

- 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. AP and CLEP test scores are accepted as follows:



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 German Language, score 3	GER 101, 102, 103
AP German Language, score 4	GER 103, 201, 202
AP German Language, score 5	GER 201, 202, 203
AP 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

College Exam Program (CLEP) will be evaluated at COCC as listed below.

CLEP English Comp, No credit, prefer challenge
 CLEP Humanities, min score 50 9 credits of Arts and Letters discipline studies list
 CLEP Am Lit, minimum score 50 ENG 253, 254, 255
 CLEP Eng Lit, minimum 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
 German: score 50 GER 101, 102, 103
 German: score 60 GER 201, 202, 203
 Spanish: score 50 SPAN 101, 102, 103
 Spanish: score 60 SPAN 201, 202, 203

CLEP General Math No credit
 CLEP College Algebra, score 50 MTH 111
 CLEP Calculus with Elem. Function, score 50 MTH 251
 CLEP Calculus with Elem. Function, score 60+ MTH 251, 252

CLEP Biology, minimum score 50 BI 101, 102, 103
 CLEP Chemistry, minimum score 50 CH 221, 222, 223
 CLEP General Exam in Natural Sciences, minimum score of 50 9 non-lab science credits for "additional courses" or electives

CLEP Princ of Mgmt., minimum score 70 . . . equivalent course credit as elective in business
 CLEP Accounting, minimum score 70 equivalent course credit as elective in business
 CLEP Intro Business Law, min score 70 equivalent course credit as elective in business
 CLEP Princ of Marketing, min score 70 equivalent course credit as elective in business

CLEP US History I minimum score 50 HST 201
 CLEP US History II minimum score 50 HST 202
 CLEP Western Civ I minimum score 50 HST 101
 CLEP Western Civ II, minimum score 50 HST 103
 CLEP both Western CIV I and II with minimum scores of 50 HST 101, 102, 103
 CLEP Sociology, minimum score of 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.

International Baccalaureate

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. Students should allow 6-8 weeks for credit to be evaluated and appear as part of their student records.

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 52-189. The applicability of such transfer credit will be evaluated as is credit from U.S. institutions.
- NAFSA: 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.

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 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 36-37 for a listing of degree requirements between COCC and various universities.

STUDENT EDUCATIONAL RECORDS AND DIRECTORY INFORMATION

Enrollment Services – 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 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.

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.

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 Enrollment Services – Admissions and Records, 541-383-7500 or welcome@cocc.edu, for a copy of the procedure, or view it online at <http://hr.cocc.edu/Jobs/Equal+Opportunity/Complaints>.

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 Central Oregon Community College. 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. The Student Rights and Responsibilities Handbook is available online at <http://studentlife.cocc.edu/Policies/Rights+and+Responsibilities>.

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.

Complete information, including Oregon state laws, where employees and students can find assistance, health risks associated with the use of illicit drugs and the abuse of alcohol, and warning signals, is available in a flier entitled "Making Choices for Life." The flier is available at the offices of Admissions and Records and Student Life.

NONDISCRIMINATION POLICY

It is the policy of the Central Oregon Community College Board of Directors that there will be no discrimination or harassment on the basis of age, disability, gender, marital status, national origin, color, race, religion, sexual orientation or veteran status in any educational programs, activities or employment. Persons having questions about equal opportunity and nondiscrimination 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. During high fire danger periods, smoking will be banned completely.

TRANSITIONAL STUDIES

PRE-COLLEGE COURSEWORK

For those who find that 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 nontransferable, but 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 noncredit, and
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.

NONCREDIT ADULT BASIC SKILLS

Noncredit Options

Adult Basic Skills (ABS) provides an effective and affordable means for a successful transition to the college setting. Support is offered for English language learners and GED/College Prep students as well as courses for refreshing students' skills in math, writing and reading. Contact the Adult Basic Skills office, 541-504-2950, for details.

English Language Learning (ELL)

ELL classes are for those who need to learn to speak, read or write in English or need to take classes to earn U.S. citizenship. Classes are offered at convenient times and locations throughout Central Oregon.

GED College Preparation

The General Education Development (GED) certificate indicates that those completing it have the same abilities as high school graduates. It is accepted by colleges, training schools and employers nationwide. At COCC, students are prepared for and gain the necessary skills to pass the GED test. Students are also provided with secondary skills to achieve success in college credit classes.

The GED test covers five areas: language arts reading; language arts writing; social studies; science; and math. Each area must be passed with a minimum score of 410 and an average of 450 for all testing areas. A short essay is also required. The test is offered throughout the state and two specific locations in Central Oregon. Tuition is affordable and books are available to help with studies.

Adult High School Diploma (AHSD)

This program is for those who did not graduate from high school but are only a few credits short of doing so. Credits may be earned by taking a combination of online high school courses through COCC's AHSD program and COCC credit classes. Tuition is required for each half credit plus book expenses, as well as a transcript evaluation fee.

Credit Recovery

Those who need high school credit and enjoy studying independently using the Internet can participate in COCC's credit recovery program. Public and private high school students can use these online courses to maintain their status during absences, regain failed credits or graduate early. Students are referred to this program by their high school counselor.

PRE-COLLEGE LEVEL CREDIT CLASSES

Credit Options

Several academic departments 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.

Check the current course schedule for convenient times and location: http://current.cocc.edu/Degrees_Classes/schedule.

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 75	Basic Writing I
WR 95	Basic Writing II
HD 100CL	Introduction to College Life
HD 100CS	College Success
HD 100NT	Note Taking
HD 100OL	Exploring Online Learning
HD 100 PM	Procrastination & Motivation
HD 100SC	Success in the Classroom
HD 100TM	Time Management
HD 100TT	Test Taking
HD 100VC	Values Clarification
HD 101	Study Strategies

PATHWAYS 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, allowing students to choose their program based on their educational goals.

GENERAL EDUCATION OUTCOMES

As part of its commitment to learning and to student success in transfer and career programs, COCC has adopted the following outcomes for general education (the foundational and discipline studies requirements for its degrees):

Aesthetic Engagement

Students will engage in informed discussion of the meaning and value of aesthetic expression.

Communication

Students will speak, read, write and listen effectively.

Critical Thinking

Students will analyze, interpret and synthesize ideas and information.

Cultural Awareness

Students will explain how cultural context shapes human perceptions and values.

Health Choices

Students will identify responsible health and safety procedures.

Quantitative Reasoning

Students will apply appropriate mathematics to analyze and solve problems.

Scientific Reasoning

Students will apply scientific inquiry to arrive at informed conclusions.

Technology and Information Literacy

Students will use computer technology to gather, process and communicate information.

Values and Ethics

Students will evaluate the ethical dimensions of arguments and the consequences of decisions.

TRANSFER/BACHELOR DEGREE PREPARATION

Students wishing to attend COCC and use these credits toward a bachelor's degree have several options that range from completing individual courses to completing an associates 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



photo by Candace Bowman

(OTM), Associate of Arts Oregon Transfer (AAOT), Associate of Science (AS), Associate of Science - Direct Transfer to Oregon State University (AS-DT), Associate of Science Oregon Transfer - Business, and various articulation agreements with our two- and four-year partners.

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 the CAP Center advisors can assist students with locating this information.

COCC partners with several colleges and universities to offer students a seamless transfer among institutions for certain majors. Current articulation agreements are as follows, and some degree requirements can be found on pages 50-130 in the catalog. Contact the COCC Admissions and Records office for requirements not listed on these pages.

Eastern Oregon University

Note that all of these degree options are available via online education and on the EOU Campus. Interested students should contact Brenda McDonald, EOU Distance Education coordinator, at 541-385-1137, or bmcdonal@eou.edu.

- Anthropology/Sociology
- Business Administration
- Business Economics
- English
- Fire Science Administration
- Physical Activity and Health
- Philosophy, Politics and Economics
- Psychology
- Liberal Studies: Small City and Rural County Management, Environmental Studies, Business and Health Promotion, Organizational Psychology, Early Childhood Education

Linn Benton Community College

Linn-Benton Community College (LBCC) offers a distance education program in Diagnostic Imaging (Radiological Technology). Students may complete their prerequisite coursework through COCC and complete the LBCC Radiological Technology coursework through a variety of distance education methods. Students who live in the COCC District apply for the Diagnostic Imaging program through COCC.

Oregon Institute of Technology

- Specific COCC coursework is aligned with requirements for OIT's Medical Imaging Technology program.
- Associate of Science degree is articulated with OIT's Bachelor of Science degree in Information Technology - Health Informatics option.

Oregon State University-Cascades

(See Associate of Science - Direct Transfer degree option, page 43.)

Portland Community College

Portland Community College offers an Associate of Applied Science degree in Medical Laboratory Technology. Students complete the program prerequisites and general education requirements at their local community college and the MLT program requirements through PCC's Distance Education program. Students in the Extension program may occasionally meet with instructors; however, all of the MLT coursework is completed online. Clinical lab experiences are provided in Central Oregon at Cascade Health Care Community.

Southern Oregon University

AAS in Early Childhood Education articulated with Bachelor of Arts/Sciences in Early Childhood Development.

CERTIFICATE AND ASSOCIATE DEGREE GENERAL REQUIREMENTS

Degree/certificate 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.

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 40-48)
- 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. The student's choice of catalog years is based upon the student's attendance and the most recent year that the student applied to COCC:
 - 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 of more than four consecutive terms, 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 within the term immediately following the last term attended at COCC, excluding summer, and meets degree requirements listed in the current college catalog or the previous two catalogs.
 3. The student left COCC prior to completing degree requirements but through subsequent transfer credit meets degree requirements currently in effect at the time of final degree evaluation and award.



photo courtesy of Wally Kempe & Associates

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.

Career and Technical Education certificates of completion

- 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, drafting and medical transcription). 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.
- Range from one to six terms, noting that many of the allied health technical courses start fall or winter terms only (general education coursework can be done prior to, during or after completing technical courses).
- 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.

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.

Computer competency requirement

Some COCC associate degrees (AS, AAS and AGS) require that students 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. 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 that they 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).

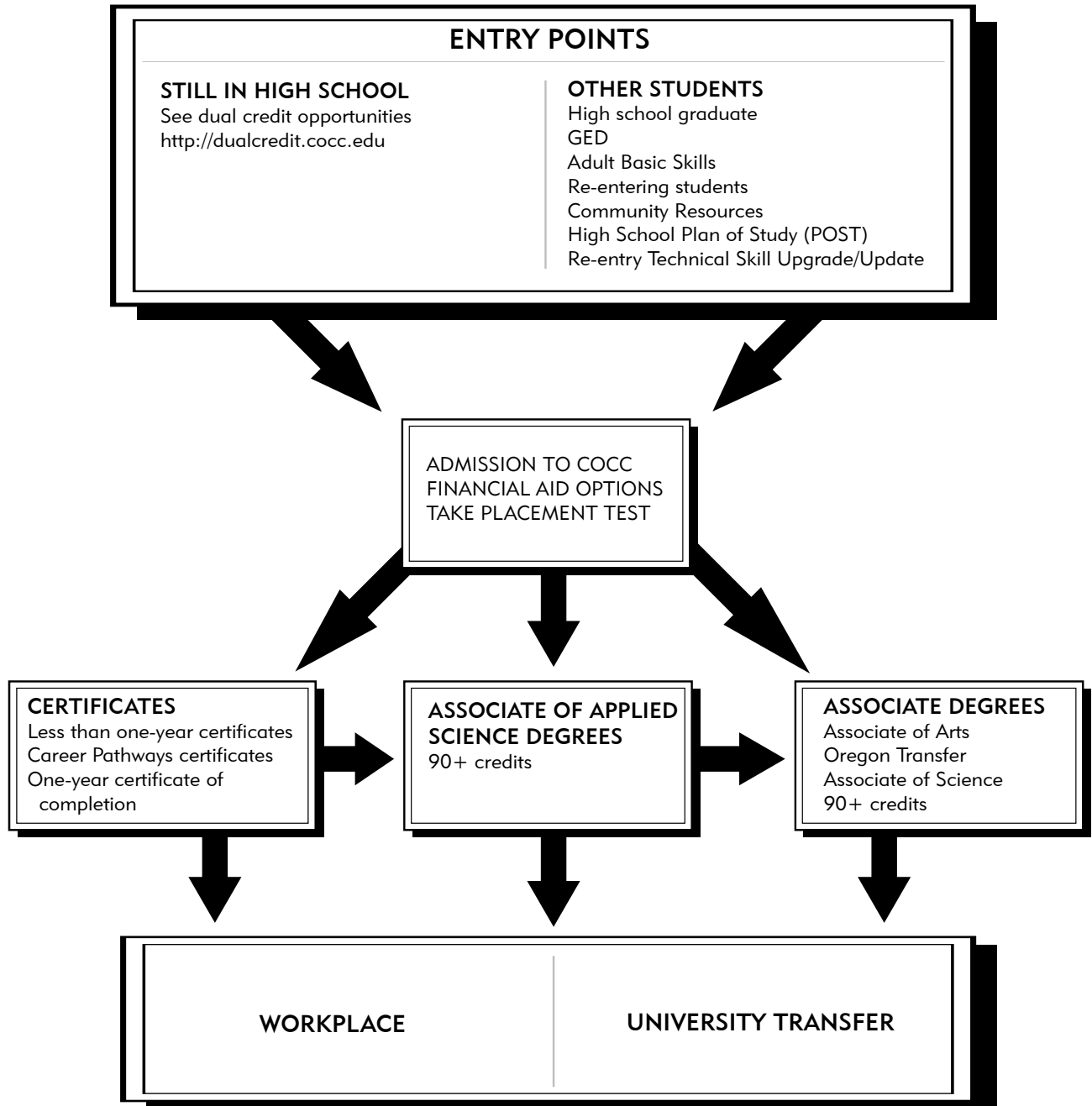
Note: CIS courses may be required in some AS or AAS programs and the competency test will not substitute for that requirement; see individual program descriptions for details.

Graduation/Commencement Ceremony

Students who wish to earn a certificate or associate degree from COCC must submit a degree application to the Admissions and Records office at least two terms prior to the intended term of completion. After evaluation, students receive a copy of their degree evaluation confirming the completed courses that apply toward the certificate or degree program and indicating any remaining requirements. 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 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 graduation application to the Admissions and Records office 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 to the Admissions and Records office and attend the commencement rehearsal.

CAREER PATHWAYS



Pathways to Success: Degree Options

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 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 49 and 50. 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

_____ w/lab _____ 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 50 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

TOTAL CREDITS FOR AAOT DEGREE	
(90 credits)	_____

(continued on next page)

ASSOCIATE OF ARTS OREGON TRANSFER DEGREE WORKSHEET *(continued)***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 52-189 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 copies of their 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.

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 a degree application to Admissions and Records;
- Owe no debt to the College;
- Fulfill catalog year requirement as outlined on page 37.

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. Here, 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: <http://www.ous.edu/stucoun/prospstu/transfer.php>
- 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. Students should keep in mind, however, that the AAOT does not guarantee that two additional years will suffice to earn a baccalaureate degree. That 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's not uncommon 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 105 or higher
 _____ 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 49 and 50.

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 50 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

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

ASSOCIATE OF SCIENCE DEGREE WORKSHEET *(continued)*

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 transcript and diploma. The degree is not associated with a major.

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.

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 copies of their 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.

Graduation requirements

Complete all 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 a degree application to the Admissions and Records office;
- Owe no debt to the College;
- Fulfill catalog year requirement as outlined on page 37.

Associate of Science - Direct Transfer to Oregon State University-Cascades Campus (AS-DT)

(See individual program descriptions for course requirements.)

- Designed for students who plan to transfer to and receive a degree from Oregon State University-Cascades Campus.
- Guarantees 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 transcript and diploma.

Available for the following major:

Bachelor of Science in Tourism and Outdoor Leadership, options in Tourism and Commercial Recreation Management, International Ecotourism or Outdoor and Experiential Education

Associate of Science - Oregon Transfer, Business Degree

(See page 94 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 *(continued)***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) areas are provided on pages 52-189.

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 copies of their 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.

Graduation requirements (Complete all requirements listed below)

- Complete all AAS degree requirements, as listed on pages 52-189;
- Earn a minimum 2.0 cumulative COCC grade-point average;
- Complete at least 24 COCC degree-applicable credits;
- Submit a degree application to the Admissions and Records office;
- Owe no debt to the College;
- Fulfill catalog year requirement as outlined on page 37.

ASSOCIATE OF GENERAL STUDIES DEGREE WORKSHEET

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 (choose one of the following)

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

Mathematics (minimum three credits)

MTH 31, 60, 85, BA 104 or MTH 100+ level

_____ 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 49 and 50. 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

Choose one (1) course from the Arts and Letters discipline studies list, page 49.

_____ CL _____ cr

Physical/Biological Lab science

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

_____ w/lab _____ cr

Social Science

Choose one (1) course from the Social Science discipline studies list, page 50.

_____ CL _____ 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 *(continued)*

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 copies of their 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.

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 a degree application to the Admissions and Records office;
- Owe no debt to the College;
- Fulfill catalog year requirement as outlined on page 37.



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 49).

_____ cr
 _____ cr
 _____ cr

Science/Math/Computer Science

Three courses from the COCC science/math/computer science discipline studies list (pages 49 and 50), 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 50).

_____ cr
 _____ cr
 _____ cr

ELECTIVES

As required to bring overall credits to 45 credits. Courses must be from COCC's discipline studies list, pages 49 and 50.

_____ cr
 _____ cr
 _____ cr

<p>TOTAL CREDITS FOR OREGON TRANSFER MODULE</p> <p>(45 credits) _____</p>
--

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 copies of their 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;
- Fulfill catalog year requirement as outlined on page 37.

Advisor notes

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

*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)
 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 212W Autobiography (4 credits)
 *ENG 221 Intro to Children's Literature (4 credits)
 ENG 232C Topics in American Literature: Contemporary Fiction (4 credits)
 ENG 232M Topics in American Literature: Literature & 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 210 Culture & Literature of Asia (4 credits)
 *HUM 211 Culture & Literature of Africa (4 credits)
 *HUM 212 Culture & Literature of the Americas (4 credits)
 *HUM 213 Culture & 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 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)
 PHL 170 Philosophy of Love and Sex (3 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)
 PHL 205 Medical Ethics (3 credits)
 *SPAN 201, 202, 203 Second Year Spanish I, II, III (4 credits each)
 *SPAN 211, 212, 213 Spanish Conversation & Culture I, II, III (3 credits each)
 *SP 115 Into Intercultural Communication (3 credits)
 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 Women's and Gender Studies (4 credits)

(*Counts as a cultural literacy course

Science/Math/Computer Science discipline studies course options

Anth 230 Biological Anthropology (4 credits)
 **BI 101, 102, 103 General Biology I, II, III (4 credits each)
 * 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 (4 credits each)
 **CH 221, 222, 223 General Chemistry I, II, III (5 credits each)
 **CH 241, 242, 243 Organic Chemistry I, II, III (5 credits each)
 CIS 160 Computer Science Orientation (4 credits)
 CIS 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 162 Regional Geology (3 credits)
 **G 201, 202, 203 Geology I, II, III (4 credits each)
 **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)
 **G 162 Regional Geology (3 credits)
 GEOG 209 Physical Geography Weather and Climate (4 credits)
 GEOG 265 Geographic Information Systems (4 credits)
 HHP 220 Introduction to Epidemiology (3 credits)
 HHP 259 Care & 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 211W, 212W, 213W Fundamentals Elementary Math I, II, III (4 credits each)
 MTH 231, 232 Discrete Mathematics I, II (4 credits)
 MTH 241 Calculus for Management/Social Science (4 credits)
 MTH 243 Math for Management/Life/Social Science (4 credits)
 MTH 244 Introduction to Methods of Probability & Statistics (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 222 Animal Behavior (4 credits)

**Counts as a lab science course)

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 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)
 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 208 Physical Geography Landforms and Water (4 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 (3 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)
 *HST 201, 202 History of the US (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)
 PSY 201 Mind and Brain (4 credits)
 *PSY 202 Mind and Society (4 credits)
 *PSY 207 Applied Psychology (3 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 250 Sociology of Popular Cultures (4 credits)

(*Counts as a cultural literacy course

**Counts as a lab science course)

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
 CCI All courses
 CIS All courses except CIS 16X, CIS 275 and CIS 276
 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
 HIT All courses
 LMT All courses
 MFG All courses
 MA All courses
 NUR All courses
 OA All courses

HUMAN RELATIONS LIST

ANTH 103 Cultural Anthropology (4 credits)
 BA 285 Business Human Relations (3 credits)
 ED 219 Multicultural Issues in Education Settings (3 credits)
 FOR 211 Supervision and Leadership (3 Credits)
 GEOG 107 Cultural Geography (4 credits)
 HS 162 Effective Helping Skills I (3 credits)
 HS 208 Multicultural Issues Human Services (4 credits)
 PSY 207 Applied Psychology (3 credits)
 PSY 216 Social Psychology (4 credits)
 SOC 201 Introduction to Sociology (4 credits)
 SOC 206 Social Psychology (4 credits)
 SP 218 Interpersonal Communication (3 credits)

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 52-189.

	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	52	53	54										121 121
Anthropology			55										123
Apprenticeship	56	56											184
Boiler Operator	56	57						186	187		188		
Boiler/Turbine Operator	59	60											125
Limited Maintenance Electrician	62	63									128	130	130
Manufacturing Plant Electrician	65	66						127					
Millwright	68	69						127					
Sheet Metal	71	72						127					
Art				74	74								
Automotive Management			75										
Automotive Technology													
Auto Drive Train Technician	78												
Auto Electrical Technician (Basic)	78												
Auto Electrical Technician (Advanced)	78												
Auto Engine Technician	79												
Auto Engine Performance Technician	78												
Auto Heating and Air Conditioning Technician	79												
Master Auto Technician		80											
Under-car Technician	79							137					
Aviation Professional Pilot - Airplane			84										
Aviation Professional Pilot - Helicopter			85										
Biology				86	86								
Botany (see Biology)				86									
Business Administration			92	94	94								
Accounting	87	92											
Entrepreneurship	88	93											
Hotel, Tourism and Recreation Management		93											
Information Systems Management		93											
Management		93											
Marketing	89												
Office Assistant	90												
Retail Management	91	93											
Chemistry				95	95								
Computer and Information Systems	96	97											
Computer Aided Drafting (CAD)	96	99											
Desktop Support		99											
Networking		99											
Web Development/Database		99											
Criminal Justice			102	104									
Juvenile Corrections	101												
Culinary Arts	106	108											
Baking and Pastry Arts		107											
Kitchen Prep	105												
Dental Assisting	110												
Dental Hygiene – Pre				176									
Dentistry – Pre				179									
Dietary Manager	112												
Early Childhood Education			113	115	115								
Economics				116									
Education				117	117								
Emergency Medical Services				118									
Engineering				174									
English/Literature													121 121
Exercise Science													123
Fire Science – Structural													184
Fire Science – Wildland Fire/Fuels Mgmt								186	187		188		
Foreign Languages													125
Forest Resources Technology													128 130 130
Advanced Forest Concepts								127					
Conservation of Natural Resources								127					
Forest Ecology								127					
Forest Measurements								127					
Forest Protection								127					
Mapping/Cartography								127					
General Science													131 131
Geographic Information Systems (GIS)								132			133		
Geography													135
Geology													136 136
Health Information Technology													139
Coding Competency											138		
Insurance								137					
Medical Office Specialist											137		
Medical Billing Specialist											138		
Medical Transcription											137		
Health Promotion													141
History													142 142
Humanities													143
Law – Pre													177
Manufacturing Technology													148 151 153
CNC Machining											145		
Industrial Maintenance											146		
Manual Machining											147		
Quality Assurance											149		
Welding											150		
Massage Therapy											156	156	157
Mathematics													158 158
Medical Assistant											159		
Medical Imaging – Pre													180
Medical (Pre) Lab Technology													178
Medicine – Pre													179
Microbiology (see Biology)													86
Military Science													162 162
Music													163
Nursing											167		168
Oregon Green Technology											169		
Outdoor Leadership													170 170
Pharmacy Technician											172		
Physics													174
Political Science													175 175
Psychology													181 181
Radiology Technologist – Pre													124
Science (General)													131 131
Sociology													182
Speech Communication													183 183
Veterinary – Pre													179

Pathways to Success: Degree Options

* pending State approval

ADDICTIONS STUDIES

Certificate of Completion
61 credits

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Addictions Studies

PROGRAM DESCRIPTION

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.

ASSOCIATE OF APPLIED SCIENCE

After obtaining the CADC I credential, students looking for more advanced opportunities in the field should complete the Associate of Arts or 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
- Video taping fees for two terms: 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 65/75/95 (C or better)
- Students should have basic computer competency skills

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. If you believe that your past history may interfere with your ability to complete the program of study or to obtain licensure or certification in your chosen field, you should contact the appropriate state board or 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

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

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 <http://mvines.cocc.edu/>.

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 1. 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.

PROGRAM COURSE REQUIREMENTS

General education/foundational requirements

Students must complete each required course with a grade of "C" or better.

WR 121	English Composition	4
MTH 031	Health Care Math	3

Students must complete each required course for the Addiction Studies certificate with a grade of "C" or better.

HS 161	Ethics for Human Services	4
HS 162	Effective Helping Skills	3
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	Groups and Addictions Treatment	3
HS 208	Multicultural Issues in Human Services	4
HS 210	Dual Diagnosis	4
HS 223	Drugs and Addictions	3
HS 260	Counseling Theories	3
HS 262	Effective Helping Skills II	3
HS 263	Counseling the Chemically Dependent Client	3
HS 266	Case Management for the Chemically Dependent Client	4
HS 291	Practicum Addictions Treatment	3
HS 291	Practicum Addictions Treatment	3
HS 291	Practicum Addictions Treatment	3

ADDICTIONS STUDIES

Associate of Applied Science (AAS) Degree
93 credits

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Addictions Science

PROGRAM DESCRIPTION

The AAS degree prepares students academically for the CADC II certification. Individuals will need an additional 3,000 hours (for a total of 4,000) to sit for this exam. For more information: <http://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 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. If you believe that your past history may interfere with your ability to complete the program of study or to obtain licensure or certification in your chosen field, you should contact the appropriate state board or the program director.

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 218	Interpersonal Communication	
or SP 219	Small Group Communication	
MTH 31	Health Care Math	3
MTH 60	Algebra	4
Health	(3 credits with HHP prefix)	3
HHP activity courses (1 credit each) are not to be duplicated		
HS 161	Ethics for Human Services	4

General education/discipline studies

Complete a minimum three credits of discipline studies courses. The courses must be outside of the AAS program area and each must have a different prefix. Students may need additional coursework to reach the 93 minimum credits required for the Addictions Studies AAS degree. See advisor for details.

Electives

CJ 243	Drugs and Crime in Society	3
HS 162	Effective Helping Skills	3
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	Groups and Addictions Treatment	3
HS 208	Multicultural Issues in Human Services	4
HS 210	Dual Diagnosis	4
HS 223	Drugs and Addictions	3
HS 260	Counseling Theories	3
HS 262	Effective Helping Skills II	3
HS 263	Counseling/Chemically Dependent Client	3
HS 266	Case Management	4
HS 291	Practicum	9
PSY 202	Mind and Society	4
PSY 219	Abnormal Psychology	4
PSY 233	Violence and Aggression ¹	4

¹ Recommended elective.

ADDICTIONS STUDIES

Associate of Arts Oregon Transfer (AAOT) Degree
93 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 the appropriate course planning, all lower-division major requirements may also be met.

General education/foundational requirements

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

Health	(3 credits with HHP prefix)	3
HHP activity courses (1 credit each) are not to be duplicated		
MTH 105	Intro to Contemporary Mathematics	4
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		
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	
WR 121	English Composition	4
WR 122	English Composition	4
or WR 227	Technical Writing	

General education/discipline studies

(One of the courses must be a cultural literacy course.)

HS 208 Multicultural Issues in Human Services fulfills this requirement.

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.

Electives (32 credits)

32 credits from the Addictions Studies Certificate will be applied toward elective credits. No additional elective credits are needed to earn the AAOT.

Additional advising information and recommendations

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.

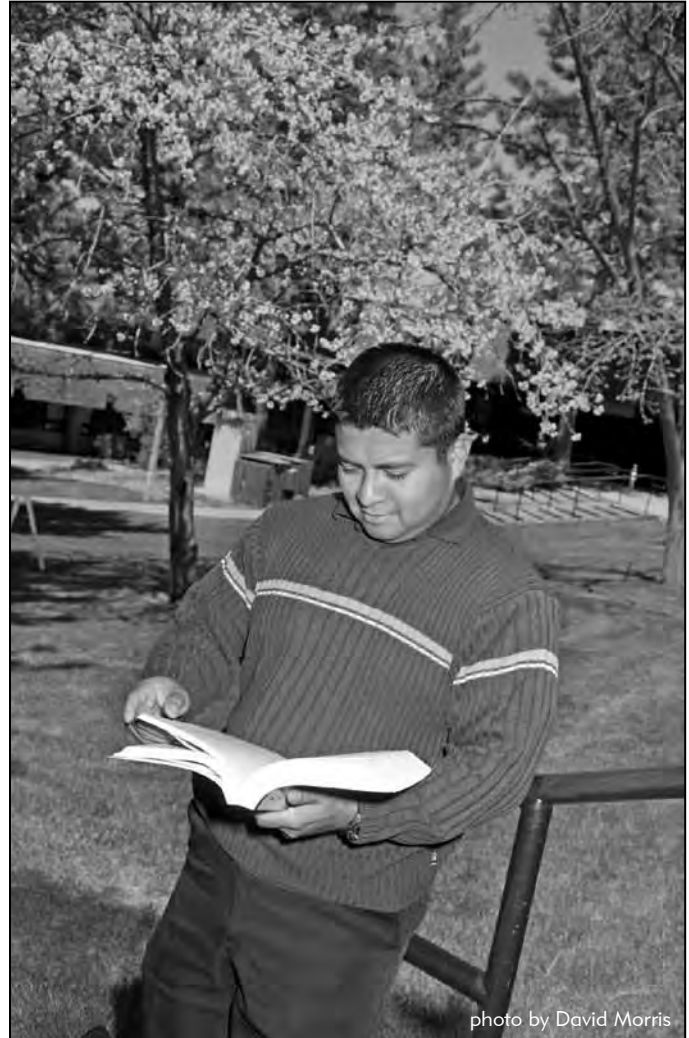


photo by David Morris

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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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

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 49 and 50 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
ANTH 230	Biological 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.

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-level statistics course. Taking MTH 243: Math for Management/Life/Soc Science and MTH 244: Intro to Method of Probability and Stats 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.

APPRENTICESHIP

BOILER OPERATOR
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 trades listed below. 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 & 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 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 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 (16 credits)

APR 121	Boiler Oper 1 - Stationary Eng Principles	4
APR 122	Boiler Oper 2 - Boiler Accessories	4
APR 221	Boiler Oper 3 - Boiler Operation	4
APR 222	Boiler Oper 4 - Steam Usage	4

APPRENTICESHIP

BOILER OPERATOR

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 trades listed below. 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 & 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 & Maintenance Technology Apprenticeship takes an apprentice above and beyond the standard related training classes which 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 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 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

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.

(continued on next page)

APPRENTICESHIP**BOILER OPERATOR** *(continued)*

Associate of Applied Science (AAS) Degree
94-99 credits

PROGRAM COURSE REQUIREMENTS**Boiler operator related training**

APR 121	Boiler Oper 1 - Stationary Eng Principles	4
APR 122	Boiler Oper 2 - Boiler Accessories	4
APR 221	Boiler Oper 3 - Boiler Operation	4
APR 222	Boiler Oper 4 - Steam Usage	4

Industry Electives to bring trade-specific related 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 & 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 II	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

Math

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 2011-2012 Human Relations list, see page 50	3
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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 journeyperson's card to be awarded 11 credits in recognition of 4000 hours of on-the-job training.

11

TOTALS: 94-99 credits

APPRENTICESHIP

BOILER/TURBINE OPERATOR

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 trades listed below. 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 & 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 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 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 Oper 1 – Stationary Eng Principles	4
APR 122	Boiler Oper 2 – Boiler Accessories	4
APR 221	Boiler Oper 3 – Boiler Operation	4
APR 222	Boiler Oper 4 – Steam Usage	4
APR 223	Turbine Oper 1 – Applied Mechanics	4
APR 224	Turbine Oper 2 – Instrumentation	4
APR 225	Turbine Oper 3 – Thermodynamics	4
APR 226	Turbine Oper 4 – Electrical Theory	4

Total related-training credits: 32

Related instruction/general education

Computation/Math

MTH 85	Technical Mathematics I	4
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Communications

WR 121	English Composition	4
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Human Relations

PSY 207	Applied Psychology	3
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Total General Education credits: 11

TOTAL CREDITS: 43

APPRENTICESHIP

BOILER/TURBINE OPERATOR

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 trades listed below. 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 & 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 & Maintenance Technology Apprenticeship takes an apprentice above and beyond the standard related training classes which 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 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 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 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.

(continued on next page)

APPRENTICESHIP

BOILER/TURBINE OPERATOR *(continued)*
 Associate of Applied Science (AAS) Degree
 94-99 credits

PROGRAM COURSE REQUIREMENTS

Boiler/turbine operator-related training

APR 121	Boiler Oper 1 - Stationary Eng Principles	4
APR 122	Boiler Oper 2 - Boiler Accessories	4
APR 221	Boiler Oper 3 - Boiler Operation	4
APR 222	Boiler Oper 4 - Steam Usage	4
APR 223	Turbine Oper 1 - Applied Mechanics	4
APR 224	Turbine Oper 2 - Instrumentation	4
APR 225	Turbine Oper 3 - Thermodynamics	4
APR 226	Turbine Oper 4 - Electrical Theory	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

Math

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 2011-2012 Human Relations list, see page 50	3
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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 journeyperson's card to be awarded 22 credits in recognition of 8,000 hours of on-the-job training.	22
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TOTALS: 94-99

APPRENTICESHIP**LIMITED MAINTENANCE ELECTRICIAN**

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 trades listed below. 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 & 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, Lmt'd 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 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

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

APPRENTICESHIP

LIMITED MAINTENANCE ELECTRICIAN

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 trades listed below. 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 & 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, Lmtd Maintenance Electrician

PROGRAM DESCRIPTION

Earning an AAS degree in Electrician Apprenticeship Technologies takes an apprentice above and beyond the standard related training classes which 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.

(continued on next page)

APPRENTICESHIPLIMITED MAINTENANCE ELECTRICIAN *(continued)*

Associate of Applied Science (AAS) Degree

94-99 credits

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 related 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 & 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

Math

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 2011-2012 Human Relations list, see page 50	3
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Additional elective credits	9
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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

TOTALS: 94-99

APPRENTICESHIP

MANUFACTURING PLANT ELECTRICIAN

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 trades listed below. 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 & 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 Plnt 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 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

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

Computation/Math

MTH 85	Technical Mathematics I	4
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Communications

WR 121	English Composition	4
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Human Relations

PSY 207	Applied Psychology	3
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TOTAL general education credits: 11

TOTAL PROGRAM CREDITS: 43

APPRENTICESHIP

MANUFACTURING PLANT ELECTRICIAN

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 trades listed below. 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 & 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 Plnt Electrician

PROGRAM DESCRIPTION

Earning an AAS degree in Electrician Apprenticeship Technologies 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 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 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

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.

(continued on next page)

APPRENTICESHIP
MANUFACTURING PLANT ELECTRICIAN *(continued)*
 Associate of Applied Science (AAS) Degree
 94-99 credits



photo by Eugen Helmbrecht

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

Math

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 2011-2012 Human Relations list, see page 50	3
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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 journeyperson’s card to be awarded 22 credits in recognition of 8,000 hours of on-the-job training.	22
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TOTALS: 94-99

APPRENTICESHIP**MILLWRIGHT**

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 trades listed below. 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 & 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 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 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 Tech I	3
MFG 105	Welding Tech 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 Weld I	2
MFG 205	Drill Press	2

Plus 5 credits from the following courses:

MFG 107	Welding Tech 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**Computation/Math**

MTH 85	Technical Mathematics I	4
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Communications

WR 121	English Composition	4
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Human Relations

PSY 207	Applied Psychology	3
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Total general education credits: 11

TOTAL CREDITS: 46

APPRENTICESHIP

MILLWRIGHT

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 trades listed below. 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 & 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 & Maintenance Technology Apprenticeship takes an apprentice above and beyond the standard related training classes which 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.

(continued on next page)

APPRENTICESHIPMILLWRIGHT *(continued)*

Associate of Applied Science (AAS) Degree

94-99 credits

PROGRAM COURSE REQUIREMENTS**Millwright apprentice related training**

MFG 101	Blueprint Reading	2
MFG 103	Welding Tech I	3
MFG 105	Welding Tech 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 Tech 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

Math

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 2011-2012 Human Relations list, see page 50	3
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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 journeyperson's card to be awarded 22 credits in recognition of 8,000 hours of on-the-job training.	22
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TOTALS: 94-99

APPRENTICESHIP

SHEET METAL

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 trades listed below. 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 & 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 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.

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 & 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

Computation/Math

MTH 85	Technical Mathematics I	4
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Communications

WR 121	English Composition	4
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Human Relations

PSY 207	Applied Psychology	3
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Total general education credits: 11

TOTAL CREDITS: 54

APPRENTICESHIP

SHEET METAL

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 trades listed below. 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 & 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, Sheet Metal

PROGRAM DESCRIPTION

Earning an AAS degree in Construction Trades, General Apprenticeship takes an apprentice above and beyond the standard related training classes which 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.

(continued on next page)

APPRENTICESHIP

SHEET METAL *(continued)*

Associate of Applied Science (AAS) Degree
94-99 credits



photo by Eugen Helmbrecht

PROGRAM COURSE REQUIREMENTS

Sheet metal apprentice related training

APR 141	Sheet Metal Core Curriculum	4
APR 142	Sheet Metal 1	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 & 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 related training to 46 credits

MFG 105	Welding Technology II	3
MFG 110	Mfg Processes I	3

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

Math

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 2011-2012 Human Relations list, see page 50	3
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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 journeyperson's card to be awarded 22 credits in recognition of 7,200 hours of on-the-job training.	22
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TOTALS: 94-99

ART

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

COCC's Art program includes courses in art history, basic design, painting, ceramics, jewelry and metalwork, drawing, photography, figurative sculpture and watercolor. COCC's main art facility, Pence Hall, houses art studios equipped with drawing tables, easels, potter's wheels and metalwork equipment for student use.

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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

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

General education/discipline studies

(See pages 49 and 50 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.



photo by Eugen Helmbrecht

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.

A second year of a foreign language is also recommended.

¹ Students planning to transfer to Oregon State University (Corvallis or Cascades Campus) must take SP 111.

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

AAS of Automotive Management

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 degree enables 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 Management 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.

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

COST OF PROGRAM

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

- Program fee of \$57
- 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 to 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.

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 (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.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program (AUT) 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 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 300 hours of Cooperative Work Experience (CWE) is included in the training.

(continued on next page)

AUTOMOTIVE TECHNOLOGYAUTOMOTIVE MANAGEMENT *(continued)*

Associate of Applied Science (AAS) Degree

97-101 credits

TRANSFER INFORMATION**Recommended language**

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 50	3
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Program requirements**Year one****Fall term**

AUT 101	Basic Electricity for Automotive	2
AUT 106	Automotive Program Orientation	1
AUT 107	Mechanical Systems I	3
AUT 110	Small Gas Engines	3
AUT 109	Mechanical Systems II	1
Human Relations course, from list, page 50	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
HHP 252A	Fitness/First Aid	3

Spring term

AUT 104	Automotive Electric III	2
AUT 111	Computerized Engine Controls	5
AUT 206	Engine Performance II	2
AUT 208	Automotive Brakes	3
Computer competency ¹	0-4	

Summer

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

Year two**Fall term**

BA 101	Intro to Business	4
BA 111	Applied Accounting I	3
BA 206	Management Fundamentals I	4
MTH 60	Algebra I	4
or MTH 85	Technical Mathematics I	
General education discipline studies courses ²	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	

Footnotes

¹ Pass computer basic skills competency test (see page 38 for details), or take CIS 120, Computer Concepts.

² Choose nine credits from COCC's discipline studies list (pages 49 and 50); each course must have a different prefix.

Electives

AUT 211	ASE Test Prep I	1
AUT 212	ASE Test Prep II	1
AUT 112	Basic Engine Performance	1

AUTOMOTIVE TECHNOLOGY

Short-Term Certificates
14-27 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Short-term Certificate of Completion in:

- Automotive Electrical Technician-Basic
- Automotive Drive-Train Technician
- Automotive Engine Technician
- Under-Car Technician
- Automotive Heating & AC Technician
- Auto Electrical Technician-Advanced
- Auto Engine Performance Tech

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 \$57
- 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 to 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.

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 (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) 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 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 300 hours of Cooperative Work Experience (CWE) is included in the training.

(continued on next page)

AUTOMOTIVE TECHNOLOGY

Short-Term Certificates *(continued)*

14-27 credits

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 DRIVE TRAIN TECHNICIAN

Short-term Certificate

20 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 252	Automatic Transmissions II	1

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 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

(continued on next page)

AUTOMOTIVE TECHNOLOGY

Short-Term Certificates *(continued)*
14-27 credits

AUTOMOTIVE ENGINE TECHNICIAN

Short-term Certificate

16 credits

Learn to rebuild an engine, or start building one from scratch, by taking courses toward COCC’s Automotive Engine Technician Certificate; 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 201	Automotive Engines	4

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 TECHNOLOGY**AUTOMOTIVE TECHNICIAN**

Certificate

71 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Automotive Technology

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.

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

COST OF PROGRAM

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

- Program fee of \$57
- 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 to 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.

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 (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) 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 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 300 hours of Cooperative Work Experience (CWE) is included in the training.

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AUTOMOTIVE TECHNOLOGY

AUTOMOTIVE TECHNICIAN *(continued)*

Certificate
71 credits

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	4
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Computation

MTH 60 Algebra I	4
or MTH 85 Technical Math I	

Human Relations

Human Relations course, see list page 50	3
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Program requirements

Automotive basic skills <i>(required prior to any other AUT classes)</i>	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 216 Co-op Work Experience-Automotive	8
AUT 251 Automatic Transmissions I	3
AUT 252 Automatic Transmissions II	1
AUT 253 Automotive Air Conditioning	3

Electives

AUT 211 ASE Test Prep I	1
AUT 212 ASE Test Prep II	1
AUT 112 Basic Engine Performance	1



photo by Eugen Helmbrecht

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 Private Pilot and Commercial Pilot certificates (single and multiengine land), 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 Private Pilot and Commercial Pilot certificates, the Instrument rating, and certified flight instructor certificate/rating (CFI, CFII).

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 certificates, 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 235 airplane or 200 helicopter hours of flight training and 50 hours of training time in our FAA-approved flight simulator (which will reduce the total cost by reducing the amount of flight time). See the Aviation program director, 541-318-3736 or online at <http://aviation.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, which they will pay directly to the flight provider.
- 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 course(s) if fees are not paid on time.
- Simulator fees will not be refunded.
- 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, \$400 per flight certificate/rating (\$3,200).

Helicopter

- FAA Designated Pilot Examiner fees, \$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 courses must be completed with a "C" grade or better.
- Graduates must have an overall 2.0 GPA or better.

REGISTRATION INFORMATION

The Aviation program accepts new students every term. Applicants should contact the program director, 541-318-3736 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 veteran's benefits and other federal financial aid.

(continued on next page)

AVIATION PROGRAM

PREREQUISITES, STANDARDS and REQUIREMENTS *(continued)*

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 pay the Department of Veterans Affairs back for the entire cost of the course.

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.

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.

An Associate of Science (AS) degree is available and selective courses can be taken to maximize the transferability of credits. For information about the AS transfer degree, contact the Aviation program director, 541-318-3736.

AVIATION**AVIATION, PROFESSIONAL PILOT – AIRPLANE**

Associate of Applied Science (AAS) Degree

93 credits

See preceding pages 82-83 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
- Transfer information

DEGREES AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Aviation – Airplane

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 Public Speaking 3
or SP 218 Interpersonal Communication
or SP 219 Small Group Communication**Computer skills**

CIS 120 Computer Concepts 0-4

General education/discipline studiesComplete a minimum of nine credits of discipline studies 9
courses, pages 49 and 50. The courses must be outside of
the AAS program area and each must have a different prefix.**Business**BA 206 Fundamentals of Management⁴ 4
or BA 101 Introduction to Business⁴**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 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 ⁵	5
AV 220	Commercial Pilot-Airplane ⁵	4
AV 230	Multiengine Pilot ⁵	2
AV 235	Human Factors ¹	4
AV 246	Aviation Safety ¹	3
AV 250	Cert Flight Instructor Ground ¹	5

Airplane Flight Labs

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

AV 222A	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222B	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222C	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222D	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222E	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222F	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222G	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222H	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222I	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222J	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222K	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222L	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222M	Airplane Professional Pilot Flt Lab ^{3,6}	1
AV 222N	Airplane Professional Pilot Flt Lab ^{3,6}	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 portion of flight fees are not refundable. The fee structure is available on the Aviation website (<http://aviation.cocc.edu>). Contact the Aviation program director, 541-318-3736, for more information.⁴ May be taken in any sequence, in any term.⁵ 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.⁶ Airplane students will take 11 credits of AV 222, Airplane Professional Pilot Flight Labs. The labs can be taken in any term. Labs are repeatable. See your Aviation advisor for scheduling sequence.

AVIATION

AVIATION, PROFESSIONAL PILOT – HELICOPTER

Associate of Applied Science (AAS) Degree

93 credits

See preceding pages 82-83 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
- Transfer information

DEGREES AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Aviation – Helicopter

PROGRAM COURSE REQUIREMENTS

General education/foundational requirements

Communication

WR 121 English Composition 4

Computation

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

Human Relations

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

Computer skills

CIS 120 Computer Concepts 0-4

General education/discipline studies

Complete a minimum of nine credits of discipline studies 9
courses, pages 49 and 50. The courses must be outside of
the AAS program area and each must have a different prefix.

Business

BA 206 Fundamentals of Management⁴ 4
or BA 101 Introduction to Business⁴

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 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-Airplane ⁵	5
AV 225	Commercial Pilot-Airplane ⁵	4
AV 235	Human Factors ¹	4
AV 245	Advanced Helicopter Operations	4
AV 246	Aviation Safety ¹	3
AV 255	Cert Flight Instructor Ground ¹	5

Helicopter Flight Labs

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

AV 227A	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227B	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227C	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227D	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227E	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227F	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227G	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227H	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227I	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227J	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227K	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227L	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227M	Helicopter Professional Pilot Flt Lab ^{3,6}	1
AV 227N	Helicopter Professional Pilot Flt Lab ^{3,6}	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 portion of flight fees are not refundable. The fee structure is available on the Aviation website (<http://aviation.cocc.edu>). Contact the Aviation program director, 541-318-3736, for more information.

⁴ May be taken in any sequence, in any term.

⁵ 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.

⁶ Helicopter students will take 10 credits of AV 227, Helicopter Professional Pilot Flight Labs. The labs can be taken in any term. Labs are repeatable. See your Aviation adviser for scheduling sequence.

BIOLOGY

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

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

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

General education/discipline studies

(See pages 49 and 50 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

OR

CH 104	Introduction to Chemistry I ²	4
CH 105	Introduction to Chemistry II ²	4
CH 106	Introduction to Chemistry III ²	4
CH 241	Organic Chemistry I	5
CH 242	Organic Chemistry II	5
CH 243	Organic Chemistry III	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

Recommended for those entering health-related fields

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
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To enhance understanding of scientific terminology

BI 205	Scientific Terminology	3
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¹ Recommended for students interested in medical, dental and veterinary schools.

² Recommended for students who have not recently taken Algebra II and chemistry in high school.

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.

BUSINESS ADMINISTRATION

ACCOUNTING CLERK

Certificate of Completion

44 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 course work may be applied to an Associate of Applied Science (AAS) Business degree.

COST OF PROGRAM

Standard tuition, student fees and text books.

PROGRAM PREPARATION AND PREREQUISITES

Recommended

- High School Diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/75/95 ("C" or better grade)
- Minimum placement scores resulting in MTH 20/31 placement or completion of MTH 10 ("C" or better grade)

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.



photo by David Morris

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.

Fall

BA 101	Introduction to Business	4
BA 104	Business Math	3

Note: prerequisite grade of "C" or better in MTH 60, MTH 60 equivalency met, or appropriate placement exam score.

BA 111	Applied Accounting I	3
WR 121	English Composition	4

Winter

BA 112	Applied Accounting II	3
BA 177	Payroll Accounting	3
BA 285	Business Human Relations	3
CIS 131	Software Applications	4

Spring

BA 113	Applied Accounting III	3
BA 220	Math for Business Decisions	4
BA 229	QuickBooks	3
CIS 125E	Excel	4

Summer

BA 280	Co-op Work Experience	3
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BUSINESS ADMINISTRATION**ENTREPRENEURSHIP**

Certificate of Completion

45-46 credits

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 65/75/95 ("C" or better grade)
- Minimum placement scores resulting in MTH 20/31 placement or completion of MTH 10 ("C" or better grade)

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 an Entrepreneurship certificate and will depend on course availability. A recommended sequence of the courses required for this certificate is listed below.

Fall

BA 101	Introduction to Business	4
BA 104	Business Math	3
<i>Note: prerequisite grade of "C" or better in MTH 60, MTH 60 equivalency met, or appropriate placement exam score.</i>		
CIS 131	Software Applications	4
WR 121	English Composition	4

Winter

BA 111	Applied Accounting I	3
BA 206	Management Fundamentals I	4
BA 223	Marketing Principles I	4
CIS 125E	Excel	4

Spring

BA 250	Entrepreneurship	4
BA 220	Math for Business Decisions	4
BA 238	Selling and Negotiations	4

Final Term

Choose one course from the following		3-4
BA 261	Consumer Behavior (4)	
BA 180	Co-op Work Experience (3)	

BUSINESS ADMINISTRATION

MARKETING

Certificate of Completion

45 credits

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Marketing

PROGRAM DESCRIPTION

COCC’s Marketing certificate is designed to give students a foundation in Marketing to apply to their career. 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 65/75/95 (“C” or better grade)
- Minimum placement scores resulting in MTH 20/31 placement or completion of MTH 10 (“C” or better grade)

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 a Marketing certificate and will depend on course availability. A recommended sequence of the courses required for this certificate is listed below.

Fall

BA 101	Introduction to Business	4
BA 104	Business Math	3
<i>Note: prerequisite grade of “C” or better in MTH 60, MTH 60 equivalency met, or appropriate placement exam score.</i>		
CIS 131	Software Applications	4
WR 121	English Composition	4

Winter

BA 178	Customer Service	3
BA 206	Management Fundamentals I	4
BA 223	Marketing Principles I	4

Spring

BA 261	Consumer Behavior	4
BA 239	Marketing Principles II	4
BA 238	Selling and Negotiations	4

Final Term

BA 233	Internet Marketing	4
BA 180	Co-op Work Experience	3

BUSINESS ADMINISTRATION

OFFICE ASSISTANT
Certificate of Completion
47 credits

CERTIFICATE/DEGREE 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 already in business who desire to update and enhance their skills.

COST OF PROGRAM

Standard tuition, student fees and text books.

PROGRAM PREPARATION AND PREREQUISITES**Recommended**

- High school diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/75/95 ("C" or better grade)
- Minimum placement scores resulting in MTH 20/31 placement or completion of MTH 10 ("C" or better grade)
- 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. For part-time students and those with schedule conflicts, please see 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 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 an Office Assistant certificate and will depend on course availability. A recommended sequence of the courses required for this certificate is listed below.

Fall

BA 101	Introduction to Business	4
BA 104	Business Math	3
<i>Note: prerequisite grade of "C" or better in MTH 60, MTH 60 equivalency met, or appropriate placement exam score</i>		
BA 111	Applied Accounting I	3
CIS 120	Computer Concepts	4
WR 121	English Composition	4

Winter

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

Spring

CIS 125E	Excel	4
CIS 235	IT in Business	4
<i>Note: Class offered fall and spring term only</i>		

Plus select one from the following

CIS 125A	Access (4)	4
CIS 125DW	Introduction to Dreamweaver (4)	
CIS 125G	Introduction to Photoshop (4)	
CIS 140	A+ Essentials (4)	
CIS 122	Introduction to Programming (4)	
CIS 178	Internet in Depth (4)	
CIS 195	Web Development I (4)	

Summer

OA 280	Co-op Work Experience Office Admin.	4
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BUSINESS ADMINISTRATION

RETAIL MANAGEMENT

Certificate of Completion

46 credits

CERTIFICATE/DEGREE 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 65/75/95 ("C" or better grade)
- Minimum placement scores resulting in MTH 20/31 placement or completion of MTH 10 ("C" or better grade)

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 a Retail Management certificate and will depend on course availability. A recommended sequence of the courses required for this certificate is listed below.

Fall

BA 101	Introduction to Business or Business elective	4
BA 111	Applied Accounting I	3
WR 121	English Composition	4
CIS 131	Software Applications	4

Winter

BA 178	Customer Service or Business elective	3
BA 104	Business Math	3
<i>Note: prerequisite grade of "C" or better in MTH 60, MTH 60 equivalency met, or appropriate placement exam score.</i>		
BA 206	Management Fundamentals II	4
BA 223	Marketing Principles I	4
BA 285	Business Human Relations	3

Spring

WR 214	Business Communications	3
BA 224	Human Resources Management	4
BA 249	Retailing	4
SP 111	Fundamentals of Public Speaking or SP 219	3
	Small Group Communication	

BUSINESS ADMINISTRATION

BUSINESS

Associate of Applied Science (AAS) Degree with Specializations
97-99 credits

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science (AAS) Business degree with Specializations

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 text books.

PROGRAM PREPARATION AND PREREQUISITES

Recommended

- High School Diploma or GED
- Minimum placement scores resulting in WR 121 placement or completion of WR 65/75/95 ("C" or better grade)
- Minimum placement scores resulting in MTH 20/31 placement or completion of MTH 10 ("C" or better grade)

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.

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

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 before taking any Level 2 core course.

CIS 131	Software Applications	4
<i>(Recommended prerequisites: IC³ certificate or CIS 120 and MTH 60/85 or BA 104)</i>		
WR 121	English Composition	4
BA 111	Applied Accounting I	3
BA 101	Introduction to Business	4
BA 104	Business Math	3
<i>(Prerequisite: MTH 60 or equivalency/placement score)</i>		
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
<i>(Recommended prerequisites: CIS 131 and CIS 120)</i>		
WR 214	Business Communication	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	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 24 credits of coursework with a BA or HTRM prefix from the Business electives list (pay careful attention to prerequisites) 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. (25 credits)

BA 177	Payroll Accounting	3
BA 211	Financial Accounting I	3
BA 212	Financial Accounting II	3
BA 213	Managerial Accounting	3
BA 220	Math for Business Decisions	4
BA 228	Computer Accounting Applications	3
BA 229	QuickBooks	3
Business elective (BA & HTRM prefixes)		3
and/or CIS 235 or CIS 135BD		

(continued on next page)

BUSINESS ADMINISTRATION

BUSINESS *(continued)*

Associate of Applied Science (AAS) Degree with Specializations
97-99 credits

» 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. (24 credits)

CIS 125A	Access	4
CIS 135DB	Database Theory/SQL	4
CIS 140	A+ Essentials	4
CIS 235	IT in Business	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. (24 credits)

BA 207	Management Fundamentals II	4
BA 220	Math for Business Decisions	4
BA 224	Human Resource Mgmt	4
Select from the following		12
BA 203	Global Business (3)	
BA 211	Financial Accounting I (3)	
BA 212	Financial Accounting II (3)	
BA 213	Managerial Accounting (3)	
BA 229	QuickBooks (3)	
BA 233	Internet Marketing (4)	
BA 238	Selling and Negotiations (4)	
BA 250	Entrepreneurship (4)	
BA 253	Business Plan Elements (4)	
BA 261	Consumer Behavior (4)	
BA 286	Managing Business Processes (4)	

» SMALL BUSINESS/ENTREPRENEURSHIP SPECIALIZATION

(Pending state approval) This specialization is for those who plan to start up and run a successful business or grow an existing business. (23-24 credits)

BA 220	Math for Business Decisions	4
BA 238	Selling & Negotiation	4
BA 250	Entrepreneurship	4
BA 253	Business Plan Elements	4
Select two from the following		7-8
BA 203	Global Business (3)	
BA 207	Management Fundamentals II (4)	
BA 233	Internet Marketing (4)	
BA 239	Marketing Principles II (4)	
BA 261	Consumer Behavior (4)	

» 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. (24 credits)

BA 220	Math for Business Decisions	4
BA 224	Human Resource Management	4
BA 239	Marketing Principles II	4
BA 249	Retailing	4
BA 261	Consumer Behavior	4
Select one from the following		4
BA 207	Management II (4)	
BA 238	Selling & Negotiations (4)	

» HOTEL, TOURISM AND RECREATION MANAGEMENT SPECIALIZATION

This specialization is for those who desire to operate or manage hotels, restaurants or recreation businesses. (24 credits)

GEOG 212	Tourism and Recreation	3
HTRM 105	Food Service Management	4
HTRM 106	Lodging Management	3
Business electives		14
<i>(BA/CIS 135DB and CIS 235 or HTRM prefixes)</i>		
Recommended: HTRM 233, Event Planning		

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 222	Business Finance	3
<i>(Prerequisites: BA 104 and either BA 113 or BA 212)</i>		
BA 280	Co-op Work Experience Business	3
BA 290	Business Seminar	3
<i>(Recommended prerequisites: students should complete management, marketing and accounting coursework prior to enrolling in this seminar.)</i>		

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 49-50	8
Recommended: GEOG 106, Economic Geography (4)	

Plus

HHP 295 or 242 or 266 or 258 or 231 or 252A	3
and one HHP activity course	1

BUSINESS ADMINISTRATION

BUSINESS TRANSFER

Associate of Science Oregon Transfer (ASOT) Business Degree
91 credits

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT

Assoc Science/OfTrans-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 public university. It is designed to include the courses required for entrance not only into an Oregon public university but to the university's business college as well. (For those unsure of where they might transfer or unsure of their desire for a bachelor's degree in business, please see COCC business department advisors to determine the best course of study and COCC transfer degree from the many options available to business transfer students.)

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 65/75/95 ("C" or better grade)
- Minimum placement scores resulting in MTH 20/31 placement or completion of MTH 10 ("C" or better grade)

MINIMUM GPA OR GRADE REQUIREMENTS

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

REGISTRATION INFORMATION

To meet graduation requirements, students must complete every course listed below with a grade of "C" or higher.

PROGRAM STANDARDS

All courses listed under Program Course Requirements (below) must be completed with a grade of "C" or higher.

TRANSFER INFORMATION

This degree is designed for students planning to transfer to a university upon graduation. Often only selected credits are considered transferrable to public or private baccalaureate institutions.

PROGRAM COURSE REQUIREMENTS

General requirements (all courses must be completed with a "C" grade or higher)

CIS 131	Software Applications	4
SP 111	Fundamentals of Public Speaking	3
WR 121	English Composition	4
WR 122	English Composition	4
WR 227	Technical Writing	4

Discipline studies requirements

Arts and Letters

Minimum of 12 credits from COCC's arts and letters discipline studies list, chosen from at least two disciplines.

Science

Minimum of 12 credits of laboratory science in biological or physical sciences from COCC's science/math/computer science discipline studies list.

Social Sciences

EC 201	Microeconomics	4
EC 202	Macroeconomics	4

Plus four additional credits from COCC's social sciences discipline studies list, that do not have an EC prefix.

Mathematics (all courses must be completed with a "C" grade or higher)

Required minimum of 12 credits including:

MTH 111	College Algebra	4
MTH 244	Intro to Methods of Probability and Stats	4
MTH 243	Math for Management/Life/Social Science	4
	or MTH 241 Calculus for Management/Science	

Business specific requirements (all courses must be completed with a "C" grade or higher)

BA 101	Introduction to Business	4
BA 211	Financial Accounting I	3
BA 212	Financial Accounting II	3
BA 213	Managerial Accounting	3
BA 226	Business Law	4

Electives

Recommended courses to take as electives are BA 206, Management Fundamentals I and BA 223, Marketing Principles I. It is recommended that students planning to transfer to OSU take BA 250, Entrepreneurship and HHP 295, Health and Fitness. 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.

TRANSFER AND/OR ARTICULATION INFORMATION

The ASOT Business degree articulates directly to Oregon public university business school requirements. The ASOT Business degree meets the lower-division general education requirements for all Oregon public universities and business schools and some private four-year business schools.

For more information about the Associate of Science (AS) degree and articulation agreements with local colleges and universities, see pages 42-43.

For more information about the AAOT degree and articulation agreements with local colleges and universities, see pages 40-41.

CHEMISTRY

Associate of Arts Oregon Transfer (90 credits)

Associate of Science (93 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, 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 AAOT meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements. With the appropriate course planning, all lower-division major requirements may also be met.

Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

Health (3 credits with HHP prefix)

<i>HHP activity courses (1 credit each) are not to be duplicated</i>		3
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photo by Eugen Helmbrecht

General education/discipline studies

(See pages 49 and 50 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.

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

CH 241	Organic Chemistry I	5
CH 242	Organic Chemistry II	5
CH 243	Organic Chemistry III	5

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.

COMPUTER AND INFORMATION SYSTEMS

Certificates

For information about the Geographic Information Systems (GIS) program, see pages 132-134.



photo by Eugen Helmbrecht

COMPUTER AND INFORMATION SYSTEMS

Certificate of Completion

46-47 credits

CERTIFICATE REQUIREMENTS

Human Relations course, see list, page 50	3
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	3-4
or BA 104 Business Math	
WR 121 English Composition	4

COMPUTER AIDED DRAFTING (CAD)

Certificate of Completion

45-46 credits

CERTIFICATE REQUIREMENTS

Human Relations course, see list, page 50	3
CIS 120 Computer Concepts	4
CIS 125A1 AutoCAD I	4
CIS 125A2 AutoCAD II	4
CIS 125A3 AutoCAD III	4
CIS 135A1 AutoDESK Revit I	3
CIS 135A2 AutoDESK Revit II	3
CIS 135M1 AutoDESK Inventor I	3
CIS 135M2 AutoDESK Inventor II	3
CIS 135C1 AutoCAD Civil 3D	3
CIS 140 A+ Essentials	4
MTH 85 Technical Math I	3-4
or BA 104 Business Math	
WR 121 English Composition	4

COMPUTER AND INFORMATION SYSTEMS (CIS)

Associate of Applied Science (AAS) Degree

94-97 credits

For information about the Geographic Information Systems (GIS) program, see pages 132-134.

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science Degree, 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 27-28 credits of CIS electives. Students 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. Students can also earn a general AAS in CIS by choosing any 27-28 elective credits (in addition to the core) with a CIS prefix that are not part of the core courses list. 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 abilities 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 web sites 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 jump drive, basic office supplies - notebooks), \$150

Strongly recommended, but not required:

A home or laptop computer capable of running the Windows operating system Vista or Windows 7, Office 2007, \$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 75 and/or WR95 (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 Co-operative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a worksite. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the program director.

MINIMUM GPA OR GRADE REQUIREMENTS

Students must complete all CIS courses with a grade of "C" or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Core CIS 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 so planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

(continued on next page)

COMPUTER AND INFORMATION SYSTEMS (CIS)

Associate of Applied Science (AAS) Degree *(continued)*

94-97 credits

For information about the Geographic Information Systems (GIS) program, see pages 132-134.

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	Business Communications	3-4
or WR 227	Technical Writing	
or SP 111	Fundamentals of Public Speaking	

Computation

MTH 85	Technical Math I or (higher)	3-4
or BA 104	Business Math, 3-4 credits	

Human Relations

Human Relations course, see list, page 50	3
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Other

Health

HHP 252A	Fitness/First Aid	3
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Electives

Select from:

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	(3)
BA 212	Financial Accounting II	(3)
BA 213	Managerial Accounting	(3)
BA 217	Accounting Fundamentals	(3)
BA 218	Personal Finance	(3)
BA 220	Math for Business Decisions	(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 Application	(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

Degree requirements

Program requirements

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)	3-4
CIS 280	Co-op Work Experience CIS	3

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(continued on next page)

COMPUTER AND INFORMATION SYSTEMS (CIS)

Associate of Applied Science (AAS) Degree *(continued)*

94-97 credits

For information about the Geographic Information Systems (GIS) program, see pages 132-134.

Other required courses (CIS electives)

(27-28 credits with CIS prefix or choose one of the following CIS options)

For a general CIS AAS degree (no option) select 27-28 credits with a CIS prefix from the list in the course descriptions, pages 221-226, or choose one of the following CIS options for your degree.

Networking option (28 credits)

CIS 151C	Cisco Internetworking	4
CIS 152C	Cisco Router Configuration	4
CIS 154C	Cisco VLAN / WAN Technologies	4
CIS 279V	Windows Vista or CIS 279W7 Windows 7	4
CIS 279SA	Windows Server 2008 Administration	4
CIS 279NI	Windows Server 2008 Network Infra.	4
CIS 279AD	Windows Server 2008 Active Directory	4

Desktop Support option (28 credits)

CIS 125E	Excel	4
CIS 125A	Access	4
CIS 195	Web Development I	4
CIS 125G	Photoshop	4
CIS 295	Web Development II	4
CIS 279V	Windows Vista or CIS 279W7 Windows 7	4
CIS 235	IT in Business	4

Web Development/Database option (28 credits)

CIS 125G	Photoshop or CIS 125I Adobe Illustrator or	
CIS 125FL	Introduction to Flash	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 275	Introduction to Database Management and Design	4
CIS 276	Advanced SQL	4

CAD option (27 credits)

CIS 125A1	AutoCAD I	4
CIS 125A2	AutoCAD II	4
CIS 125A3	AutoCAD III	4
CIS 135A1	AutoDESK Revit I	3
CIS 135A2	AutoDESK Revit II	3
CIS 135C1	AutoCAD Civil 3D	3
CIS 135M1	AutoDESK Inventor I	3
CIS 135M2	AutoDESK Inventor II	3



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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 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.
- **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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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 their 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
HD 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 Communications	3
SP 250	Listening	1

CRIMINAL JUSTICE

JUVENILE CORRECTIONS

Certificate
54 credits

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

Computer Competency	0-4
Math 65 Algebra II	4
Writing 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 courses

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



photo by Eugen Helmbrecht

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 the appropriate course planning, all lower division major requirements may also be met.

Students should work closely with an advisor to select the best degree option and review specific transfer requirements. 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 General Education/foundational skills and all Criminal Justice program courses 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 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

Health and Human Performance ² (see footnote)	3
MTH 20 Pre Algebra (or higher)	4
SP 218 Interpersonal Communication	3
WR 121 English Composition	4

Program requirements¹

(See footnote)

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

(continued on next page)

CRIMINAL JUSTICE

Associate of Applied Science (AAS) Degree *(continued)*
93 credits

CJ Electives³ (see footnote) 15-18 credits

Other required courses

SP 111	Fundamentals of Public Speaking	3
SP 219	Small Group Communication	3
PSY 233	Psychology of Violence and Aggression	4
Two (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 49-50, 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 49-50.

Any 100-level or higher class from the following departments:

- Addiction Studies (HS)
- Computer & Information Systems
- Criminal Justice
- Emergency Medical Services (EMT)
- Foreign Languages
- Geographic Information Services
- Health and Human Performance (no repeats of activity classes)
- Military Science
- Speech
- Study Skills (HD)
- Art 161, 162, 163, 261, 265

Footnotes

¹ Must be completed with "C" grade or higher

² HHP- 3-4 credits of health are required. This can be any HHP prefix. HHP Health classes are recommended. (HHP, 252a, 231,242,258, 266, 295 or any three credits of activity classes—no repeats.)

³ Select from CJ 110, 123, 188, 199, 204, 207, 210, 211, 220, 222, 230, 243 or EMT 195.

Advising information

If transferring to Southern Oregon University, CJ 210, 211 are recommended.

If transferring to Portland State University, CJ 101, 110 and 253 are recommended.

If transferring to Western Oregon University, CJ 100 is recommended.



photo by Eugen Helmbrecht

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 the appropriate course planning, all lower division major requirements may also be met.

Students should work closely with an advisor to select the best degree option and review specific transfer requirements. 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.

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
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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 49 and 50 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.

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 information

If transferring to Southern Oregon University: CJ 210, 211 are recommended.

If transferring to Portland State University, CJ 101, 110 and 253 are recommended.

If transferring to Western Oregon University, CJ 100 is recommended.

CULINARY

KITCHEN PREP Short-term Certificate 23 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Short-term Certificate of Comp, Culinary Mgmt – Kitchen Prep

PROGRAM DESCRIPTION

The Cascade Culinary Institute Kitchen Prep certificate prepares students in the fundamental techniques of “level one”: baking, hot foods, garde manger and dining room service along with basic sanitation and food service nutrition.

COST OF PROGRAM

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

- Program fees of \$80 per credit for kitchen lab classes
- Program fees of \$50 per credit for lecture classes, specific to the culinary certificate or degree
- Materials, uniforms, knife kit, pastry kit, approximately \$480

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (CCI) courses:

- High School Diploma or GED
- Minimum placement scores resulting in MTH 20/31 placement OR completion of MTH 10 (“C” or better)
- Completion of CCI 102, Sanitation and Safety for Managers

Required prior to entering Cooperative Work Experience:

- All other Kitchen Prep certificate coursework

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.

REGISTRATION INFORMATION

Program (CCI Culinary Arts) course begin every term (fall, winter, spring).

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program (CCI) courses; students who do not meet this standard may be dismissed from the program. Students may be readmitted to the program with an approved plan developed with their advisor. Additional information regarding program standards and student conduct is contained in the Cascade Culinary Institute handbook which is available at <http://culinary.cocc.edu>

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 COURSEWORK

The following is a suggested course of study for students interested in pursuing a certificate in Kitchen Prep and will depend on course availability.

CCI 102	Sanitation and Safety for Managers	2
CCI 144	Intro to Baking Science	1
CCI 145	Basic Baking Principles	3
CCI 121	Hot Foods Production I	4
CCI 151	Garde Manger I	4
CCI 161	Dining Room Operations	3
CCI 110	Culinary Nutrition	3
CCI 280A	Cooperative Work Experience	3

CULINARY

CULINARY ARTS Certificate of Completion 45 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Cascade Culinary Institute

PROGRAM DESCRIPTION

A Cascade Culinary Institute certificate introduces students to a variety of skill areas: hot and cold food preparation, baking and dining room operations. Those completing the certificate will be prepared to begin their culinary career with an excellent kitchen experience and a sound foundation preparing them for growth within the industry. The Cascade Culinary Institute certificate has been accredited by the American Culinary Federation Foundation Accrediting Commission since 2003.

COST OF PROGRAM

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

- Program fees of \$80 per credit for kitchen lab classes
- Program fees of \$50 per credit for lecture classes, specific to the culinary certificate or degree
- Materials, uniforms, knife kit, pastry kit, approximately \$480

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (CCI) courses:

- High School Diploma or GED
- Minimum placement scores resulting in MTH 20/31 placement OR completion of MTH 10 ("C" or better)
- Completion of computer competency (either competency test or CIS 120)
- Completion of CCI 102, Sanitation and Safety for Managers

Required prior to entering Cooperative Work Experience:

- Two terms of CCI lab classes

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.

REGISTRATION INFORMATION

Program (CCI Culinary Arts) courses begin every term, (fall, winter, spring).

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program (CCI) courses; students who do not meet this standard may be dismissed from the program. Students may be readmitted to the program with an approved plan developed with their advisor. Additional information regarding program standards and student conduct is contained in the Cascade Culinary Institute handbook which is available at <http://culinary.cocc.edu>

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

BA 285	Business Human Relations	3
MTH 60	Algebra I	4
WR 60	Rhetoric and Critical Thinking I	4

Program requirements

CCI 102	Sanitation and Safety for Managers	2
CCI 144	Introduction to Baking Science	1
CCI 145	Basic Baking Principles	3
CCI 121	Hot Foods Production I	4
CCI 151	Garde Manger I	4
CCI 161	Dining Room Operations	3

Additional Culinary courses

CCI 122	Hot Foods Production II	4
CCI 123	A La Carte Cooking	4

Other required coursework

CCI 110	Culinary Nutrition	3
CCI 204	Restaurant Management and Supervision	3
CCI 280	Cooperative Work Experience	3

CULINARY

BAKING & PASTRY ARTS (*pending State approval*)

Associate of Applied Science (AAS) Degree

97 credits

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Baking & Pastry Arts

PROGRAM DESCRIPTION

The Baking Pastry Arts curriculum is designed to prepare students with the skills and knowledge required for employment in the baking and pastry industry, including restaurants, hotels, independent bakeries and pastry shops, wholesale and retail markets, and high-volume bakeries.

COST OF PROGRAM

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

- Program fees of \$80 per credit for kitchen lab classes
- Program fees of \$50 per credit for lecture classes, specific to the culinary certificate or degree
- Materials, uniforms, knife kit, pastry kit, approximately \$480

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (CCI) courses:

- High School Diploma or GED
- Minimum placement scores resulting in WR 121 placement OR completion of WR 65/75/95 ("C" or better)
- Minimum placement scores resulting in MTH 20/31 placement OR completion of MTH 10 ("C" or better)
- Completion of computer competency (either competency test or CIS 120)
- Completion of CCI 102, Sanitation and Safety for Managers

Required prior to entering Cooperative Work Experience:

- Four terms of CCI lab classes

MINIMUM GPA OR GRADE REQUIREMENTS

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

REGISTRATION INFORMATION

Program (CCI Baking & Pastry Arts) courses begin every fall.

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program (CCI) courses; students who do not meet this standard may be dismissed from the program. Students may be re-admitted to the program with an approved plan developed with their advisor. Additional information regarding program standards and student conduct is contained in the Cascade Culinary Institute handbook which is available at <http://culinary.cocc.edu>

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

MTH 60	Algebra I or higher	4
	Human Relations list, see page 50	3
WR 121	English Composition	4

Program requirements

CCI 144	Intro to Baking Science	1
CCI 145	Basic Baking Principles	3
CCI 146	Artisan Breads	4
CCI 148	Laminated Doughs	4
CCI 172	Custards and Frozen Desserts	4
CCI 174	Intro to Cakes and Tortes	4
CCI 176	Fruit Desserts, Pies, Tarts	3
CCI 242	Petite Fours and Candies	3
CCI 244	Specialty and Wedding Cakes	4
CCI 246	Chocolate Desserts/Decor	4
CCI 248	Plated Desserts and Presentations	4
CCI 121	Hot Foods Production I	4
CCI 240	Advanced Artisan Breads	4
CCI 266	Intro to Sugar Arts	3

Additional Culinary courses

CCI 102	Sanitation & Safety for Managers	2
CCI 110	Culinary Nutrition	3
DM 210	Nutrition Therapy	3
CCI 204	Restaurant Management and Supervision	3
CCI 206	Storeroom & Inventory Controls	3
CCI 168	Menu Planning and Development	2
CCI 280A	Cooperative Work Experience Culinary	3
CCI 280B	Cooperative Work Experience Culinary	3

Other required courses

SP 111	Fundamentals of Public Speaking	3
or SP 219	Small Group Communication	
CIS 131	Software Applications	4
BA 178	Customer Service	3
CCI 290	Baking and Pastry Capstone	5

CULINARY**CULINARY ARTS**

Associate of Applied Science (AAS) Degree

100 credits

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Cascade Culinary Institute

PROGRAM DESCRIPTION

The Hotel, Restaurant and Institutional Cooking program is designed to meet the varied needs of food service establishments. Students are provided with a background of hot and cold food preparation, food service management, and cost control. Demonstrations and practical experience provided in our operational dining room permit students to develop the necessary food preparation skills for gainful employment.

COST OF PROGRAM

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

- Program fees of \$80 per credit for kitchen lab classes
- Program fees of \$50 per credit for lecture classes, specific to the culinary certificate or degree
- Materials, uniforms, knife kit, pastry kit, approximately \$480

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (CCI) courses:

- High School Diploma or GED
- Minimum placement scores resulting in WR 121 placement OR completion of WR 65/75/95 ("C" or better)
- Minimum placement scores resulting in MTH 20/31 placement OR completion of MTH 10 ("C" or better)
- Completion of computer competency (either competency test or CIS 120)
- Completion of CCI 102, Sanitation and Safety for Managers

Required prior to entering Cooperative Work Experience:

- Four terms of CCI lab classes

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.

REGISTRATION INFORMATION

Program (CCI Culinary Arts) course begin every term (fall, winter, spring).

PROGRAM STANDARDS

Students must maintain a minimum 2.0 GPA while enrolled in the program (CCI) courses; students who do not meet this standard may be dismissed from the program. Students may be re-admitted to the program with an approved plan developed with their advisor. Additional information regarding program standards and student conduct is contained in the Cascade Culinary Institute handbook which is available at <http://culinary.cocc.edu>.

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**

Human Relations list, see page 50	3
MTH 60 Algebra I	4
WR 121 English Composition	4

Program requirements

CCI 121 Hot Foods Production I	4
CCI 122 Hot Foods Production II	4
CCI 123 A la Carte Cooking	4
CCI 144 Intro to Baking Science	3
CCI 145 Basic Baking Principles	1
CCI 151 Garde Manger I	4
CCI 153 Charcuterie and Butchering	4
CCI 155 Mediterranean Cuisine	4
CCI 161 Dining Room Operations	3

Additional Culinary courses

CCI 102 Sanitation and Safety for Managers	2
CCI 110 Culinary Nutrition	3
CCI 168 Menu Planning and Development	2
CCI 204 Restaurant Management and Supervision	3
CCI 206 Storeroom and Inventory Controls	3
CCI 208 Farm to Table	3
CCI 260 Wine and Beverages	3
CCI 280A Cooperative Work Experience Culinary	3
CCI 280B Cooperative Work Experience Culinary	3
DM 210 Nutrition Therapy	3

Additional program requirements

BA 178 Customer Service	3
CIS 131 Software Applications	4
CCI 291 Culinary Arts Capstone	9
HHP 252A Fit/First Aid	3
SP 111 Fundamentals of Public Speaking	3
or SP 219 Small Group Communication	

Select credits from Baking electives 8

CCI 146 Artisan Breads	4
CCI 148 Laminated Doughs	4
CCI 172 Custards and Frozen Desserts	4
CCI 174 Intro to Cakes and Tortes	4
CCI 176 Fruit Desserts, Pies and Tarts	3
CCI 240 Advanced Artisan Breads	4
CCI 242 Petit Fours and Candies	3
CCI 244 Specialty and Wedding Cakes	4
CCI 246 Chocolate Desserts/Decor	4
CCI 248 Plated Desserts and Presentations	4
CCI 266 Intro to Sugar Arts	3

(continued on next page)

CULINARY

CULINARY ARTS *(continued)*
 Associate of Applied Science (AAS) Degree
 100 credits



photo by David Morris

Sample Schedule

First term

BA 178	Customer Service	3
CCI 102	Sanitation & Safety for Mgrs	2
CIS 120	Software Applications	4
HHP 252A	Fitness/First Aid	3
WR 121	English Composition	4

Second term

CCI 121	Hot Food Production I	4
CCI 144	Intro to Baking Science	1
CCI 145	Basic Baking Principles	3
CCI 151	Garde Manger I	4
CCI 161	Dining Room Operations	3

Third term

CCI XXX	Baking electives	8
CCI 122	Hot Foods Production II	4
CCI 155	Mediterranean Cuisine	4

Fourth term

CCI 110	Culinary Nutrition	3
CCI 123	A La Carte Cooking	4
CCI 153	Charcuterie and Butchering	4
DM 210	Nutrition Therapy	3
Human Relations list, see page 50		3

Fifth term

CCI 168	Menu Planning and Development	2
CCI 204	Restaurant Management and Supervision	3
CCI 206	Storeroom and Inventory Controls	3
CCI 260	Wine and Beverages	3
CCI 280A	Cooperative Work Experience Culinary	3
CCI 280B	Cooperative Work Experience	3
MTH 60	Algebra I	4
SP 111	Fundamentals of Public Speaking	3
or SP 219	Small Group Communication	

Sixth term

CCI 208	Farm to Table	3
CCI 291	Culinary Arts Capstone	9

DENTAL ASSISTING

Certificate of Completion

65-73 credits

CERTIFICATE/DEGREE 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/term (or \$501 total for the year) while enrolled in the DA cohort
- Materials (uniform, goggles, lab jacket), \$95
- National Board exams, \$675 total
- In some cases: fees associated with immunizations, \$222, and/or CPR card, \$20-\$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 65/75/95 ("C" or better)
- Minimum placement scores resulting in MTH 20/31 placement OR completion of MTH 10 ("C" or better)

Recommended prior to entry in program (DA) courses:

- Completion of computer competency (either competency test or CIS 120)

Required prior to entering practicum (winter term):

- Documentation of completion of immunizations (Hepatitis B or release, current TB, two immunizations for measles)
- Current CPR card (including adult and child CPR)

All COCC students enrolled in Dental Assisting (which includes requirements for practical experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a medical or other facility for training. Students who do not pass the CHC may not be eligible to complete training at affiliated practicum sites, to sit for licensure or certification exams, or to be hired for some professional positions. Students who believe that their past history may interfere with their ability to complete the program of study or to obtain licensure or certification in their chosen field should contact the appropriate state board or the program director.

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.

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 CDA or an EFDA to work as a dental assistant. However, opportunities for advancement in the occupation are limited without these two certifications.
 - » DA students can earn a Certified Dental Assistant (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 Chairside Exam (GC).
 - » DA students can become an EFDA by: certificate of completion from COCC, successfully pass the written RHS exam, complete the proficiency exam in Dental Radiology, and submit the required fee.
- In Oregon, a dental assistant must have a Radiology Certificate to take dental radiographs. This certificate is obtained by successfully passing the RHS written exam and completing a proficiency exam, which includes submitting a diagnostic full set of radiograph.
- An Expanded Function Dental Assistant 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), reline 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 <http://www.danb.org/>.

(continued on next page)

DENTAL ASSISTING

Certificate of Completion *(continued)*

65-73 credits

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	Pre-Algebra (or higher)	4
SP 218	Interpersonal Communication	3

Other required courses

HHP requirement:

Students can choose from HHP 231, HHP 242, HHP 258, HHP 266, HHP295, and one activity or health module

or HHP 252A only 3-4

Human Relations list, see page 50 3

Computer Competency (test or CIS 120) 0-4

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	3
DA 131	Dental Materials II	3
DA 134	Dental Radiology I	2
DA 135	Dental Radiology II	3
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



DIETARY MANAGER

DIETARY MANAGER
Certificate of Completion
18 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Short-term Certificate of Comp, Dietary Manager

PROGRAM DESCRIPTION

The Dietary Manager program is uniquely designed to help students who are already employed to receive certification while working. The program can be completed in three terms, with classroom work offered one day per week. The courses give a foundation in quantity food production, personnel management, nutrition care principles and food service systems management. The field experience may be completed at the student's worksite, on campus, and/or a local facility providing food service, and will provide a practical application of the principles learned in coursework. Students completing the program will be prepared to sit for the national examination to become Certified Dietary Managers approved by the Dietary Managers Association.

COST OF PROGRAM

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

- Student membership in Dietary Manager Association, optional but recommended, \$35
- CDM®, CFPP® Certification Exam Study Guide, \$150
- National Credentialing Exam, \$390
- In some cases, fees associated with TB Testing or immunizations (if required by practicum site), \$222

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry in program:

- High school diploma or GED

Recommended prior to entry into program:

- Minimum placement scores resulting in WR 121 placement or completion of WR 65/75/95 ("C" or better)
- Minimum placement scores resulting in MTH 60 placement or completion of MTH 20/31 ("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:

Students may enroll in the Dietary Manager courses during any term. Coursework is not sequential.

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

The Dietary Manager program is accredited by the Dietary Managers Association (DMA). This accreditation requires that students complete 150 hours of practicum (internship) in appropriate facilities, which may include long-term health care facilities, schools and hospitals. Some facilities require students to obtain immunizations and/or TB testing prior to the practicum.



photo by Andy Tullis

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

CCI 102	Sanitation and Safety for Managers	2
CCI 110	Culinary Nutrition	3
CCI 204	Restaurant Management and Supervision	3
CCI 206	Storeroom and Inventory Controls	3
DM 111	Practicum: Restaurant Mgmt and Supervision	1
DM 121	Practicum: Sanitation and Safety for Managers	1
DM 131	Practicum: Storeroom and Inventory Control	1
DM 210	Nutrition Therapy	3
DM 211	Practicum: Nutrition Therapy	1
DM 221	Practicum: Culinary Nutrition	1

EARLY CHILDHOOD EDUCATION

Associate of Applied Science (AAS) Degree
93-98 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 (if appropriate)

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 health-related and no-smoking policies.

Refer to the COCC Early Childhood Student Handbook (<http://ece.cocc.edu>) 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 <http://www.sou.edu/admissions/transfer/articulation.html> and click on the Early Childhood Development link under Central Oregon Community College.

(continued on next page)

EARLY CHILDHOOD EDUCATION

Associate of Applied Science (AAS) Degree *(continued)*
93-98 credits

PROGRAM COURSE REQUIREMENTS

General education/foundational requirements

Communication

WR 121	English Composition	4
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Computation

MTH 60	Algebra I	4
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Human Relations

Human Relations list, see page 50		3
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Program requirements

ED 140	Intro to Early Childhood Education	4
ED 150	Environments and Curriculum in ECE	4
ED 151	Observation and Guidance in ECE Learning	4
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

Computer competency		0-4
ENG 221	Children's Literature	4
FN 225	Human Nutrition	4
GEOG 272	Geography for Teachers	3
Health		3-4
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	4

Complete 7-12 credits of discipline studies courses to reach the 93 minimum credits required for the AAS degree. See advisor for details.



photo by David Morris

EARLY CHILDHOOD EDUCATION

Associate of Arts Oregon Transfer (AAOT) Degree
90 credits

General education/foundational requirements

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

Writing

WR 121	English Composition	4
WR 122 or WR 227	English Composition 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 105	Intro to Contemporary Mathematics	4
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		
or MTH 111	College Algebra	
or MTH 211-213	Fund of Elementary Math I-III (12 cr)	

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

General education/discipline studies

(See pages 49 and 50 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.

Note: For students intending to transfer to Oregon State University-Cascades program in Human Development and Family Sciences, the following courses are required and may be used to fulfill the foundational requirements:

- FN 225, Human Nutrition
- HHP 231, Human Sexuality; and
- HHP 295, Health and Fitness.
- PSY 201, Mind and Brain
- PSY 202, Mind and Society
- SOC 201, Introduction to Sociology
- SP 218, Interpersonal Communication



photo by Aaron Stark

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 ¹	4
ED 150	Environments and Curriculum in ECE	4
ED 151	Observation and Guidance of Young Children's Learning	4
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 ²	3
ED 219	Multicultural Issues in Education Settings ²	3
ED 250	Advanced Curriculum Development and Teaching Methods in Early Childhood	4
ED 253	Learning Across the Life Span ²	3
ED 265	Children at Risk	3
ENG 221	Introduction to Children's Literature	4
PSY 215	Developmental Psychology	4

¹ Course required for OSU-Cascades HDFS program.

² ED 216, 219, and 253 count toward the recommended courses for students pursuing the MAT at OSU-Cascades.

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

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

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

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

General education/discipline studies

(See pages 49 and 50 for course listings. One of the courses must be a cultural literacy course, designated with an asterisk.)



photo by David Morris

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.

EC 201	Microeconomics	4
EC 202	Macroeconomics	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

Take enough elective courses to meet the minimum 90 credits required for the degree. Elective courses should include:

MTH 241	Calculus for Management/Social Science	4
MTH 243	Math for Management/Life/Social Science	4

Plus 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.

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 40-41 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 a transfer degree in Early Childhood Education through COCC (see page 115) 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.

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 <http://www.tspc.state.or.us> 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: <http://cap.cocc.edu/Advising/Teacher+Education/>.



photo by Aaron Stark

EMERGENCY MEDICAL SERVICES

Associate of Applied Science (AAS) Degree

104-108 credits

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science in 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) Basic and Paramedic levels. Students will need to satisfy a computer-based and practical hands-on test through the National Registry to complete certification. All applicants wanting to gain reciprocity with the State of Oregon Health Division at the Paramedic level must show proof they have completed an associate of applied science degree in Emergency Medical Services and pay the required fees.

EMT 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. EMS 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 and textbooks, students should anticipate the following estimated program costs:

- Program lab fees vary depending on level of EMT training. Ranges are \$150 per term for EMT Basic, \$345 per term for EMT Intermediate and \$650 per term for Paramedic.
- Specialty equipment (optional) stethoscopes, note pads. Range from \$20 - \$150
- Testing fees which include National Board 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).
- Immunizations required: current TB, Hepatitis B series, measles/mumps/rubella. Costs range from \$20 - \$150, depending on where the shots are obtained.
- Paramedic students may anticipate a cost for housing and living expenses while doing their field internship, if sent outside of the local area.

PROGRAM PREPARATION AND PREREQUISITES

The AAS in Emergency Medical Services (EMS) is designed for students seeking an EMS career and those seeking a career in the fire service industry. The program meets or exceeds the required technical skills and knowledge necessary for national and state licensure testing. Specific immunization records are required prior to registration in EMT Basic, EMT Intermediate and Paramedic classes. The program contains certification requirements at the EMT Basic, EMT Intermediate and Paramedic levels. This program includes coursework that meets accreditation standards for communication, human relations and computation.

ADVISING INFORMATION

It is strongly advised 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.

Recommended preparation for EMT basic students includes successful completion of WR 121; MTH 60 or 85.

Second-year paramedic courses are open only to students who have been admitted to the program.

Students should contact the Admissions office for application process details of the paramedic course selection 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 an instructor and program director to make sure you understand the state and national testing process for EMT Basic and Paramedic courses.

Speak with an advisor to get recommendations for courses to complete the Associate of Arts Oregon Transfer (AAOT) degree.

REQUIRED PRIOR TO ENTRY IN PROGRAM (EMS) COURSES

- High school diploma or GED. Students must be 18 years old or older to test for state and national exams.
- Placement scores resulting in college-level writing and math.
- Immunization records: current TB (must be within one year), Hepatitis B series, Measles/Mumps/Rubella (two documented shots).

Information on the courses that are required for entry into the Paramedic course as prerequisites and those used to calculate points for selection may be found on the EMS website, <http://alliedhealth.cocc.edu/ems-selection>.

(continued on next page)

EMERGENCY MEDICAL SERVICES

Associate of Applied Science (AAS) Degree *(continued)*

104-108 credits

REQUIRED PRIOR TO ENTERING PARAMEDIC COURSE FALL TERM

- Complete application process found at <http://alliedhealth.cocc.edu/ems-selection>.
- Acceptance into the program based on the selection process found on the website listed above.
- Criminal background check.
- All required prerequisite courses complete with an overall GPA of 3.0 (find required prerequisite courses at <http://alliedhealth.cocc.edu/ems-selection>).
- Documentation of completion of immunizations (Hepatitis B or release, current TB, two immunizations for measles/mumps/rubella).
- CPR will be included at the EMT Basic, EMT Intermediate and Paramedic level during the course, however, a current Health Care Provider CPR card is required prior to placement into the Paramedic course.

All COCC students enrolled in Emergency Medical Services (which includes requirements for clinical, field and practical experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a medical or other facilities for training. Students who do not pass the CHC may not be eligible to complete training at affiliated clinical sites, to sit for licensure or certification exams, or to be hired for some professional positions. Students who believe their past history may interfere with their ability to complete the program of study or to obtain licensure or certification in their chosen field should contact the appropriate state board or the program director.

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 of a 2.7 GPA to stay enrolled in the Paramedic course. Students who fall below the minimum 3.0 GPA for prerequisite courses will not be eligible and their applications will not be considered for selection into 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 be re-admitted the following year if their applications are accepted for the selection process based on minimum requirements.

REGISTRATION INFORMATION

Program (EMS) courses begin once per year in fall term for the Paramedic course. All other courses are offered multiple times throughout fall, winter and spring terms. See the online schedule (www.cocc.edu, Quick Links/Credit Class Schedule) for information.

PROGRAM STANDARDS

Students must maintain a minimum 2.7 GPA while enrolled in the Paramedic course part of the EMS program; students who do not meet this standard may be dismissed from the program. Students who fall below a minimum 2.7 ongoing GPA during the Paramedic course will have one term to correct the deficit and bring up their grade. Students who fail to bring their grade up may not be allowed to register the following term and complete the course. They may be re-admitted the following year if their applications are accepted for the selection process based on minimum requirements.

State requirements allow for 85 percent attendance in EMT classes and students must pass the overall EMT class at a minimum of 75 percent to sit for state and national registry testing and certification.

If students are asked to leave a clinical site on bad terms with that agency and that agency decides it would be best for that student to not return, they may forfeit their ability to continue due to the requirement of clinical rotations at each of the four area hospitals as paramedic students. Students are offered an opportunity to correct and repair the relationship with the clinical site before decisions are made to remove them from the program.

The EMS handbook outlines all of the requirements in class, lab, clinical, field and practical settings and can be located by contacting the EMS program manager. 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 grade 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.

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

The Emergency Medical Services program is accredited by the Board of Education and the Oregon State Health Services & Trauma section. This accreditation requires that students complete didactic, lab, clinical and field internships as outlined in the Oregon Administrative Rules.

In Oregon it is required to have an AAS in EMS or a degree with completion of all the required EMS courses and certifications 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.

(continued on next page)

EMERGENCY MEDICAL SERVICESAssociate of Applied Science (AAS) Degree *(continued)*

104-108 credits

TRANSFER INFORMATION

This degree is designed for students planning to enter their chosen career upon graduation. Student 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

AAS in Emergency Medical Services - Refer to the Selection Process Handbook for the Paramedic class selection.

General education/foundational skills

MTH 60	Algebra I	4
or MTH 85	Technical Mathematics I	
WR 121	English Composition	4
FOR 211	Supervision and Leadership	3
or BA 285	Business Human Relations	

EMS program requirements

Students must complete all EMS courses listed to graduate.

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/Documentation	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 1	8
EMT 291	EMT Paramedic Clinic Part 1	3
EMT 292	EMT Paramedic Part 2	8
EMT 293	EMT Paramedic Part 2 Clinic	3
EMT 294	EMT Paramedic Part 3	8
EMT 295	EMT Paramedic Part 3 Clinic	3
EMT 280	EMT-Paramedic Co-op Work Experience	7
SFS 230	Rescue Practices	3

Other Requirements

The following is a list of general requirement courses that must be completed for graduation:

Computer Competency	0-4	
General education discipline studies courses, pages 49-50	9	
HHP	3	
SP 218	Interpersonal Communication	3
or SP 111	Fundamentals of Public Speaking	



photo by Benjamin Edwards

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.

COCC’s Humanities department offers courses in

- English (American, British, Children’s and Western World Literature, and Introduction to Literature: Fiction, Drama, Poetry);
- Foreign Languages (French and Spanish);
- Humanities (American Multiculturalism, Film Arts, Non-Western Cultures and Literature, Popular Culture, British Life and Culture, Italian Life and Culture);
- Philosophy;
- Reading; and
- Writing (English Composition, Technical Writing and Creative Writing: Fiction, Non-Fiction, Poetry, Scriptwriting)

as 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 transfer students are encouraged to consult college catalogs and work closely with their advisors. Students seeking a bachelor’s degree in English/Literature or an interdisciplinary humanities degree featuring literary studies are often best served by pursuing the Associate of Arts Oregon Transfer degree.

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

The following is a suggested course of study for students interested in pursuing a bachelor’s degree in English/Literature.

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

Health (3 credits with HHP prefix)

		3
<i>HHP activity courses (1 credit each) are not to be duplicated</i>		

General education/discipline studies

(See pages 49 and 50 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. 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

NOTE: ENG 140, Shakespeare in Ashland (3) may also satisfy the Shakespeare requirement at some universities.

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.

(continued on next page)

ENGLISH/LITERATURE

Associate of Arts Oregon Transfer (AAOT) Degree *(continued)*
90 credits

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:

(1) 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

(2) 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

(3) American Multiculturalism (may satisfy cultural diversity requirements)

HUM 230	Immigrant Experience American Literature	4
HUM 240	Native American Literature and Culture	4
HUM 256	Introduction to African-American Literature	4

(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 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 257	Literature into Film	4
HUM 105	Italian Life and Culture	2
HUM 106	British Life and Culture	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

Transfer information

Oregon University System (OUS) universities that offer bachelor's degrees with majors, minors or specializations in English/Literature and related fields include:

Oregon State University-Cascades

English (minor): American Literature and Liberal Studies (BA/BS).

Oregon State University-Corvallis

American Studies; English (major), BA; English Literature minor; Writing minor; Print Media minor; Elementary and Secondary Education: English Language Arts authorization level or endorsement area; Ethnic Studies (focus: American multiculturalism); Liberal Studies (interdisciplinary themes, including English/Literature, Education, Ethnic Studies, European Studies, Foreign Languages and Literatures, Philosophy, Writing)

University of Oregon

Comparative Literature, English, Ethnic Studies, Film Studies, Humanities.

Portland State University

English, Film Studies (minor only), Professional Writing (minor only)

Eastern Oregon University

English/Writing (concentration in Literature, Literature/Film, Discourse Studies or Writing)

Southern Oregon University

English and Writing, Native American Studies, Shakespeare Studies

Western Oregon University

English (B.A.: English/Language Arts Common Core, English/Literature, English/Linguistics, English/Writing).

Note: WOU English majors and Language Arts secondary teaching majors should take ENG 107, ENG 108 and ENG 109.

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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements. The following is a suggested course of study for students interested in pursuing a bachelor's degree in exercise science.

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

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

General education/discipline studies

(See pages 49 and 50 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.

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 (offered fall and winter)	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:

BA 101	Introduction to Business	4
HHP 131	Intro to Exercise/Sport Science (offered fall)	3
HHP 212	CPR-American Heart Association	1
or HHP 212A	CPR-AHA Health Care Providers	
HHP 259	Care and Prevention of Athletic Injury (offered spring)	3
HHP 260	Anatomical Kinesiology (offered winter)	4
HHP 262	Training Theory and Applications (offered spring)	3
HHP 266	Nutrition for Health	3
HHP 270	Sport and Exercise Psychology (offered winter)	3
HHP 280	Co-op Work Experience - HHP	2

Students transferring to OSU must take HHP 295.

Oregon public universities with an exercise science major

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
- Portland State University
Health Studies
- Southern Oregon State University
Health and Physical Education

Advising information

Lab fees:

- \$20 for HHP 295, Health and Fitness, 3 credits or HHP 252A, Fit/First Aid, 3 credits
- \$20 for HHP 212, CPR, 1 credit and HHP 212A, CPR for Health Care Providers, 1 credit
- \$16 for all HHP 185 activity classes for Mazama user fee

EXERCISE SCIENCE

Associate of Science

93 credits

The Associate of Science degree with a focus in exercise science is intended for students who want to work in the fitness industry immediately upon graduation or current employees who wish to upgrade their skills. This degree can help prepare a student to sit for the ACSM Personal Trainer or Health Fitness Instructor Certificate exams.

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 219	Small Group Communication	

Mathematics

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

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

Computer competency ²		0-4
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General education/discipline studies

(See pages 49 and 50 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.

Recommend including:

PSY 201	Mind and Brain	4
PSY 202	Mind and Society	4
SOC 201	Intro to Sociology	4

Science/Math/Computer Science

Choose nine-12 credits from the science/math/computer science discipline studies list. Must include at least two different prefixes and at least two courses with the same prefix. 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

Program requirements

BA 101	Introduction to Business	4
HHP 131	Intro to Exercise/Sport Science (offered fall)	3
HHP 212	CPR-American Heart Association	1
or HHP 212A	CPR-AHA Health Care Providers	
HHP 259	Care and Prevention of Athletic Injury (offered spring)	3
HHP 260	Anatomical Kinesiology (offered winter)	4
HHP 262	Training Theory and Applications ³ (offered spring)	3
HHP 266	Nutrition for Health	3
HHP 270	Sport and Exercise Psychology (offered winter)	3
HHP 280	Co-op Work Experience - HHP	2

Electives

17-34 credits. 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).

Advising notes

¹ Students transferring to OSU must take HHP 295

² Pass computer basic skills competency test (see page 38 for details) or take CIS 120, Computer Concepts.

³ Can be used to meet the science/math/computer science discipline studies requirement

Transfer information

- Eastern Oregon University-Distance Education
Physical Activity and Health
- Oregon State University
Health and Human Sciences
- Portland State University
Health Studies
- Southern Oregon State University
Health and Physical Education

Advising information

Lab fees:

- \$20 for HHP 295, Health and Fitness, 3 credits or HHP 252A, Fit/First Aid, 3 credits
- \$20 for HHP 212, CPR, 1 credit and HHP 212A, CPR for Health Care Providers, 1 credit
- \$16 for all HHP 185 activity classes for Mazama user fee

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 Humanities Department offers first- and second-year French and Spanish as well as 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 or Spanish; 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 degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements; with the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor’s degree in foreign languages.

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

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



photo by Eugen Helmbrecht

General education/discipline studies

(See pages 49 and 50 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.

Electives

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:

(continued on next page)

FOREIGN LANGUAGES

Associate of Arts Oregon Transfer (AAOT) Degree *(continued)*

90 credits

Oregon State University-Corvallis

Foreign Languages and Literatures (majors): French and Spanish; International Degree Program (including Foreign Languages and Literatures, Cultural Diversity, Contemporary Global Issues, and Western Culture); Liberal Studies (interdisciplinary themes, including Foreign Languages and Literatures); Education (Pre-Elementary, Elementary and Secondary); Ethnic Studies (focus: American multiculturalism).

University of Oregon

French, Spanish (Romance Languages and Literatures); Comparative Literature, Ethnic Studies, European Studies, Humanities, International Studies, Latin American Studies, Linguistics, Peace Studies, Second Language Acquisition and Teaching; School of Education: English for Speakers of Other Languages/ESOL-Bilingual endorsement areas include Spanish and French.

Portland State University

Foreign Languages and Literatures offer majors and minors in French, Spanish; International Studies certificate programs require language and area studies, and encourage study abroad; certificate programs include European Studies, Latin American Studies, Middle East Studies and Canadian Studies, as well as International Business Studies; Teaching English as a Second Language (certificate).

Eastern Oregon University

International Studies; Modern Languages Department offers minors in German and Spanish, and BA in Liberal Studies with concentration in German or Spanish.

Southern Oregon University

Foreign Languages and Literatures offers degrees in French and Spanish, including BA's in Language and Culture, Arts and Letters, and Interdisciplinary Studies. International Studies require proficiency in a foreign language equivalent to three years of college-level instruction and encourage study abroad with immersion in a related foreign culture and an intensive language component.

Western Oregon University

Bachelor's degrees include Humanities (emphasis options include Modern Languages, French or Spanish), International Studies (specialization options include Modern Language in one language or Social Science: French Studies or Latin American Studies), Spanish, and Spanish Teacher Education. Minors are offered in Chicano/a Studies, French, International Studies, Latin American Studies and Spanish. Education degree programs include endorsements in Foreign Language (French and Spanish) and Bilingual/ESOL Education.



photo by Benjamin Edwards

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 also designed for those already in the workforce 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.

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 in 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 recognized 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 interested in entering the program must meet basic competencies in reading, writing and math as determined by the minimum scores received on placement tests as well as hold a high school diploma or its equivalent.

MINIMUM GPA OR GRADE REQUIREMENTS

All required program courses must be passed with a grade of at least a "C." Students are expected to provide their own appropriate field clothing and tools. A list will be provided in FOR 100, Forestry Program Orientation.

REGISTRATION INFORMATION

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 interested in entering the program must meet basic competencies in reading, writing and math as determined by the minimum scores received on placement tests as well as hold a high school diploma or its equivalent.

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. Institutions with which COCC has articulation agreements in Forest Resources Technology are Oregon State University, Oregon State University-Cascades, University of Idaho and Humboldt State University.

Students planning on transferring 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.

(continued on next page)

FOREST RESOURCES TECHNOLOGY

Associate of Applied Science (AAS) Degree *(continued)*

105 credits

PROGRAM REQUIREMENTS

The following is a suggested course sequence for students able to attend full time. Students are encouraged to meet with a faculty member 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. For further information, contact Michael Fisher, mfisher@cocc.edu or 541-383-7755.

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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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 49-50)		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	
or FW 212	Survey of Northwest Birds	2

General education discipline studies courses (see pages 49-50) 4

¹ Students planning to transfer should take MTH 111 or 112 and should see their advisor for specific transfer requirements.

² Pass computer basic skills competency test (see page 38 for details) or take CIS 120, Computer Concepts.

³ Transfer students should also take WR 227, Technical Writing.

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

TRANSFER OPTIONS

Credits vary

Students planning on transferring to Oregon State University, Oregon State University Cascade or the University of Idaho to acquire a Bachelor of Science degree should meet with a COCC Forestry Program advisor to discuss current transfer requirements. Many of the required undergraduate courses for the Bachelor of Science degrees can be taken at COCC and transferred accordingly.

Oregon State University (www.cof.orst.edu)

- Fisheries and Wildlife
- Forest Engineering
- Forest Engineering/Civil Engineering
- Forest Operations Management
- Forest Management Recreation Resource Management
- Renewable Materials

Oregon State University-Cascades (www.osucascades.edu/academics/naturalresources)

- Natural Resources
- Tourism and Outdoor Leadership

University of Idaho (www.cnrhome.uidaho.edu)

- Ecology and Conservation Biology
- Fishery Resources
- Forest Products
- Forest Resources
- Rangeland Ecology and Management
- Resource Recreation and Tourism
- Wildlife Resources

TRANSFER AND/OR ARTICULATION INFORMATION

Articulation and transfer options currently exist with:

- Oregon State University
- Oregon State University-Cascades
- University of Idaho



photo by Eugen Helmbrecht

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

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

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
	<i>(or higher for which Intermediate Algebra is a prerequisite)</i>	

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

General education/discipline studies

(See pages 49 and 50 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 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.

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
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	General Physics I	5
PH 202	General Physics II	5
PH 203	General Physics III	5
or		
PH 211	General Physics I	
PH 212	General Physics II	
PH 213	General Physics III	

¹ University of Oregon majors must take two additional science sequences from those not used to meet the COCC science discipline studies requirement listed above.

Transfer information

The University of Oregon is currently the only public institution in Oregon that offers a Bachelor of Science degree in general science.

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 role.

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), \$150

Recommended, but not required:

- A home or laptop computer capable of running the GIS software, \$600. Contact program instructor for specifics.

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry in program (GIS) courses:

- Two- or four-year degree from accredited institution

Recommended prior to entry in program (GIS) courses:

- 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

WR121 English Composition	4
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Computation

Imbedded in program courses

Human Relations

Human Relations list, see page 50	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 role.

COST OF PROGRAM

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

- Materials (jump drive, maps, asst. office supplies), \$150

Recommended, but not required

- A home or laptop computer capable of running the GIS software, \$600. Contact program instructor for specifics.

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry in program (GIS) courses:

- High School Diploma or GED
- Minimum placement scores resulting in WR121 placement, OR completion of WR65/75/95 ("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 (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 worksite. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. If you believe that your history may interfere with your ability to complete the program of study, you 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.

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)	4

Human Relations

Course from Human Relations list, page 50	(minimum)	3
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GEOGRAPHIC INFORMATION SYSTEMS (GIS)

Associate of Applied Science (AAS) Degree *(continued)*

94-99 credits

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 49-50		(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 degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements; with the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

Health (3 credits with HHP prefix)

		3
<i>HHP activity courses (1 credit each) are not to be duplicated</i>		

General education/discipline studies

(See pages 49 and 50 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.

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.



photo by Eugen Heimbrecht

Electives

GEOG 107	Cultural Geography	4
GEOG 190	Environmental Geography	4
GEOG 208	Landforms and Water ¹	4
	or GEOG 209 Weather and Climate ¹	

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.

Additional advising information and recommendations

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.

¹ Courses in Geography do not need to be taken in sequence.

GEOLOGY

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

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

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

Health (3 credits with HHP prefix)

HHP activity courses (1 credit each) are not to be duplicated		3
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General education/discipline studies

(See pages 49 and 50 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.

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 I	4
BI 102	General Biology II	4
BI 103	General Biology III	4
CH 222	General Chemistry II	5
CH 223	General Chemistry III	5
G162CV	Cascades Volcanoes	3
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	4
PH 212	General Physics II	4
PH 213	General Physics III	4

Advising information

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: Medical Insurance; Medical Office Specialist; Medical Transcription
37-60 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, they receive an Insurance Certificate.
- At the end of the first three quarters (year one) students are awarded a Medical Office Specialist Certificate.
- After completing the first three quarters of coursework (year one), plus the completion of HIT131C, Transcription Applications, offered summer term, and passing a qualifying exam, students earn a Medical Transcription Certificate.
- After completing four academic quarters (year one 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.
- At the end of six academic quarters (two years), 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.

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:

- Computer basics
- Study skills
- Spelling skills
- Word processing skills essential
- Keyboarding, 40 WPM minimum
- Basic English (writing skills)
- Reading skills

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.

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. Note that students must complete all program courses with a "C" grade (75 percent) or better.

INSURANCE

Short-term Certificate of Completion

(37 credits; two quarters 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.

Fall term

AH 111	Medical Terminology I	3
BI 231	Human Anatomy and Physiology I	4
CIS 120	Computer Concepts	4
HIT 103	Health Information Systems and Procedures	5
MTH 031	Health Care Math	3

Winter term

AH 112	Medical Terminology II	3
BI 232	Human Anatomy and Physiology II	4
HIT 104	Health Data Content and Structure	5
HIT 180	HIPAA Management	2
WR 121	English Composition	4

MEDICAL OFFICE SPECIALIST

Certificate of Completion

(56 credits; three quarters 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
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Spring term

AH 113	Introduction to the Study of Disease	5
BI 233	Human Anatomy and Physiology III	4
HIT 131A	Document Management and Technology	3
HIT 182	Introduction to Medical Coding	4
SP 218	Interpersonal Communication	3
or BA 285	Business Human Relations	
or PSY 207	Applied Psychology	

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
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Summer term

HIT 131C	Medical Transcription Applications	4
Pass qualifying exam		0

(continued on next page)

HEALTH INFORMATION TECHNOLOGY

Certificates: Medical Billing Specialist, Medical Coding
71-84 credits

MEDICAL BILLING SPECIALIST

Certificate of Completion

(71 credits; five quarters 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 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

(80-84 credits; seven quarters 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	71-75
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Winter term

HIT 283 Coding Classifications	6
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Spring term

HIT 285 Advanced Coding Classification	3
Pass proficiency exam	



HEALTH INFORMATION TECHNOLOGY

Associate of Applied Science (AAS) Degree

104 credits

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science, Health Information Technology

PROGRAM DESCRIPTION

The Health Information Technology program trains 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
- Medical Coding

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.

- Tuition for AAS is estimated at \$8,400-\$9,745 to complete 104-108 credits.
- Additional costs estimated to be approximately \$1500 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 (required course) and AH 111 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 HIT and science-related courses must be completed with a grade of "C" 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. 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).

Unethical or unprofessional conduct is a 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, leading to eligibility for the Registered Health Information Administrator (RHIA) exam.

(continued on next page)

HEALTH INFORMATION TECHNOLOGYAssociate of Applied Science (AAS) Degree *(continued)*

104 credits

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 207	Applied Psychology	
or BA 285	Business Human Relations	

All courses with an HIT prefix require instructor approval.

Program course requirements

HIT 103	Health Info Systems/Procedures	5
HIT 104	Health Data Content & 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 131C	Medical Transcription Applications (Optional) (Proficiency Exam)	4
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	4
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	3
HIT 293	Directed Practice II	2

Other required courses

AH 111	Medical Terminology I	3
AH 112	Medical Terminology II	3
AH 113	Intro to Study of Disease	5
BI 231	Human Anatomy & Physiology	4
BI 232	Human Anatomy & Physiology	4
BI 233	Human Anatomy & Physiology	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 Health and Human Performance-Public Health Department)
- Eastern Oregon University and Southern Oregon University Department of Health and Physical Education (Health Promotion/Fitness Management).

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

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

The following is a suggested course of study for students interested in transferring to a bachelor's degree program in health promotion.

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

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

General education/discipline studies

(See pages 49 and 50 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.

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	

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 220, Introduction to Epidemiology, and HHP 258, Holistic Wellness.

Advising information

Lab fees:

- \$20 for HHP 295, Health and Fitness, 3 credits or HHP 252A, Fit/First Aid, 3 credits
- \$20 for HHP 212, CPR, 1 credit and HHP 212A, CPR for Health Care Providers, 1 credit
- \$16 for all HHP 185 activity classes for Mazama user fee

HISTORY

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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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

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
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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 49 and 50 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. Recommend that students take 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.

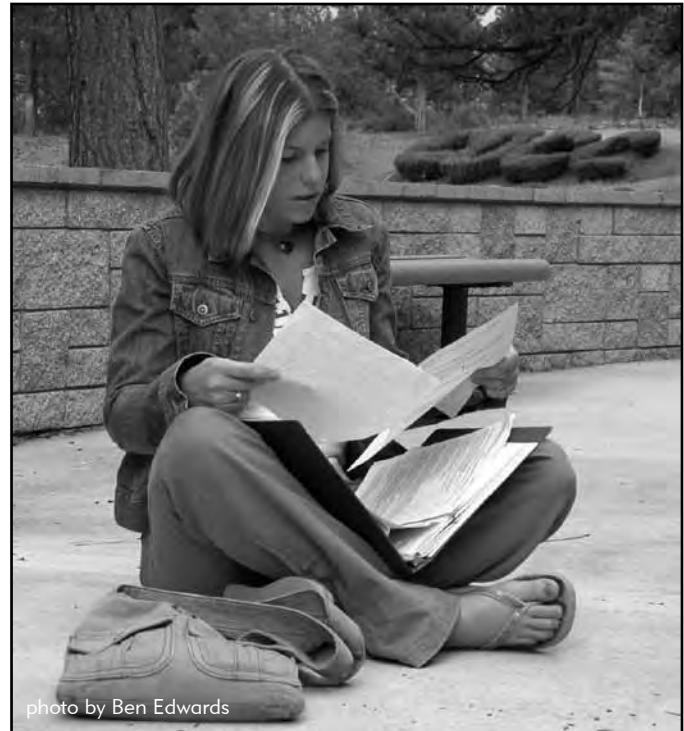


photo by Ben Edwards

Advising information

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)

History (minor)

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, and 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; strong writing, reading, critical thinking and research skills; and 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);
- Foreign Languages (French and Spanish);
- Humanities (American Multiculturalism, Women’s Studies, Film Arts, Non-Western Cultures and Literature, Popular Culture);
- Philosophy (Ethics, Epistemology, Logic);
- Reading; and
- Writing (English Composition, Technical Writing and Creative Writing: Fiction, Non-Fiction, Poetry, Scriptwriting)

as needed 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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

Health (3 credits with HHP prefix)

		3
<i>HHP activity courses (1 credit each) are not to be duplicated</i>		

General education/discipline studies

(See pages 49 and 50 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.

Electives

Choose enough electives to reach the minimum of 90 credits required for the AAOT.

Transfer students seeking a bachelor’s degree in specific or interdisciplinary humanities fields are advised to select general education/discipline studies and electives 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.

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HUMANITIES

Associate of Arts Oregon Transfer (AAOT) Degree *(continued)*
90 credits

Transfer information

Oregon University System (OUS) universities that offer bachelors' degrees with specializations in humanities fields:

Oregon State University-Cascades

English (minor); Liberal Studies; American Studies.

Oregon State University-Corvallis

American Studies, Education (Pre-Elementary, Elementary and Secondary), English, Ethnic Studies (focus: American Multiculturalism), Foreign Languages and Literatures (majors: French, Spanish), History, International Degree Program (including Western Culture, Cultural Diversity, Contemporary Global Issues, Foreign Languages and Literatures), Liberal Studies (interdisciplinary themes, including English/Literature, Education, Ethnic Studies, European Studies, Foreign Languages and Literatures, Philosophy, Writing), Philosophy.

University of Oregon

Comparative Literature, English, Ethnic Studies, Film Studies, French, History, Humanities, International Studies, Linguistics, Peace Studies, Philosophy, Second Language Acquisition and Teaching, Spanish, Women's and Gender Studies.

Portland State University

African Studies, Applied Linguistics, Black Studies, Chicano/Latino Studies (certificate), English, European Studies, Foreign Language (French, or Spanish), Film Studies (minor only), Hispanic/Latin American Studies, History, International Studies, Latin American Studies (certificate), Middle East Studies, Native American Studies (minor only), Philosophy, Professional Writing (minor only), Teaching English as a Second Language (certificate).

Eastern Oregon University

English/Writing (concentration in Literature, Literature/Film, Discourse Studies, or Writing), Gender Studies, History, Humanities, International Studies, Liberal Studies, Modern Languages, Philosophy.

Southern Oregon University

Education, English and Writing, Foreign Languages, History, International Peace Studies, International Studies, Native American Studies, Philosophy, Shakespeare Studies.

Western Oregon University

Chicano/a Studies, Education (Early Childhood, Elementary, Middle Level, High School), English (B.A.: English/Language Arts Common Core, English/Literature, English/Linguistics, English/Writing), Film Studies, French, Gender Studies, History, Interdisciplinary Studies, International Studies, Latin American Studies, Literature (see English), Philosophy, Spanish, Writing (see English).



photo by Eugen Helmbrecht

MANUFACTURING TECHNOLOGY

CNC MACHINING

Certificate of Completion

44 credits

CERTIFICATE/DEGREE 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. Departmental 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 \$60-\$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, 115, 116, 118, 133, 153, 160
- Welding personal protective equipment and tools, \$400

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High School Diploma or GED
- Minimum placement scores resulting in WR 60 placement OR prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 10 placement OR prior completion of MTH 10 ("C" or better)
- Completion or current enrolment in MATC new-student orientation class MFG 100 with a "Pass" grade
- Certificate courses require instructor permission
- 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

All MATC programs are self-directed, outcome-based programs. 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 with 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 certification such as that provided by AWS or SME should discuss this with their advisor.

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. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

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	Weld 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. Departmental 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 \$60-\$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, 115, 116, 118, 133, 153, 160
- Welding personal protective equipment and tools, \$400

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High School Diploma or GED
- Minimum placement scores resulting in WR 60 placement OR prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 10 placement OR prior completion of MTH 10 ("C" or better)
- Completion or current enrolment in MATC new-student orientation class MFG 100 with a "Pass" grade
- Certificate courses require instructor permission
- 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

All MATC programs are self-directed, outcome-based programs. 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 with 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 certification such as that provided by AWS or SME should discuss this with their advisor.

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. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

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	Weld I	3
MFG 109	Lean Practices	2
MFG 110	Manufacturing Processes I	3
MFG 160	Materials Engineering	2
MFG 116	Manufacturing Electrical Systems	2
MFG 118	Fluid Power Systems	2
MFG 241	Electric Motor Control	2
MFG 242	PLC I	2
MFG 243	Industrial Sensors	2
MFG 244	PLC II	2
MFG 245	Electrical Controls /Fluid Power	2
MFG 289	Material Handling-Fork Lift Safety	1
MFG 267	Oxygen Fuel & Plasma Cutting	2
MFG 246	Mechanical Trouble Shooting	2

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. Departmental 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 \$60-\$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, 115, 116, 118, 133, 153, 160
- Welding personal protective equipment and tools, \$400

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High School Diploma or GED
- Minimum placement scores resulting in WR 60 placement OR prior completion of WR 60 or higher (“C” or better)
- Minimum placement scores resulting in MTH 10 placement OR prior completion of MTH 10 (“C” or better)
- Completion or current enrolment in MATC new-student orientation class MFG 100 with a “Pass” grade
- Certificate courses require instructor permission
- 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

All MATC programs are self-directed, outcome-based programs. 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 with 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 considerable regarding secondary certifications in Manufacturing. The MATC offers certification preparation classes to assist students in obtaining certifications.

Students desiring specific certification such as that 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 transferable.

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	Weld 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**MANUFACTURING TECHNOLOGY**

Certificate of Completion

47 credits

CERTIFICATE/DEGREE 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. Departmental 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 \$60-\$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, 115, 116, 118, 133, 153, 160
- Welding personal protective equipment and tools, \$400

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High School Diploma or GED
- Minimum placement scores resulting in WR 60 placement OR prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 10 placement OR prior completion of MTH 10 ("C" or better)
- Completion or current enrolment in MATC new-student orientation class MFG 100 with a "Pass" grade
- Certificate courses require instructor permission
- 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

All MATC programs are self-directed, outcome-based programs. 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 with 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 certification such as that 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 transferable.

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	Weld I	3
MFG 105	Weld II	3
MFG 107	Weld 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	Business Human Relations	3
or PSY 207	Applied Psychology	
or SP 218	Interpersonal Communication	
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. Departmental 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 \$60-\$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, 110, 115, 116, 118, 133, 153, 160
- Welding personal protective equipment and tools, \$400

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High School Diploma or GED
- Minimum placement scores resulting in WR 60 placement OR prior completion of WR 60 or higher (“C” or better)
- Minimum placement scores resulting in MTH 10 placement OR prior completion of MTH 10 (“C” or better)
- Completion or current enrolment in MATC new-student orientation class MFG 100 with a “Pass” grade
- Certificate courses require instructor permission
- 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

All MATC programs are self-directed, outcome-based programs. 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 with 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 considerable regarding secondary certifications in Manufacturing. The MATC offers certification preparation classes to assist students in obtaining certifications.

Students desiring specific certification such as that provided by AWS or SME should discuss this with their advisor.

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. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

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	Weld 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. Departmental 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 \$60-\$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, 115, 116, 118, 133, 153, 160
- Welding personal protective equipment and tools, \$400

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High School Diploma or GED
- Minimum placement scores resulting in WR 60 placement OR prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 10 placement OR prior completion of MTH 10 ("C" or better)
- Completion or current enrolment 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

All MATC programs are self-directed, outcome-based programs. 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 with 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 reenter 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 certification such as that 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 transferable.

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	Weld I	3
MFG 105	Weld II	3
MFG 107	Weld III	3
MFG 110	Manufacturing Processes I	3
MFG 202	Metals Preparation	2
MFG 262	Welding Inspection/Quality Control	2
MFG 271	SMAW I	2
MFG 272	GMAW I	2
MFG 281	GTAW I	2
MFG 282	FCAW I	2
MFG 267	Oxygen Fuel & Plasma Cutting	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

MANUFACTURING TECHNOLOGY

Two-Year Certificate of Completion

85 credits

CERTIFICATE/DEGREE 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. Departmental 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 \$60-\$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, 115, 116, 118, 133, 153, 160
- Welding personal protective equipment and tools, \$250-400

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High School Diploma or GED
- Minimum placement scores resulting in WR 60 placement OR prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 10 placement OR prior completion of MTH 10 ("C" or better)
- Completion or current enrollment in MATC new-student orientation class MFG 100 with a "Pass" grade
- Certificate courses require instructor permission
- 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

All MATC programs are self-directed, outcome-based programs. 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 with 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 certification such as that 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 transferable.

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	Weld I	3
MFG 105	Weld II	3
MFG 107	Weld 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 from at least 38 credits from the following program electives:

CIS 135S1	Solidworks 1	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

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MANUFACTURING TECHNOLOGYMANUFACTURING TECHNOLOGY *(continued)*

Two-Year Certificate of Completion

85 credits

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	PLC I	2
MFG 243	Industrial Sensors	2
MFG 244	PLC 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
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 207	Applied Psychology	
or SP 218	Interpersonal Communication	
CIS 70	Introduction to Computers: Windows (or higher)	2

TOTAL: 85 credits

photo by Eugen Helmbrecht

MANUFACTURING TECHNOLOGY

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. Departmental 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 \$60-\$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, 115, 116, 118, 133, 153, 160
- Welding personal protective equipment and tools, \$400

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program (MFG) courses:

- High School Diploma or GED
- Minimum placement scores resulting in WR 60 placement OR prior completion of WR 60 or higher ("C" or better)
- Minimum placement scores resulting in MTH 10 placement OR prior completion of MTH 10 ("C" or better)
- Completion or current enrolment in MATC new-student orientation class MFG 100 with a "Pass" grade
- Certificate courses require instructor permission
- 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

All MATC programs are self-directed, outcome-based programs. 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 with 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 reenter 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 considerable regarding secondary certifications in Manufacturing. The MATC offers certification preparation classes to assist students in obtaining certifications.

Students desiring specific certification such as that provided by AWS or SME should discuss this with their advisor.

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. Prior to starting any MATC program, students are advised to contact the institution to which they intend to transfer and identify what credits may be transferable.

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	Weld I	3
MFG 105	Weld II	3
MFG 107	Weld 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

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MANUFACTURING TECHNOLOGYMANUFACTURING TECHNOLOGY *(continued)*

Associate of Applied Science (AAS) Degree

96 credits

Program electives

Students must choose from at least 38 credits from the following program electives:

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	PLC I	2
MFG 243	Industrial Sensors	2
MFG 244	PLC 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
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



photo by Eugen Helmbrecht

Other required courses

CIS 70	Introduction to Computers: Windows	2
CIS 120	Computer Concepts	4
HHP 252A	Fitness / First Aid	3
Human Relations course, see list page 50		
MFG 280	CWE Manufacturing	3
SP 219	Small Group Communication	3
SP 252	Team Skills	1

TOTAL: 96

MASSAGE THERAPY PROGRAM

PREREQUISITES, STANDARDS and REQUIREMENTS

PROGRAM DESCRIPTION

Students are educated in the sciences relating to the human body and theories relating to the practice of massage therapy. Students are taught skills that include a variety of massage techniques, how to maintain client and business records, to practice ethical client/practitioner boundaries, to demonstrate excellent client communication skills and to 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 of \$88 for all LMT courses
- Textbooks \$600-700
- Medical scrubs (royal blue) \$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
- MBLEx \$195 (massage and bodywork licensing exam)
OR
NCBTMB \$225 (national certifying board of therapeutic massage and bodywork)
- 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 75 or WR 95
- Minimum placement scores resulting in MTH 20/31 placement
OR completion of MTH 20 or MTH 31

Recommended prior to entry in LMT program courses:

BI 121/122	Anatomy & Function I, II (will not transfer)
OR BI 231/232/223	Anatomy & Physiology I, II, III
LMT 95	Intro to a Massage Therapy Career
AH 111	Medical Terminology
MTH 31	Health Care Math

Criminal background and fingerprinting for Massage Therapy licensing.

Students who have been arrested or convicted of a crime excluding minor traffic violations, or if a student 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 does not automatically result in a denial of licensure. The Oregon Board of Massage Therapists may 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, <http://www.oregon.gov/OBMT/miscinfo.shtml>

If you believe that your past history may interfere with your ability to complete the program of study or to obtain licensure in the massage therapy field, contact the appropriate state board or discuss this with the program director.

MINIMUM GPA OR GRADE REQUIREMENTS

All Massage Therapy Program one-/two-year certificate and two-year degree required courses to be completed with a grade of "C" (75%) or higher.

No contact hours will be awarded toward licensure requirements if the grade earned was less than 75 percent.

Students must maintain a 2.0 overall GPA to graduate. 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.

REGISTRATION INFORMATION

Students are offered several 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.

(continued on next page)

MASSAGE THERAPY PROGRAM

PREREQUISITES, STANDARDS and REQUIREMENTS *(continued)*

Certificates of Completion

52-81 credits

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
 - Hygiene
- Improper attire that exposes the midriff, the gluteal cleft or breast cleavage
- Continued failure to keep up 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 which 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

STATE ELIGIBILITY REQUIREMENTS FOR LICENSURE

Massage Therapy is regulated by the state of Oregon. The Oregon Board of Massage Therapists sets the standards for licensure and may be subject to change. The Oregon Board of Massage Therapists currently requires 500 hours of contact hours in specific subjects. They require both a written and a practical examination. Students may apply for a massage therapy license after passing both written and practical exams. The license may be contingent on a criminal background check and fingerprinting.

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

52-57 credits

PROGRAM REQUIREMENTS

BA 150	Business of Massage	3
or BA 101	Intro to Business (with approval)	4
BI 121/122	Anatomy & Function I, II	8
or BI 231, 232, 233	Anatomy & 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 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 & Rules	2
LMT 175	Clinic I	2
LMT 180	Clinic II	3
MTH 20	Pre-Algebra (or higher)	4

MASSAGE THERAPY

Two-Year Certificate

74-81 credits

PROGRAM REQUIREMENTS

BA 150	Business of Massage	3
or BA 101	Intro to Business (with approval)	4
BI 121/122	Anatomy & Function I, II	8
or BI 231, 232, 233	Anatomy & 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 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 & Rules	2
LMT 175	Clinic I	2
LMT 180	Clinic II	3
BA 217	Accounting Fundamentals	3
LMT 210	Advanced Clinic	2
LMT 245	Effective Office Decisions	2
LMT 200-level electives		15-17
MTH 20	Pre-Algebra (or higher)	4

MASSAGE THERAPY

Associate of Applied Science (AAS) Degree
96-103 credits

See preceding pages 155-156 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 & Function I,II	8
	or BI 231, 232, 233 Anatomy & Physiology I, II, III	12
BA 150	Business of Massage	3
	or BA 101 Intro to Business (with approval)	4
BA 217	Accounting Fundamentals	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 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 & Rules	2
LMT 175	Clinic I	2
LMT 180	Clinic II	3
LMT 210	Advanced Clinic	2
	or LMT Advanced Clinic course substitutions ¹	3
LMT 245	Effective Office Decisions	2
LMT 200-level electives		15-17
MTH 20	Pre-Algebra (or higher)	4
SP 218	Interpersonal Communications	3
WR 121	English Composition	4
WR 214	Business Communication	3
	Courses from the discipline studies list, pages 49-50	9

Health

(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
	OR	
HHP 252A	Fitness/First Aid ²	3



photo by David Morris

Footnotes

¹ Choose from the following advanced clinic course substitutions:

- FN 225 Human Nutrition (4)
- 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 Fit/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 & 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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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

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
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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 49 and 50 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. 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 241	Calculus for Management/Social Science	4
MTH 243	Math for Management/Life/Social Science	4



MTH 244	Intro to Methods of Probability and Stats	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 information

Students planning to transfer to OSU need to take:

HHP 295	Health and Fitness	3
and HHP 185	Activity class	1

Oregon public universities with a math major

University of Oregon
 Pure Math
 Applied Math
 Secondary Teaching
 Design your own
 Oregon State University - Cascades
 Math minor
 Oregon State University
 Mathematics
 Secondary Teaching emphasis
 Mathematical Sciences
 Southern Oregon University
 Portland State University
 Eastern Oregon University
 Western Oregon University

MEDICAL ASSISTANT

Certificate of Completion
58-64 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Medical Assisting

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 physician with examinations and treatments, and administering selected diagnostic tests and medications as directed by the physician. 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. The Medical Assistant program is accredited by CAAHEP (Commission on Accreditation of Allied Health Education Programs).

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.
- Lab fees estimated at \$450-\$600.

Other Costs

- Prior to entering the clinical lab setting winter term, enrolled students must have a current TB test (completed within the previous year), two measles immunizations, and must have started a Hepatitis B immunization series (or must sign a release form indicating refusal to be immunized), (estimated at \$227, but cost varies depending on the clinic).
- CPR and first aid cards issued upon successful completion of HHP 252A (\$20 fee in addition to tuition).
- Criminal background check during fall term (estimated at \$55).
- American Association of Medical Assistants (AAMA CMA) Examination (\$125).
- Books: Estimate \$350/term for full-time attendance

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry into program (MA) courses:

- High School Diploma or GED
- Minimum placement scores resulting in WR 121 placement OR completion of WR 65/75/95 ("C" or better). See the CAP Center website for scores needed to place in the above classes.
- Completion of AH 111, AH 112, MTH 20 or 31.

Recommended prior to entry into program (MA) courses: completion of BI 121, BI 122 and CIS 120.

After entering the program:

- Immunizations

TB: Documentation of a recent TB test is required during the first few weeks of fall term. Ideally, the test should be taken immediately prior to entering the program. TB tests are good for one year. The test will need to be repeated if it expires prior to completion of the program.

MMR: Documentation of two measles immunizations, or a titer indicating immunity, need to be completed prior to winter term. If you do not have documentation of childhood immunizations, it is recommended that you start these immunizations or obtain a titer before entering the program. Students born before January 1, 1957 do not need to meet the requirement.

Hepatitis B series: A three-shot series that takes six months to complete. Students should start the series as soon as they know they are registered in MA core classes. The second injection is given four weeks after the first, and needs to be completed by the end of winter term. The third injection is completed four months after the first, and needs to be completed before the end of spring term.

- Current CPR and first aid card by end of winter term (including adult, child and infant CPR)
- All COCC students enrolled in Medical Assistant program, which includes requirements for practical experience may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a medical or other facility for training.
- Students who do not pass the CHC may not be eligible to complete training at affiliated practicum sites, to sit for licensure or certification exams, or to be hired for some professional positions. If personal history may interfere with the ability to complete the program of study or to obtain licensure or certification in the chosen field, contact the appropriate state board or the program director.
- 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

(continued on next page)

MEDICAL ASSISTANT

Certificate of Completion *(continued)*
58-64 credits

student's expense.

- Flexibility during weekday hours and transportation to Central Oregon locations are necessary during the summer term when the majority of 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.

REGISTRATION INFORMATION

Program (MA) courses begin once per year in fall term. All MA courses offered each term must be taken together and sequentially. Students are discouraged from working during the summer term of the program due to the need to be flexible enough to attend practicum assignments when facilities are available. The admissions process is under review. Please see the Medical Assistant program website or contact the program director and/or the CAP Center for current information.

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. 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-off's, work samples and skill demonstrations.

The following actions may also result in probation and/or dismissal of a student from the MA program:

- Poor personal hygiene resulting in verbal notification to the student that may include, but is not limited to:
 - Perfumes
 - Smoking
 - 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 MA 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 CAAHEP (Commission on Accreditation of Allied Health Education Programs). 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.

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.

Individuals who have been found guilty of a felony, or pleaded guilty to a felony, may not be eligible to sit for licensure or certification examinations following completion of COCC's program. However, the Certifying Board may grant a waiver based on mitigating circumstances. See the Certified Medical Assistant Examination Application for specifics at www.aama-ntl.org.

(continued on next page)

MEDICAL ASSISTANT

Certificate of Completion *(continued)*
58-64 credits

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	Pre-Algebra	3-4
or MTH 31	Health Care Math (recommended) (or higher)	
SP 111	Fundamentals of Public Speaking	3-4
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	
or SP 241	Media, Communication, Society	

Program requirements

MA 113	Introduction to Medical Assisting	3
MA 125	Medical Office Procedures I	4
MA 123	Medical Assisting Basic Procedures	4
MA 135	Medical Office Procedures II	4
MA 133	Medical Assisting Advanced Procedures	4
MA 145	Computerized Medical Office Procedures	1
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	
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:

MTH 20	Pre-Algebra (or higher)	3-4
or MTH 31	Health Care Math (recommended)	
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	

Total prior to entry: 17-22

After entering the program:

Fall

AH 113	Introduction to the Study of Disease	5
MA 113	Introduction to Medical Assisting	3
MA 125	Medical Office Procedures I	4

Total fall: 12

Winter

MA 123	Medical Assisting Basic Procedures	4
MA 135	Medical Office Procedures II	4
HHP 252	First Aid and CPR	3
	or HHP 252A Fitness/First Aid	
CIS 10	Computer Keyboarding	1

Total winter: 12

Spring

MA 133	Medical Assisting Advanced Procedures	4
MA 145	Computerized Medical Office Procedures	1
SP 111	Fundamentals of Public Speaking	3-4
or SP 218	Interpersonal Communication	
or SP 219	Small Group Communication	
or SP 241	Media, Communication, Society	
Writing 121	English Composition	4

Total spring: 12-13

Summer

MA 147	Medical Assistant Practicum I	5
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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 Army ROTC 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 Army ROTC Basic courses without a military commitment.

The Advanced course takes place during the students' last two years in college, as elective courses. It normally includes one elective 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 Advance 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 Reserve Officer Training Corps office at 541-322-3143.

Year One

Fall term

MS 111	Military Skills 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	Leadership Development	1
MS 180	Army Physical Fitness	1

Electives

Discipline Studies and Electives ¹	10-14
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Spring term

MS 113	Basic Orienteering, Military 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 of 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	10-14
---	-------

Spring term

MS 213	Fundamentals of Military Operations	2
MS 180	Army Physical Fitness	1

Electives

Discipline Studies and Electives ¹	10-14
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¹ See advisor for list of available courses. Selected coursework needs to lead to completion of a four-year degree

Total: 93 credits at or above the 100-level courses

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, and to that end we have no fewer than six ensembles in which a student could 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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

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

General education/discipline studies
(See pages 49 and 50 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, Music Fundamentals; MUS 201, Understanding Music; and MUS 111, Music Theory as well as another non-music arts and letters course. Additional MUS classes can be taken, and 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, and Applied or Private Lessons (MUP 74, 174, 274).

MUS 201: Understanding Music, while not required, is an excellent survey course of music history and provides a solid background for future in-depth studies of music history.

MUP 74, 174, 274: Applied or Private Lessons, while not required, will help develop individual growth and provide a solid background in solo repertoire, proper language enunciation and 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, allowing students to transfer in at 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).

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 accredited 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 practical nurse and registered nurse 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 from the Oregon State Board of Nursing.

After completion of 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 from the Oregon 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.

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 the Nursing program at any point 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, student fees and textbooks, students should anticipate the following estimated program costs:

- Nursing textbooks, approximately \$1500
- Nursing courses, \$300 per term fee
- Nursing course supplies, \$90 first year, \$45 second year
- Specialized clothing or uniform, approximately \$150
- Tools and equipment - approximately \$80
- State exam/licensure fee, \$320 (\$160 LPN, \$160 RN)
- State fingerprinting fee, \$104 (\$52 LPN, \$52 RN)
- Criminal History Check, \$55
- Immunizations, approximately \$200
- CPR certification, approximately \$50

PROGRAM PREPARATION AND PREREQUISITES

Students must complete a Nursing program application, and submit any required documentation, as part of their application packet. Admission packets are available at <http://nursing.cocc.edu/nsgcocc>. Admission is once a year in June at the end of spring term for the 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; **OR** complete either a nursing assistant course from an unaccredited agency (i.e., nursing home or hospital) or COCC's Community Learning nursing assistant course and obtain an Oregon CNA certificate.

All applicants must demonstrate basic computer skills by completing CIS 120, Computer Concepts, or by passing the computer competency exam.

Students must complete the following support courses with a "C" grade or better:

GS 105	Physical Science Chemistry
or CH 104	Intro to Chemistry I
or CH 221	General Chemistry I ¹
FN 225	Human Nutrition
PSY 215	Developmental Psychology

¹ Chemistry may be no older than five years at the time of completed application to the Nursing program. The five-year requirement is defined as the academic year the course was taken, e.g., five years from 2011-2012 is 2006-2007. In the event an applicant's science courses surpass the five-year limit while continuously and actively pursuing admission to the nursing program by submitting a complete application each year, the five-year limit will be waived.

Completion of the following prerequisite courses:

BI 231	Anatomy and Physiology I ²
BI 232	Anatomy and Physiology II ²
BI 233	Anatomy and Physiology III ²
BI 234	Microbiology ²
MTH 95	Intermediate Algebra or higher
WR 121	English Composition
WR 122	English Composition or WR 227 Technical Writing

Prerequisite courses must be completed with a "C" grade or better, with a cumulative GPA of 3.0 or higher.

² Anatomy & Physiology and Microbiology 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 2011-2012 is 2006-2007. In the event an applicant's science courses surpass the five-year limit while continuously and actively pursuing admission to the nursing program by submitting a complete application each year, the five-year limit will be waived.

(continued on next page)

NURSING PROGRAM

PREREQUISITES, STANDARDS and REQUIREMENTS *(continued)*

Completion of the Test of Essential Academic Skills (TEAS)[™] a scholastic aptitude test designed to measure basic essential skills identified as important for entry-level Nursing program applicants.

Once admitted into the Nursing program, students will need to complete the following before the start of fall term:

Documentation of completion of immunizations as follows:

- 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) or documentation of the first vaccine and documentation of dose #2 within first four weeks of the term (NUR 106), and dose #3 within first four weeks of second term (NUR 106), followed by serologic testing at the end of the first year of the Nursing program.
- One-time dose of Tdap (Tetanus, Diptheria, 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 date indicated on the checklist for the term and second dose at one month, which must be completed prior to beginning the clinical component of the course; or laboratory evidence of measles, mumps and rubella immunity.
- Two doses Varicella vaccine, four weeks apart; or serological evidence of immunity (titer) to Varicella; or documentation of the first vaccine and documentation of the second dose within first four weeks of the term.
- A negative tuberculosis skin test (PPD) is required annually and must be completed, read, and any follow-up care completed between June 1 and September 1. When the PPD is done, the test must be read in 48 hours to determine if it is positive or negative. The test is to be read by the institution that administered the PPD. If the test was positive, students are required to have a chest X-ray to determine state of health. If a student has had a positive TB test in the past, students are required to provide documentation of the positive TB test and a baseline chest X-ray completed within the last five years. If a chest X-ray has not been done, this must be completed before the deadline.

Health Care Provider Level CPR.

Students must hold a current American Heart Association Health Care Provider CPR/AED card or American Red Cross AED/CPR for the Professional Rescuer card. These are the only approved trainers per Oregon State Board of Nursing rules, no other cards will be accepted. The CPR card must be valid through the end of the academic year.

Complete a criminal background check with Verified Credentials.

MINIMUM GPA OR GRADE REQUIREMENTS

3.0 GPA for BI 231, 232, 233, 234, WR 121 and MTH 95. All other prerequisite courses must be completed with "C" or higher. Once admitted to the Nursing program, Students must pass Nursing Theory at >76.55% or 77% 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 Admissions and Records. 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 Nursing orientation session offered by Enrollment Services 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 many 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 <http://studentlife.cocc.edu/Policies/Rights+and+Responsibilities>. The Nursing program progression policy can be found by going to <http://nursing.cocc.edu/apply> and clicking on Progression Polices near the bottom of the page.

(continued on next page)

NURSING PROGRAM

PREREQUISITES, STANDARDS and REQUIREMENTS *(continued)*

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.

Licensure information in Oregon can be found at <http://oregon.gov/OSBN/RN-LPNlicensure.shtml>.

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.

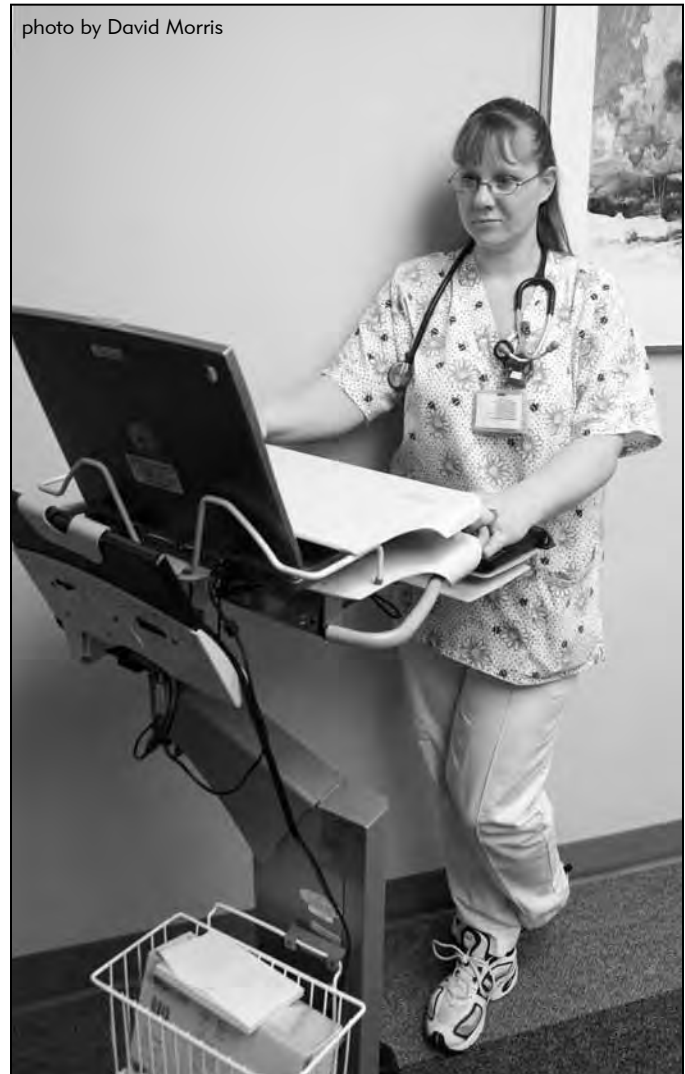
Licensure information in Oregon can be found at <http://oregon.gov/OSBN/RN-LPNlicensure.shtml>.

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 several Oregon community colleges. Colleges with nursing ladder programs include Clatsop Community College, Astoria, Oregon; Chemeketa Community College, Salem, Oregon; Columbia Gorge Community College, The Dalles, Oregon; and Oregon Coast Community College, Newport, Oregon.

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.



NURSING

PRACTICAL NURSING Certificate of Completion 60-64 credits

See preceding pages 164-166 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
- Transfer information

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT Practical Nursing Certificate

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 take CIS 120		0-4

Program requirements

NUR 106	Nursing I	11
NUR 107	Nursing II	10
NUR 108	Nursing III	11

Footnotes

¹ Anatomy & Physiology, Microbiology 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 2011-2012 is 2006-2007. In the event an applicant's science courses surpass the five-year limit while continuously and actively pursuing admission to the Nursing program by submitting a complete application each year, the five-year limit will be waived.



photo by David Morris

NURSING

REGISTERED NURSING

Associate of Applied Science (AAS) Degree
102-106 credits

See preceding pages 164-166 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
- Transfer information

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science

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*	4

Other required support courses

GS 105	Physical Science Chemistry	4-5
or CH 104	Intro to Chemistry I	
or CH 221	General Chemistry I ¹	
FN 225	Human Nutrition	4
PSY 215	Developmental Psychology	4
Pass Computer Competency test or take CIS 120		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 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 2011-2012 is 2006-2007. In the event an applicant's science courses surpass the five-year limit while continuously and actively pursuing admission to the nursing program by submitting a complete application each year, the five-year limit will be waived.



photo by David Morris

Advising information

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.

OREGON GREEN TECHNOLOGY

Certificate (*pending state approval)

45 credits

The Oregon Green Technology certificate will prepare entry-level employees with the foundation skills needed in a variety of industries that are associated with or support green jobs. While it may ultimately be adopted statewide, the Oregon Green Tech certificate is being designed to meet the unique needs of rural Oregon, where companies tend to be smaller, many occupations may have only one or two local job openings, and employers need workers who have basic technical skills that can transfer to different kinds of work and work settings as employer requirements and labor market demands shift.

Individuals who complete the one-year Green Tech certificate will:

- be multi-skilled, systems thinkers and problem solvers.
- be prepared for a broad array of green occupations across a variety of diverse industries, such as green energies production, equipment manufacturing (such as solar panel, wind turbine, wave energy, bio-energy component), construction and installation, monitoring and repair, building retro-fitting, process recycling, hazardous materials removal work and others.
- have a fundamental understanding of sustainability, green technologies, process improvements/elimination of waste, and an overview of various careers in green tech.
- be able to demonstrate the applied reading and workplace math skills needed on the job, as well as the workplace skills employers need: critical thinking, problem solving, team work, etc.
- possess a unique set of entry-level electrical, mechanical, and heating/cooling systems skills—as taught through the lens of green energy and energy efficiency—that will allow graduates to learn quickly on the job and be prepared for success in advanced programs of study.

Training will be provided by 10 Oregon community colleges located in rural Oregon through a combination of online instruction, hands-on labs and, in some areas, work experience in the field. The core content will be 45 credits, depending on the level of general education courses offered and the number of specialty electives a student may take.

For more information about enrolling in this certificate contact, Jackie.G@tocowa.org.

First term

GT 101	Intro to Industrial Sustainability	3
GT 102	Green Industrial Safety	2
GT 103	Mechanical Systems	3
GT 104	Electrical Systems Troubleshooting I	2
GT 105	Applied/Workplace Math or MTH 085 Technical Math I	4
WR 095	Basic Writing II (or higher)	3

Second term

GT 106	Intro to Green Tech	2
GT 107	Electrical Systems Troubleshooting II	3
GT 108	Building Systems	2
GT 109	HVACR Sys Operations	3
GT 110	Workplace Communication Skills/ Information Literacy	2

Third term

Electives		3
GT 111	Preventive Maintenance and Energy Conservation	2
GT 112	Control Systems	3
GT 113	Fluid Power	2
GT 114	Local Applications for Alternative Energy	3
GT 115	Human Relations/Customer Service in Business	3

*Information about this certificate has been gathered from the website of The Oregon Consortium & Oregon Workforce Alliance, <http://www.tocowa.org>.

OUTDOOR LEADERSHIP

Associate of Science - Direct Transfer (AS-DT) Degree

Associate of Science (AS) Degree

93 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 (see page 171) or AS-DT 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-DT 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, students entering into the AS-DT 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.

WR 121	English Composition	4
WR 122	English Composition	4
SP 111	Fundamentals of Public Speaking	3
HHP 295	Health and Fitness for Life	3
CIS 120	Computer Concepts	4
or CIS 131	Software Applications	
OL 111	Introduction to Outdoor Leadership	3
OL 253	Wilderness Advanced First Aid	3
OL 255	Outdoor Living Skills	3

Sample AS-DT two-year plan

Year One

Fall term

OL 111	Intro to Outdoor Leadership	3
OL 253	Wilderness Adv. First Aid	3
OL 255	Outdoor Living Skills	3
HHP 295	Health and Fitness for Life	3
HHP 185	Orienteering (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

Difference, Power and Discrimination requirement ¹	3-4	
Social Processes requirement ¹	3-4	
SP 111	Fundamentals of Public Speaking	3
WR 122	English Composition	4
HHP 185	Activity Class (elective)	1

Year Two

Fall term

Literature and the Arts requirement ¹	3-4	
OL 271	Facilitating Group Experiences	3
Science requirement ¹	4-5	
Western Culture requirement ¹	3-4	

Winter term

Cultural Diversity requirement ¹	3-4	
OL 207	Seminar in Outdoor Leadership	2
OL 273	Outdoor Recreation Leadership	3
Science requirement ¹	4-5	

Spring term

FOR 255	Resource Interpretation	3
OL 244	Psychology of Risk and Adventure	3
HHP/OL 280	Co-op Work Experience	2
Science requirement ¹	4-5	
Skills course(s) requirement ²	3-4	

General education/discipline studies

(See OSU website or advisor for details)

Science: Choose one biological science, one physical science, and one additional biological or physical science from the approved list at: http://oregonstate.edu/admissions/transfer/scr1140_003188.htm. Recommended courses to choose from:

GS 106	Geology	4
GS 107	Astronomy	4
GS 108	Oceanography	4
BI 102	General Biology II	4
BI 103	General Biology III	4

¹ Choose one approved course from the list at http://oregonstate.edu/admissions/transfer/scr1140_003188.htm

² Choose one from:

HTRM 233	Event Planning	3
OL 294CC	Challenge Course Practices	3
OL 294RC	Teaching Rock Climbing	3
OL 294WG	Whitewater Raft Guiding	3
or both		
OL 194MA	Mountaineering I	2
and		
OL 194MB	Mountaineering II	2

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

- \$20 for HHP 295, Health and Fitness, 3 credits
- \$25 for OL 271, Facilitating Group Experiences, 3 credits
- \$75 for OL 294CC, Challenge Course Practices, 3 credits
- \$16 for all HHP 185 classes for Mazama user fee

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-DT (see page 170) 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 AAOT degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements; with the appropriate course planning, 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.

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.

WR 121	English Composition	4
WR 122	English Composition	4
SP 111	Fundamentals of Public Speaking	3
HHP 295	Health and Fitness for Life	3
CIS 120	Computer Concepts	4
or CIS 131	Software Applications	
OL 111	Introduction to Outdoor Leadership	3
OL 253	Wilderness Advanced First Aid	3
OL 255	Outdoor Living Skills	3

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

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

General education/discipline studies

(See pages 49 and 50 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.

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	3
OL 271	Facilitating Group Experiences	3
OL 273	Outdoor Recreation Leadership	3
OL 294WG	Whitewater Raft Guiding	3
or OL 294RC	Teaching Rock Climbing	
or OL 294CC	Challenge Course Practices	
or FOR 255	Resource Interpretation	

Lab fees

- \$20 for HHP 295, Health and Fitness, 3 credits or HHP 252A, Fit/First Aid, 3 credits
- \$25 for OL 271, Facilitating Group Experiences, 3 credits
- \$75 for OL 294CC, Challenge Course Practices, 3 credits
- \$16 for all HHP 185 classes for Mazama user fee

PHARMACY TECHNICIAN

Certificate of Completion

44 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Certificate of Completion, Pharmacy Technician

PROGRAM DESCRIPTION

The Pharmacy Technician training program prepares individuals for employment as a pharmacy technician in a variety of pharmacy settings. 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, long-term care, mail order pharmacies and as third-party claim specialists for patient benefits managers. 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 skill necessary to process prescriptions accurately, participate in administration and management of a pharmacy, and maintain inventory. Topics of study include medical terminology, anatomy and function of the human body, therapeutic classification and drug names, pharmacy practice, 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;
- \$55 drug screening (if required by practicum site);
- \$65 background search (if required by practicum site);
- \$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-weekend lecture labs in the spring term.

PROGRAM PREPARATION AND PREREQUISITES

Required prior to entry into the pharmacy technician program:

- High School Diploma or GED;
- WR 65/75/95 (grade of "C" or better) OR placement into WR 121;
- MTH 20 or MTH 31 (grade of "C" or better) OR placement into MTH 60;
- CIS 120 (grade "C" or better) OR pass Computer Competency exam;
- Proof of immunity to MMR, Hepatitis B, Tdap, Varicella (chicken pox) ;
- Tuberculosis skin test (PPD) – negative results or chest X-ray if positive (within the last year);
- Current American Heart Association CPR for Health Care Providers certification;
- Complete COCC Online Orientation available at <http://web.cocc.edu/onlineorientation>;
- All COCC students enrolled in the Pharmacy Technician program, which includes requirements for practical experience, will have to pass Criminal History Checks (CHC) and/or a urine screen for drugs as a condition of their acceptance into a hospital or retail pharmacy practicum.

The Pharmacy Technician Program allows for entry into the core PHM course once per year in the winter term. Registration into the winter term core PHM courses is based on a first-come, first-served basis and department approval for registration will be granted upon completion of pre-registration requirements. 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 in the fall term.

(continued on next page)

PHARMACY TECHNICIAN

Certificate of Completion *(continued)*

44 credits

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.

Due to the nature of this curriculum and access to drugs, all students will have to declare themselves “drug free” and may be subject to a criminal background check. A urine screen for drugs may be requested prior to the practicum. A positive drug test or criminal background check may prevent the student from registering for the practicum coursework and completing the program.

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 winter term. Students can take the non-pharmacy technician (any course that does not have a PHM prefix) classes at any time prior to or concurrent with the program.

Students must be flexible during the summer 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 result in 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	Anatomy and Function I	4
BI 122	Anatomy and Function II	4
SP 218	Interpersonal Communication	3
WR 121	English Composition	4

Program requirements

PHM 100	Pharmacy Technician Practice I 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, ENGINEERING AND ENGINEERING TECHNOLOGY

Associate of Science (AS) Degree
93 credits

While there are small differences between the programs of each branch of engineering and physics, COCC works to provide the courses common to all programs. 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 degree meets the state of Oregon transfer degree requirements, allowing students to transfer to an Oregon public university and some out-of-state universities having met all lower-division general education requirements; with the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

The following is a suggested course of study for students interested in pursuing a bachelor's degree in physics, engineering and engineering technology. In some instances an Associate of Science degree may help students better meet transfer-institution course requirements; see advisor for details.

General education/foundational requirements

English Composition

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

Oral Communication

SP 111	Fundamentals of Public Speaking	3
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Mathematics

MTH 111	College Algebra	4
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Health ¹		3-4
Computer competency ²		0-4

General education/discipline studies

Arts and Letters

A minimum of 11 credits from the arts and letters discipline studies list, see page 49, with at least two different prefixes and at least two courses with the same prefix.

Science/Math/Computer Science

BI 101	General Biology I	4
PH 211	General Physics I	5
PH 212	General Physics II	5
PH 213	General Physics III	5

Social Science

A minimum of 15 credits from the social science discipline studies list, see pages 49-50, with at least two different prefixes and at least two courses with the same prefix.

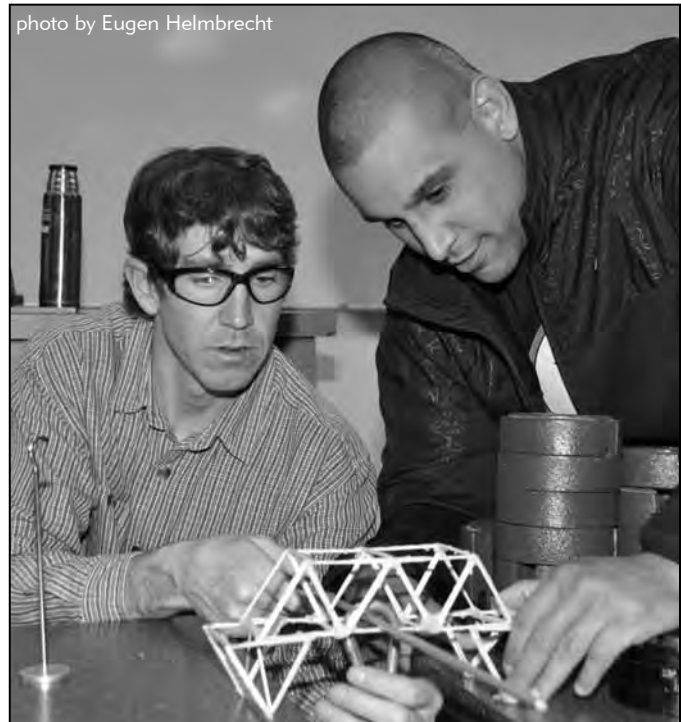


photo by Eugen Helmbrecht

Electives

CH 221	General Chemistry I	5
CH 222	General Chemistry II	5
CH 223	General Chemistry III	5
ENGR 201	Electrical Fundamentals	3
ENGR 211	Statics	4
ENGR 212	Dynamics	4
ENGR 213	Strength of Material	4
GE 101	Engr Orientation	3
GE 102	Engineering Problem Solving and Technology	3
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

Students should take all of the above plus enough additional coursework to reach the 93 minimum credits required for the AS degree.

¹ To meet this requirement, students entering OSU Cascades – EEM degree (Energy Engineering Management) should take HHP 295: Health and Fitness. Other students can choose from HHP 295, or HHP 231: Human Sexuality, HHP 242: Stress Management, HHP 258: Holistic Wellness, or HHP 266: Nutrition for Health and one activity or health module --- OR --- HHP 252A: First Aid and CPR.

² Pass computer basic skills competency test (see page 38 for details) or take CIS 120, Computer Concepts.

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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

Health (3 credits with HHP prefix)

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

General education/discipline studies

(See pages 49 and 50 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.

PS 201 ¹	Intro to US Government and Politics	4
PS 204 ¹	Intro to Comparative Politics	4
PS 205 ¹	Intro to International Relations	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.



photo by Eugen Helmbrecht

Electives

PS 206 ¹	Intro to Political Thought	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.

¹ Courses in Political Science do not need to be taken in sequence.

Additional advising information and recommendations

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

Transfer Preparation
59 credits

While Central Oregon Community College 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. Below is a listing of courses that fulfill most pre-dental hygiene transfer requirements, although students should contact their intended transfer school to determine exact requirements.

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 (optional)	4
CH 104	Introduction to Chemistry I	4
CH 105	Introduction to Chemistry II	4
CH 106	Introduction to Chemistry III	4
FN 225	Human Nutrition	4
MTH 111	College Algebra	4
PSY 201	Mind and Brain	4
SOC 201	Introduction to Sociology	4
SP 111	Fundamentals of Public Speaking	3
WR 121	English Composition	4
WR 122	English Composition	4

Colleges in Oregon offering a dental hygiene program include:

- Lane Community College
- Mt. Hood Community College
- ODS College of Dental Sciences - La Grande
- Oregon Institute of Technology
- Pacific University
- Portland Community College



photo by Benjamin Edwards

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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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 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.

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		

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

General education/discipline studies

(See pages 49 and 50 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.

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.

Additional advising information and recommendations

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-MEDICAL LAB TECHNOLOGY

Transfer Preparation
52-60 credits

Portland Community College (PCC) offers an Associate of Applied Science degree in Medical Laboratory Technology (MLT) via distance education. Students complete specific prerequisite courses at COCC and then apply to the PCC distance-learning MLT program. Acceptance into the program is on a limited basis, and is dependent on clinical space available. Additionally, continuation into the second year is contingent upon performance during the first year of the program. The medical laboratory technology courses are taught primarily online and the clinical practicum is completed at local area clinical laboratories in Central Oregon. Occasional day or weekend travel to Eugene or Portland is necessary for additional PCC-required laboratory activities. Please see an advisor for details.

PCC's Medical Laboratory Technology program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

Required prerequisites

(All courses can be taken at COCC)

WR 65	Rhetoric and Critical Thinking II	0-4
or WR 75	Basic Writing I	
or WR 95	Basic Writing II	
	or Reading and Writing ASSET score 43	
MTH 65	Algebra II	0-4
	or Elementary Algebra ASSET score 52	
CH 104	Introduction to Chemistry I ¹	4
BI 101	General Biology I	4
or BI 102	General Biology II	
or BI 103	General Biology III	

Year One

(All courses can be taken at COCC except MLT 111, MLT 112, and MLT 213, which can be taken online through PCC)

Fall term

BI 121	Anatomy and Function I ²	4
or BI 231	Human Anatomy and Physiology I ²	
MLT 111	Medical Technology I (online)	4
WR 121	English Composition	4

Winter term

BI 122	Anatomy and Function II ²	4
or BI 232	Human Anatomy and Physiology II ²	
CH 105	Introduction to Chemistry II ¹	4
MLT 112	Medical Technology II (online)	4
	General education elective	4

Spring term

BI 233	Human Anatomy and Physiology III ²	4
CH 106	Introduction to Chemistry III ¹	4
MLT 113	Intro. to Medical Microbiology (online)	4
	General education elective	4



Year Two

Students who wish to continue should contact PCC and apply for acceptance to the second year of the Medical Laboratory Technology program. Once students are officially accepted into the PCC MLT program, they will enroll in all remaining courses through PCC.

For details go to www.pcc.edu/programs/medical-lab/.

Footnotes

¹ PCC will accept GS 105 to meet the 100-level chemistry requirement for admission. However, students are still required to complete CH 104, 105 & 106.

² PCC will accept BI 211, 212, 213 in lieu of Anatomy and Function and Anatomy and Physiology

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 specific 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.

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
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(or higher for which *Intermediate Algebra* is a prerequisite)

Health (3 credits with HHP prefix)

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

General education/discipline studies

(See pages 49 and 50 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. 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



photo by Eugen Helmbrecht

Electives

CH 222	General Chemistry II	5
CH 223	General Chemistry III	5
CH 241	Organic Chemistry I	5
CH 242	Organic Chemistry II	5
CH 243	Organic 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	General Physics I	5
PH 202	General Physics II	5
PH 203	General Physics III	5

or

PH 211	General Physics I	
PH 212	General Physics II	
PH 213	General Physics III	

Students should take enough electives to reach the 90 minimum credits required for the AAOT degree.

PRE-MEDICAL IMAGING TECHNOLOGY

Transfer Preparation (51-54 credits)

Central Oregon Community College provides the prerequisite courses for Oregon Institute of Technology's Bachelor of Science in Medical Imaging Technology degree. Students complete specific courses at COCC and then apply for admission into OIT's MIT program. Admission is highly competitive; see <http://www.oit.edu/programs/mit> for program details and admission process. Students spend the second and third years of the program at the Klamath Falls campus and the fourth year at a hospital site for externship.

Prerequisite courses

AH 111	Medical Terminology I	3
BI 231	Human Anatomy and Physiology I	4
BI 232	Human Anatomy and Physiology II	4
BI 233	Human Anatomy and Physiology III	4
CH 104	Introduction to Chemistry I	4-5
or CH 221	General Chemistry I	
MIT 103	(offered online via OIT, http://www.oit.edu/dist)	3
MTH 111	College Algebra	4
MTH 112	Trigonometry	4
PSY 201	Mind and Brain	4
SP 111	Fundamentals of Public Speaking	3
WR 121	English Composition	4
WR 122	English Composition	4
	Social science electives ¹	3-4
	Arts and letters (OIT humanities) electives ¹	3-4

¹ These courses must be selected from OIT's list of approved courses. See advisor for recommendations.



photo by Eugen Helmbrecht

PRE-RADIOLOGY TECHNOLOGIST

Transfer Preparation (39-53 credits)

Linn-Benton Community College (LBCC) offers an Associate of Applied Science in Diagnostic Imaging (radiological technology) via a distance education program. Students complete specific prerequisite courses at COCC and then apply to the LBCC Distance program, noting that admission to the LBCC program is competitive. The LBCC radiology technologist courses are taught online and the clinical component courses are taught by LBCC in various locations in Central Oregon. Please see the Selection Process Handbook available in the Admissions and Records office or online (http://alliedhealth.cocc.edu/Programs_Classes/RadTechn) for details.

Required prerequisites

AH 111	Medical Terminology I	3
BI 231	Human Anatomy and Physiology I ¹	4
BI 232	Human Anatomy and Physiology II ¹	4
BI 233	Human Anatomy and Physiology III ¹	4
	Computer competency ²	0-4
	Health course ³	3
MTH 111	College Algebra	4
SP 111	Fundamentals of Public Speaking	3
or SP 218	Interpersonal Communication	
WR 121	English Composition	4

Support courses

CH 104	Introduction to Chemistry	4-5
or GS 105	Physical Science: Chemistry	
or CH 221	General Chemistry I	
BI 101	Introduction to Biology I	4
or BI 102	Introduction to Biology II	
or BI 103	Introduction to Biology III	
or BI 211	Principles of Biology I	
PH 201	General Physics	4
or PH 211	General Physics I	
or GS 104	Physical Science: Physics	
AH 112	Medical Terminology II	3

Other

	Cultural diversity course ⁴	3-4
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¹ BI 232 Human Anatomy and Physiology II and BI 233 Human Anatomy and Physiology III are not required to apply but are highly recommended.

² Pass computer basic skills competency test (see page 38 for details) or take CIS 120: Computer Concepts.

³ To meet this requirement, students can choose from HHP 231, Human Sexuality; HHP 242, Stress Management; HHP 258, Prevention of Chronic Diseases; HHP 266, Nutrition for Health; HHP 245, Health and Fitness; or HHP 252A, Fit/First Aid.

⁴ See Radiology Technologist Selection Process Handbook (http://alliedhealth.cocc.edu/Programs_Classes/RadTechn) for list of qualifying courses.

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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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

General education/foundational requirements

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

Writing

WR 121	English Composition	4
WR 122 or WR 227	English Composition 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 105	Intro to Contemporary Mathematics	4
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		
Recommended: MTH 111 College Algebra		

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

General education/discipline studies

(See pages 49 and 50 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.		
PSY 201 ¹	Mind and Brain	4
PSY 202 ¹	Mind and Society	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.

¹ These courses do not need to be taken in sequence.

Additional advising information and recommendations

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. 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 BIO 101-103 or BI 231-233 due to the relevance these courses have to upper-division psychology courses.

It is advisable for students 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: Personality Psychology (PSY 214), Developmental Psychology (PSY 215), Abnormal Psychology (PSY 219), Social Psychology (PSY 216), Psychology of Violence and Aggression (PSY 233), Animal Behavior (PSY 222) 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: Effective Helping Skills I (HS 162), Effective Helping Skills II (HS 262), Ethics for Human Services (HS 161), Groups and Addiction Treatment (HS 206), Dual Diagnosis (HS 201), Counseling Theories (HS 260), Crisis Management (EMT 195) and Children at Risk (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 (e.g., OSU requires WR 227, PSY 201, PSY 202, BIO 101, 102, 103, and MTH 111). Students who 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, 541-617-4665) or through a distance program with Eastern Oregon University (contact Brenda McDonald, EOU advisor, 541-385-1137); both programs are available in Central Oregon.

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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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

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
<i>(or higher for which Intermediate Algebra is a prerequisite)</i>		
Recommended: MTH 111 College Algebra		

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 49 and 50 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.

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.



photo by Pualani Helmbrecht

Additional advising information and recommendations

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 advised for students 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: Social Psychology (SOC 206); Social Deviance (SOC 211); Sport and Society (SOC 208); Race, Class, and Ethnicity (SOC 212); Social Issues and Social Movements (SOC 215); Sociology of Religion (SOC 219); Sociology of Popular Culture (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 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 the appropriate course planning, all lower-division major requirements may also be met. Students should work closely with an advisor to select the best degree option and review specific transfer requirements.

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

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
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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 49 and 50 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	Intro to Intercultural Communication	3
SP 218	Interpersonal Communication	3
SP 219	Small Group Communication	3
SP 220	Gender Communication	3
SP 241	Media, Communication, and Society	4
SP 270	Communicating Love	3

Advising information

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.

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
94-98 credits

CERTIFICATE/DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science in 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:

- EMT-Basic Part A & B – additional fee of \$300
- Fee for State Certification Testing and National Registry Test.
- Materials (boots, ear protection, gloves, etc.) - \$200-\$350
- In some cases fees associated with immunizations, \$222 and/or CPR card, \$20 - \$60.
- Other special equipment and clothing may be required as part of this program.

ADVISING INFORMATION

The program requires hands-on training in fire and emergency medical skills and significant on-the-job training (OJT) by joining a fire agency. Most local fire agencies have student and volunteer positions. Students must apply and compete for these positions. Passage of a physical training exam is required. Students are required to work with and around mechanical equipment, ropes, fire pumps, fire hose and appliances, ladders, various apparatus, and hand tools (both manual and powered). Students will need to be aware of the College insurance policy prior to participation in the program. A statement concerning College insurance policies is listed on all SFS degree syllabi. Students desiring to complete a dual degree, a degree in EMS and a degree in Structural Fire Science, must follow a specific course of study. Please see the program director for information.

PROGRAM PREPARATION AND PREREQUISITES

Recommended prior to entry in program Structure Fire courses:

- High school diploma or GED
- Students must be 18 or older for state and national testing for EMT-B and for affiliation with a fire agency. Students do NOT need to be 18 to begin taking SFS courses.
- Minimum placement scores resulting in WR 121 placement OR completion of WR 65/75/95 (Grade "C" or better)
- Minimum placement scores resulting in MTH 60/85 placement OR completion of MTH 20 (Grade "C" or better)
- Completion of computer competency (either competency test or CIS 120)

Required prior to taking the EMT-Basic course:

- Documentation of completion of immunizations (Hepatitis B or release, current TB, MMR immunizations).

All COCC students enrolled in EMT-B and seeking agency affiliation or any course requirement 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.

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, 100-level courses are recommended for first year, and 200-level recommended for second year. Exceptions can be made based on individual student 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 or guideline.

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) and is an approved National Fire Academy (NFA) Fire and Emergency Services Higher Education (FESHE) college.

Prior to taking the EMT-Basic 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, 541-383-7287.

(continued on next page)

STRUCTURAL FIRE SCIENCE

Associate of Applied Science (AAS) Degree *(continued)*

94-98 credits

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 and Oregon Institute of Technology. For more information on these bachelor degree programs, please contact the Fire Programs director at 541-504-2932.

PROGRAM COURSE REQUIREMENTS

Foundational requirements

Communication

WR 121	English Composition	4
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Computation

MTH 085	Technical Math I ¹	4
	or MTH 060 Algebra I	

Human Relations

FOR 211	Supervision & Leadership	3
or BA 285	Business Human Relations	

Program requirements

EMT 151	EMT-B Part A	5
EMT 152	EMT-B Part B	5
SFS 101	Intro to EMS	3
	or EMT 175 Intro to Emergency Services	
SFS 102	Firefighter Safety and Survival	3
SFS 230	Rescue Practices	3
SFS 105	Fire Behavior & Combustion 1	3
SFS 205	Fire Behavior & Combustion 2	3
SFS 110	Building Construction for Fire	3
SFS 112	Public Education and Fire Prevention	3
SFS 120	Fixed Systems & Extinguisher	3
SFS 210	Fire Investigation	3
SFS 232	Hydraulics & Water Supply	4
SFS 215	Urban Interface	3
SFS 211	Fire Tactics and Strategies Capstone	3
SFS 233	Fire Entry Exams	3

Other required courses

Courses from discipline studies list, pages 49-50 ²		9
SP 218	Interpersonal Communication	3
	or SP 111 Public Speaking	
	or SP 219 Small Group Communication	
Health and Human Performance course ³		3
HHP activity course, see pages 243-247		1
GS 105	Chemistry	4
GS 104	Physics	4
Computer Competency or CIS 120		0 – 4

The following are required for graduation in the SFS program and are only obtainable through affiliation in a fire agency:

NFPA Firefighter 1
NFPA Hazmat Awareness & Operations
I-200 FEMA or NWCG certified course

Electives

Students are required to choose nine credits from the SFS technical elective list:

AH 111	Medical Terminology	3
EMT 170	Communication & Docum	2
EMT 171	Transportation	2
EMT 195	Crisis Intervention	3
FOR 130	Chainsaw Use & Maint	2
SFS 121	Fire Law	1
SFS 122	Fire Budgets	1
SFS 212	Fire Codes and Ordinances	
WF 100	Incident Command Sys	3
WF 101	Intro to Fire Behv & FF Trng	3
WF 201	NFPA Instructor 1	3
WR 227	Technical Writing	4

Footnotes

¹ Students planning to transfer to an institution offering a four-year degree should take MTH 105 or 111.

² See general education discipline studies list, pages 49-50; each course must have a different prefix. However, for students who are going to be completing the EMS degree, see advisor for discipline studies requirements.

³ Students can choose between HHP 295, 242 or 266.

WILDLAND FIRE/FUELS MANAGEMENT**FIREFIGHTER TYPE II CERTIFICATE**

Short-term Certificate

13 credits

CERTIFICATE AS AWARDED ON TRANSCRIPT

Short-term Certificate of Comp, 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 187) as well as an Associate of Applied Science (AAS) degree in Wildland Fire/Fuels Management (page 188-189)

COST OF PROGRAM

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

Hard hat, gloves, 18" leather boots w/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

All Suppression short courses (S-courses), students will be given 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).



photo courtesy of Paula Simone

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	Intro to Fire Behv & FF Training	3
WF 134	S-134 LCES	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 (pages 188-189)

COST OF PROGRAM

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

- Hard hat, gloves, 18" leather boots w/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 65/75/95 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

- All suppression short courses (s-courses), students will be given 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 & Maintenance	2
FOR 230A	Maps, Compass and GPS	3
HHP 252A	Fitness/First Aid	3
WF 100	Incident Command Systems	3
WF 101	Intro to Fire Behv & FF Training	3
WF 134	S-134 LCES	2
WF 211	S-211 Portable Pumps	2
WF 270	S-270 Basic Air Operations	2
WF 281	L-280 Followership to Leadership	2
WF 290	S-290 Intermediate Wildfire Behavior	3

Footnotes

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 (AAS) 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 Forestry 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, 18" leather boots w/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 65/75/95 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.

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 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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Computation

MTH 85	Technical Math I	4
MTH 86	Technical Math II	4

Human Relations

FOR 211	Supervision & 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 & Harvesting	5
FOR 209	Fire Ecology & 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	Intro to Fire Bhvr & FF 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 to Leadership	2
WF 298	S-390 Fire Behavior Calculations	2

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 or CIS 120	0-4
	Discipline Studies courses (see pages 49-50)	9

(continued on next page)

WILDLAND FIRE/FUELS MANAGEMENT

Associate of Applied Science (AAS) Degree *(continued)*
102-106 credits

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

Footnotes

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.



photo courtesy of Paula Simone

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 as 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

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

EXPLANATION

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 which should be completed 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.

MIC, "M" COURSES

COCC offers courses in a variety of subject areas designated as "MIC," or Multicultural Infusion Component. These courses cover the subject matter of the course title, but they infuse multicultural or international components into the course. These include free-standing units within single courses, all-purpose courses on multicultural or international issues or courses which integrate material on diverse groups into their content. MIC courses are designed to satisfy transfer requirements for cultural diversity or perspective classes.

WIC, "W" COURSES

COCC offers courses in a variety of subject areas designated as "WIC," or Writing in Context. These courses cover the subject matter of the course title using a significant component of formal and informal writing to help students learn the course content. For example, a history WIC course may assign informal written worksheets and formal essays, or a physics WIC course may require written lab reports. WIC courses are designed to satisfy transfer requirements for lower-division writing-across-disciplines or writing-intensive coursework.

ADDICTIONS STUDIES/HUMAN SERVICES

HS 161

ETHICS FOR HUMAN SERVICES

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.

Recommended prerequisite: WR 121.

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.

CREDITS: 3 LECTURE: 3

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 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 pre- or corequisite: 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 pre- or corequisite: 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 prerequisite: WR 121.

CREDITS: 3 LECTURE: 3

HS 206

GROUPS AND ADDICTIONS TREATMENT

Provides individuals who will be working in the addictions field with a basic understanding of group therapy and the skills required to facilitate recovery. Various themes and critical issues of group work with addictions will be explored, including common and difficult therapeutic problems.

CREDITS: 3 LECTURE: 3

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 mental health challenges as well as chemical dependency problems. Examines how knowledge of diversity issues can be essential to the counselor in communications, treatment planning and implementation. Recommended prerequisite: WR 121.

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 prerequisite: WR 121.

CREDITS: 4 LECTURE: 4

HS 223

DRUGS AND ADDICTION

Covers knowledge required to pass the pharmacology section of the CADC 1 exam. 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.

CREDITS: 3 LECTURE: 3

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 prerequisite: WR 121.
CREDITS: 3 LECTURE: 3

HS 262 EFFECTIVE HELPING SKILLS II

Introduces students to intentional 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. Audio and videotaping are used extensively. Required prerequisite: HS 162 or instructor approval.
CREDITS: 3 LECTURE: 3

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 corequisite: WR 121.
CREDITS: 4 LECTURE: 4

HS 291 PRACTICUM ADDICTIONS TREATMENT

Practicum is closely supervised opportunity to implement professional skills, knowledge and attitudes presented in prior Addictions Studies coursework. Students are placed locally or regionally at schools, public or private agencies and treatment centers, and complete a minimum of 30 clock hours for each credit earned. Students also attend a weekly seminar and meet individually with both the practicum instructor and the site supervisor throughout the quarter. Course is repeatable for credit. Typically offered every term. Addiction Studies students must have completed HS 161, HS 162 and HS 206 prior to enrolling in this class. NOTE: A minimum of nine credits of HS 291 is required for the Addictions Studies Certificate and 1,000 hours supervised experience are required before taking the Oregon CADC I exam.
CREDITS: 3 LECTURE: 1 OTHER: 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 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 prerequisites: 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 prerequisite: 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 prerequisite: 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, social class and gender in film. Special attention is given to how particular representations reflect the broader historical context surrounding when the films were produced and culturally based audience sentiments. Anthropological and sociological analyses of the films will be provided to give a multi-disciplinary account of how films reflect, create and support various ideological positions regarding race, class and gender.

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 prerequisite: 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 230

BIOLOGICAL ANTHROPOLOGY

This course provides students with 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 of human evolution and population variation. Lecture topics include mechanisms of evolution, cell biology and human genetics, human variations and adaptations, primate behavior, and the fossil evidence for human evolution.

CREDITS: 4 LECTURE: 3 OTHER: 2

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 prerequisite: 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 prerequisite: 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 prerequisite: 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 prerequisite: 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 prerequisites: WR 121 and ANTH 103.

CREDITS: 4 LECTURE: 4

ANTH 299 SELECTED TOPICS: ANTHROPOLOGY

CREDITS: 1 TO 4

APPRENTICESHIP

APR 101 ELECTRICAL/MANUFACTURING 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 ELECTRICAL/MANUFACTURING 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 ELECTRICAL/MANUFACTURING 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 ELECTRICAL/MANUFACTURING 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 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, and volumes of geometric shapes; powers; and use of the scientific calculator. Emphasis is on applications to applied sheet metal fabricators. There will be lab time in the class to work on assignments.

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

ELECTRICAL/MANUFACTURING 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

ELECTRICAL/MANUFACTURING 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

ELECTRICAL/MANUFACTURING 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

ELECTRICAL/MANUFACTURING 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 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. May be offered with a WIC designation.

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. May be offered with a WIC designation.

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. May be offered with a WIC designation.

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. May be offered with a WIC designation. 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. May be taught with a MIC and/or WIC designation. 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 media.

CREDITS: 4 LECTURE: 4

ART 188**SPECIAL STUDIES: ART**

CREDITS: 1 TO 3

ART 199**SELECTED TOPICS: ART**

CREDITS: 1 TO 3

ART 299**SELECTED TOPICS: ART**

CREDITS: 1 TO 3

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 prerequisite: WR 121.

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 wheel throwing skills. 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 prerequisites: ART 155, ART 117 and ART 131.

CREDITS: 3 LECTURE: 1.5 LAB: 4.5

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 prerequisites: ART 131 and ART 154.

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 prerequisites: 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 prerequisites: 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 prerequisites: ART 117 and ART 131.

CREDITS: 3 LECTURE: 1.5 LAB: 4.5

ART 266**RAKU-SPECIAL TOPICS**

Short course focusing on the raku firing process. Recommended prerequisite: ART 154. Usually offered fall and spring terms.

CREDITS: 2 LECTURE: 1 LAB: 3

ART 131**DRAWING I**

Emphasis on observing and developing fundamental drawing and composition skills. Still life material used extensively.

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 prerequisite: 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 prerequisite: ART 131.

CREDITS: 3 LECTURE: 1.5 LAB: 4.5

ART 234

FIGURE DRAWING I

Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media. Recommended prerequisite: 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 prerequisite: 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 prerequisite: ART 235 or instructor approval.

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.

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 prerequisite: ART 157A1.

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.

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 prerequisite: ART 157B1.

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.

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 prerequisite: ART 157C1.

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 prerequisite: Either ART 157A1 or ART 157B1.

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 prerequisites: ART 158A1 and ART 157A1.

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 and invested for casting. Fusing links to weave simple chains and finishing techniques will be included.

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 prerequisites: ART 158B1 and ART 157A1.

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.

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 prerequisites: ART 158C1 and ART 157A1.

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 repousse, or other metalworking techniques used to form sheet metal. Projects may include the use of hot and/or cold connections and non-metal materials. Recommended prerequisite: ART 157A1.

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 prerequisites: ART 157A1 and ART 159A1.

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 prerequisite: Either ART 157A1 or ART 157B1.

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 prerequisites: ART 159B1 and either ART 157A1 or ART 157B1.

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 prerequisite: ART 157C1.

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 prerequisite: ART 159C1.

CREDITS: 2 LECTURE: 1 LAB: 3

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 prerequisite: 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 prerequisites: 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 prerequisites: ART 131 and ART 182 or instructor approval.

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 prerequisites: 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 prerequisites: 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 prerequisites: ART 131 and ART 282 or instructor approval.

CREDITS: 3 LECTURE: 1.5 LAB: 4.5

**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 prerequisite: 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 prerequisite: 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 prerequisite: ART 161.

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 prerequisites: ART 161.

CREDITS: 3 LECTURE: 2 LAB: 3

**ART 265
DIGITAL PHOTOGRAPHY I**

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 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 prerequisite ART 265.

CREDITS: 3 LECTURE: 1.5 LAB: 4.5

**ART 191
SCULPTURE**

Studio introduction to articulation of visual ideas in three dimensions using additive and subtractive processes. Recommended prerequisites: ART 117 and ART 131. Not offered every year.

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 prerequisites: 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 prerequisites: ART 131 and ART 185 or instructor approval.

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 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 Prerequisite: ART 131

CREDITS: 3 LECTURE: 1.5 LAB: 4.5

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 prerequisites: AUT 106 and 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 prerequisites: 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 prerequisites: 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 prerequisites: 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 prerequisites: 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.

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 prerequisite: AUT 106.

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 are included to prepare the student for a job interview in the automotive industry. A self-paced course. Recommended prerequisite: 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 prerequisites: 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 prerequisites: 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**

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 prerequisites: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110. Corequisites: AUT 106, AUT 107, AUT 110

CREDITS: 1 LAB: 2

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 prerequisites: 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 prerequisites: 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 transmissions 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 prerequisites: 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 of both domestic and import vehicles. Recommended prerequisites: 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 driveability problems. Covers engine analysis, cooling and exhaust systems, ignition and fuel management systems. Recommended prerequisites: AUT 101, AUT 103, AUT 104, AUT 106, AUT 107, AUT 109 and AUT 110.

CREDITS: 2 LECTURE: 1 LAB: 3

AUT 206**ENGINE PERFORMANCE II**

Studies diagnosis of driveability 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 prerequisites: AUT 101, AUT 102, AUT 103, 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 prerequisites: 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 prerequisite: 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 prerequisite: WR 60.

CREDITS: 1 LAB: 3

AUT 216**CO-OP WORK EXPERIENCE AUTOMOTIVE**

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

CREDITS: 1 TO 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. Recommended prerequisites: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110 and MTH 20.

CREDITS: 3 LAB: 9

AUT 252**AUTOMATIC TRANSMISSIONS II**

Second part of an automatic transmission sequence. Course continues 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. Recommended prerequisites: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110, AUT 251 and MTH 20.

CREDITS: 1 LECTURE: .5 LAB: 1.5

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 prerequisites: AUT 102, AUT 106, AUT 107, AUT 109, AUT 110, AUT 111 and MTH 20.

CREDITS: 3 LECTURE: 1.5 LAB: 4.5

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 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 private pilot rating. Involves an introduction to fundamentals of flight, aerodynamics, flight operations, airspace, weather and weather products, flight planning, decision making, human factors, human factors in aviation, and crew resource management. Comprehensive course that prepares student for the Private Pilot written exam. Recommended prerequisite: MTH 20.

CREDITS: 5 LECTURE: 5

AV 111

FLIGHT MANEUVERS

Provides the preflight training required for the FAA-approved FAR Part 141 private pilot syllabus. Topics include global positioning systems, aircraft and pilot logbooks/documents, preflight preparation, flight maneuvers and phase exams. Recommended corequisites: AV 110 Private Pilot.

CREDITS: 3 LECTURE: 3

AV 115

PRIVATE PILOT-HELICOPTER

Covers fundamentals of flight, flight operations, aviation weather, performance, navigation, aircraft systems, aeronautical publications, Federal Aviation Regulations, flight planning, radio procedures, meteorology, and human factors. Comprehensive course that prepares student for the Private Pilot written exam. Recommended prerequisite: MTH 20, recommended corequisite: AV 117. 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 prerequisite: MTH 20 and recommended corequisite: AV 115. 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 airplace design and operational characteristics. Aircraft stability and control are related to airplace performance and safety. Students will demonstrate their knowledge of aerodynamics through projects in which they predict aircraft performance. Recommended prerequisite: 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 federal aviation regulations, including use of minimum equipment lists, will be studied.

Recommended prerequisite: 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 prerequisite: AV 108 or instructor approval.

CREDITS: 4 LECTURE: 4

AV 210

INSTRUMENT - AIRPLANE

The instrument rating ground school prepares students for the FAA instrument written exam and an FAA instrument rating. Includes an in-depth study of basic altitude instrument flying, IFR navigation systems and procedures, aircraft flight instruments, aviation weather, applicable FARs and the instrument charts required for IFR flight. Recommended prerequisites: 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 written exam and an FAA Instrument rating. Includes an in-depth study of aircraft flight instruments, basic altitude instrument flying, IFR navigation systems and procedures, aviation weather, applicable FARs, and the instrument charts required for IFR flight. Recommended prerequisites: AV 115 and/or Private Pilot certificate.

CREDITS: 5 LECTURE: 5

AV 220 COMMERCIAL PILOT-AIRPLANE

Ground instruction of aeronautical skills and knowledge applicable to the 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 Federal Aviation Regulations for commercial pilots and noncommercial flight operations, with emphasis on human factors, crew resource management, and decision-making. Recommended prerequisite: AV 110 and/or FAA Private Pilot Rating.

CREDITS: 4 LECTURE: 4

AV 222A 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. Mandatory prerequisite: instructor permission.

CREDITS: 1 LAB: 3.2

AV 222B 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. Mandatory prerequisite: instructor permission.

CREDITS: 1 LAB: 3.2

AV 222C 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. Mandatory prerequisite: instructor permission.

CREDITS: 1 LAB: 3.2

AV 222D 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. Mandatory prerequisite: instructor permission.

CREDITS: 1 LAB: 3.2

AV 222E 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 (MEI), and instrument (CFII) airplane. Flight, ground, and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required for registration.

CREDITS: 1 LAB: 3.2

AV 222F 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 (MEI), and instrument (CFII) airplane. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required for registration.

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 written exam. Recommended prerequisites: AV 115 and/or Private Pilot certificate.

CREDITS: 4 LECTURE: 4

AV 227A

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 for registration.

CREDITS: 1 LAB: 3.2

AV 227B

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 for registration.

CREDITS: 1 LAB: 3.2

AV 227C

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 for registration.

CREDITS: 1 LAB: 3.2

AV 227D

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 for registration.

CREDITS: 1 LAB: 3.2

AV 227E

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 for registration.

CREDITS: 1 LAB: 3.2

AV 227F

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 for registration.

CREDITS: 1 LAB: 3.2

AV 227G

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 for registration.

CREDITS: 1 LAB: 3.2

AV 227H

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 for registration.

CREDITS: 1 LAB: 3.2

AV 227I

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 for registration.

CREDITS: 1 LAB: 3.2

AV 227J

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 for registration.

CREDITS: 1 LAB: 3.2

AV 227K

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 for registration.

CREDITS: 1 LAB: 3.2

AV 227L

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 for registration.

CREDITS: 1 LAB: 3.2

AV 227M

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 for registration.

CREDITS: 1 LAB: 3.2

AV 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 for registration.

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 prerequisites: AV 110 and/or FAA Private Pilot Rating.

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 written-knowledge tests are required to obtain the CFI certificate, and a third is recommended. See Aviation program director for current fees. Recommended prerequisite: 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 prerequisites: AV 225 and/or Commercial Pilot certificate.

CREDITS: 5 LECTURE: 5

AV 288

SPECIAL STUDIES: AVIATION

CREDITS: 1 TO 5

AV 299

SELECTED TOPICS: AVIATION

CREDITS: 1 TO 8

BIOLOGY

BI 101

GENERAL BIOLOGY I

Designed to fulfill general education requirements, courses are 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.

CREDITS: 4 LECTURE: 3 LAB: 3

BI 102

GENERAL BIOLOGY II

Designed to fulfill general education requirements, courses are intended for non-major students whose program requires biology courses. Focus is on concepts of biological diversity including evolution and adaptations to local environments. Recommended prerequisite: BI 101.

CREDITS: 4 LECTURE: 3 LAB: 3

BI 103

GENERAL BIOLOGY III

Designed to fulfill general education requirements, courses are intended for non-major students whose program requires biology courses. Focus is on interconnections such as co-evolutionary adaptations among organisms and interactions with environmental factors/resources. Recommended prerequisite: BI 101.

CREDITS: 4 LECTURE: 3 LAB: 3

BI 121

ANATOMY AND FUNCTION I

Covers body organization, cell, skin, blood, heart and circulation, immunity, respiration, bones, and skeletal muscles. Designed for pharmacy technician, health records, practical nursing and massage therapy programs. Lecture and lab must be taken simultaneously; not offered as separate classes. Should be taken in sequence.

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, health records, practical nursing and massage therapy programs. Lecture and lab must be taken simultaneously; not offered as separate classes. Should be taken in sequence.

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 prerequisites: 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 cellular morphology and physiology, genetics, evolution, and ecology. Designed for majors in the life sciences and should be taken in sequence. Recommended prerequisites: CH 221, or concurrent enrollment, MTH 95 and WR 121.

CREDITS: 5 LECTURE: 4 LAB: 3

BI 212**BIOLOGY OF PLANTS II**

Surveys bacteria, kingdoms of protists, fungi and plants; examines evolutionary 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. Recommended prerequisite: BI 211 or instructor approval.

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. Recommended prerequisite: BI 211 or instructor approval.

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 prerequisites: 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 of the integumentary skeletal and muscular systems. Concurrent labs include hands-on dissections of a variety of tissues, organs, fetal pigs and/or cats. First course of a sequence for students in pre-nursing and other pre-professional health programs. Recommended prerequisite: basic knowledge of chemistry.

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. Emphasis on gross and microscopic 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. Should be taken in sequence. Recommended prerequisite: BI 231.

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. Emphasis on gross and microscopic anatomical and physiological relationships between 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. Should be taken in sequence. Recommended prerequisite: BI 232.

CREDITS: 4 LECTURE: 3 LAB: 3

BI 234**MICROBIOLOGY**

Introduces microorganisms, especially bacteria and viruses which cause serious infectious diseases, and introduces the study of those diseases and the defenses against them. Designed especially for pre-nursing students, and other pre-professional health programs. Recommended prerequisite: high school biology course.

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 prerequisite: BI 212 or instructor approval.

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 teacher. 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 081**PUBLIC RELATIONS**

Illustrates history and theory of public relations (PR). Describes interactions of PR with other marketing promotion activities.

Examines basic uses of media and provides experience in creating news releases and public announcements.

Recommended prerequisite: BA 223.

CREDITS: 3 LECTURE: 3

BA 101**INTRODUCTION TO BUSINESS**

In this course students 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 which includes discussion on management, marketing 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. Recommended 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. Recommended 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. Recommended prerequisite: BA 112.

CREDITS: 3 LECTURE: 3

BA 150**THE BUSINESS OF MASSAGE**

Designed specifically for massage therapy students to answer the many questions involved in turning their skill and knowledge into a successful career and business. Presents basic tenets of business entrepreneurship. Covers identifying trends, target markets, analyzing competition, location analysis, distribution, financing businesses, legal issues, management of small businesses, and writing a business plan.

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 pre- or corequisite: 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 program. Emphasis will be placed on management, marketing, accounting, and operational concepts covered in Introduction to Business and/or Level II classes. Recommended pre- or corequisite: BA 101 and instructor approval required.

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 prerequisite includes 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 prerequisite: BA 223. May be taught with MIC designation.

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 prerequisite: 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 prerequisite: 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 prerequisite: 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, 112, and 113 are required for AAS accounting specialization. Recommended prerequisite: MTH 60.

CREDITS: 3 LECTURE: 3

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 flows. Recommended prerequisite: BA 211.

CREDITS: 3 LECTURE: 3

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 prerequisite: BA 212.

CREDITS: 3 LECTURE: 3

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 prerequisite: MTH 60.

CREDITS: 3 LECTURE: 3

BA 218**PERSONAL FINANCE**

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

CREDITS: 3 LECTURE: 3

BA 220**MATH FOR BUSINESS DECISIONS**

Designed to develop mathematical analytical skills in performing the daily tasks of a manager or salesperson. Course has a threefold focus: strengthening understanding and use of business terminology in regard to financial information; developing spreadsheet skills in evaluating the costing, pricing, and financing strategies of products and services; and developing skills in evaluating and making budgeting, financial and investment decisions. This is a hands-on, skills-oriented course. Prerequisite: CIS 131. Recommended prerequisites: BA 113, BA 104 and CIS 125E.

CREDITS: 4 LECTURE: 3 OTHER: 2

BA 222**BUSINESS FINANCE**

Targets the role of financial management in business and provides understanding of the effect of finance on business decisions. Covers financial forecasting, capital budgeting and risk, financial institutions, securities markets, the investment process and working capital management. Recommended prerequisites: BA 104 and either BA 113 or BA 212. Instructor approval required.

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 prerequisite: 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 prerequisite: 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 prerequisites: 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 prerequisites: 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 prerequisites: CIS 131 and either BA 111 or BA 211.

CREDITS: 3 LECTURE: 2 LAB: 2

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. Recommended 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 prerequisite: BA 223.

CREDITS: 4 LECTURE: 4

BA 239

MARKETING PRINCIPLES II

Previously titled 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. Recommended 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 prerequisite: BA 223.

CREDITS: 4 LECTURE: 4

BA 250

ENTREPRENEURSHIP

This course provides a solid foundation in entrepreneurship and small business management. Students 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 prerequisites: BA 101 and BA 212.

CREDITS: 4 LECTURE: 4

BA 253

BUSINESS PLAN ELEMENTS

This course focuses on all the elements of a business plan - the feasibility analysis, marketing plan, management plan and operations, and the pro forma financials, and presenting

the plan. All elements are reviewed in an application-driven format for the student. From this course, a student will not only understand the process of thinking through the issues important to starting a business but also have the knowledge and skills to write their own business plan. Recommended prerequisites: BA 113, BA 206, BA 223 and BA 250.

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. Recommended 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 prerequisite: 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 prerequisite: BA 101 and BA 206.

CREDITS: 4 LECTURE: 4

BA 290

BUSINESS SEMINAR

Tests student's knowledge of all facets of the business curriculum. While assessing outcomes from the business administration program, this capstone course provides practice in decision making and problem solving. Involves competing in a sophisticated computer simulation. Special projects may be included. Students should complete management, marketing and accounting course work prior to enrolling in this seminar. Instructor approval required.

CREDITS: 3 LECTURE: 3

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 PLANNING 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 course fosters cultural pride and appreciation for the value of continuing education. Recommended prerequisite: HD 190, 191 and 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 schools. 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 prerequisite: 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 prerequisite: HD 194 or instructor approval.

CREDITS: 1 LECTURE: 1

HD 199

SELECTED TOPICS: HUMAN DEVELOPMENT

CREDITS: 1 TO 4

HD 211

MENTORING FOR OLI INSTITUTE I

HD 211 is the first class 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 daylong sessions one Saturday per month. The mentoring relationship requires a three-term commitment. Recommended prerequisite: HD 100CS College Success 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 daylong sessions one Saturday per month. Recommended prerequisite 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 and in class and demonstrated with OLI mentees at daylong sessions one Saturday per month. Recommended prerequisite: HD 212 or instructor approval.

CREDITS: 3 LECTURE: 2 OTHER: 2

HD 299

SELECTED TOPICS: HUMAN DEVELOPMENT

CREDITS: 1 TO 6

CASCADE CULINARY INSTITUTE

CCI 101

CHEF WORLD INTRODUCTION

Prepare to embark on a journey of the culinary world, from tasting regional cuisines and spices to the fundamentals of making a flavorful stock. Hands-on labs will include basic knife skills, the mother sauces, kitchen safety, sanitation, plating design and dessert production. Trips to local restaurants and resorts will give students a glimpse into the fast-paced work environment of a professional kitchen.

CREDITS: 2 LECTURE: 1 OTHER: 2

CCI 102

SANITATION & SAFETY FOR MANAGERS

This course will enable students to implement and uphold national food safety standards. The main focus of the course is to highlight what causes foodborne illnesses and thus how to prevent them. Students will learn how to deal with foodborne illness outbreaks and emergencies. Class utilizes National Restaurant Association standards and NRAEF ServSafe exams.

CREDITS: 2 LECTURE: 2

CCI 107

CULINARY SUPERVISION

Introductory course in first-line supervision (team leader, shift supervisor, kitchen manager, or sous chef). Includes topics on work management, problem solving, running meetings, effective delegation, business communications and how to lead effective teams. Course focuses on both business and human relations viewpoints of supervision practices.

CREDITS: 3 LECTURE: 3

CCI 110

CULINARY NUTRITION

Focuses on nutrition as it relates to the body, as well as to food preparation and diet planning. Basic nutrients covered include carbohydrates, fats and proteins, vitamins and minerals. Special diet modifications are discussed in relation to menu preparation.

CREDITS: 3 LECTURE: 3

CCI 121

HOT FOOD PRODUCTION I

This class introduces students to the culinary profession including a brief history and chefs of distinction. General kitchen organization and hierarchy along with present-day examples. Knife skills and foundation cooking skills that include making stocks, white and brown, mother sauces and small sauces as utilized for both sauce and soup production. Flavor profiles used in today's kitchen and an understanding of their role in flavoring and seasoning a variety of foods. Emphasis is on providing the student with a strong foundation in basic culinary skills.

CREDITS: 4 LECTURE: 2 OTHER: 4

CCI 122

HOT FOOD PRODUCTION II

An introduction to the fundamental concepts and techniques of basic protein, starch and vegetable cookery. Higher development of fundamental cooking theories and techniques from Hot Food Production I will be continued. Emphasis is placed on the study of ingredients and introduction to small sauces will be given. Expanded concepts of timelines and multitasking, organization, culinary French terms and portion control.

CREDITS: 4 LECTURE: 2 OTHER: 4

CCI 123

A LA CARTE COOKING

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. Recommended prerequisite: CCI 122.

CREDITS: 4 LECTURE: 2 OTHER: 4

CCI 144

INTRODUCTION TO BAKING SCIENCE

The students will gain an understanding of different baking ingredients and how they work together. They will also gain an understanding of why and how ingredients react in the baking process. Recommended pre- or corequisite: CCI 145. Corequisite: CCI 145.

CREDITS: 1 LECTURE: 1

CCI 145

BASIC BAKING PRINCIPLES

Students will learn basic principles in baking including kitchen math, weights and measures, baking equipment, and product identification. Students will also learn to make basic elements in the pastry kitchen including: dessert sauces, quick breads, cookies, meringues, pate a choux and sugar stages. Recommended pre- and corequisites: CCI 144 and CCI 145; and Food Handler card or ServSafe Certificate. Corequisite: CCI 144.

CREDITS: 3 LECTURE: 1 LAB: 4

CCI 146

ARTISAN BREADS

Students will be working in teams of two, learning bread-baking basics along with European artistry and the slower approach to bread making. They will learn about bakers' percentages and how to design formulations utilizing them. Natural fermentation will be utilized along with commercial yeast. Students will learn how to maintain an active sourdough starter, and be responsible for their own and utilizing it when called for in class. They will learn to feed and maintain a healthy starter. Ingredients and their specific profile will be discussed; why they are used and how to select them for the best results. Recommended prerequisites: CCI 144 and CCI 145; and Food Handler card or ServSafe Certificate.

CREDITS: 4 LECTURE: 2 LAB: 4

CCI 148

LAMINATED DOUGHS

Basic principles of laminated dough technology including hands-on making of puff pastry, Danish and croissants. The course will focus on the techniques, principles, ingredient selection, product knowledge, balancing formulations, proper shaping, proofing and baking required to produce quality baked products. The class will include the making of required fillings for a variety of baked goods. Recommended prerequisites: CCI 144 and Food Handler card or ServSafe Certificate.

CREDITS: 4 LECTURE: 2 LAB: 4

CCI 151

GARDE MANGER I

Teaches basic principles of garde manger, applying them to the pantry area and salad stations, and how they relate with other kitchen operations. Focuses on plate presentation and simple garnishes; product knowledge and identification; preparation of salads and salad dressings; preparing dressings by type, recipes and techniques; and sandwich breads and fillings. Recommended prerequisite: Food Handler card or ServSafe Certificate.

CREDITS: 4 LECTURE: 2 OTHER: 4

CCI 153

CHARCUTERIE AND BUTCHERING

Advanced garde manger preparations and techniques from the commonly used methods of preserving food through curing, sausage making and smoking to pâtés, terrines and mousselines with an introduction to cheese making. Will also include an overview of sculpting, modeling, carving, food decoration and culinary competitions. Recommended prerequisite: CCI 155.

CREDITS: 4 LECTURE: 2 OTHER: 4

CCI 155

MEDITERRANEAN CUISINE

A comprehensive study of the cuisines of the countries surrounding the Mediterranean. Lecture class will include regional and historical ingredient and recipe importance pertaining to the countries of France, Italy, Spain, Greece, Morocco, Tunisia, Egypt, Turkey, Syria, Lebanon and Israel. Lab will include cooking methodology, equipment and ingredient use to prepare regional dishes. Instructor approval required. Recommended prerequisite: CCI 151.

CREDITS: 4 LECTURE: 2 OTHER: 4

CCI 156

DIETARY HEALTH AND SPA CUISINE

This course is an intensive study of the foods we consume and how they interact with our body chemistry. Recipes and their ingredients are broken down to a molecular level which then enables a better understanding of the biochemical effects they truly have on the human body. Current and past trends in the health foods are examined to determine myth from fact. A closer look at the organic and slow food movements and how they influence chefs in the kitchen. Recommended prerequisites: CCI 151 and CCI 121.

CREDITS: 3 LECTURE: 1 OTHER: 4

CCI 161

DINING ROOM OPERATIONS

Hands-on table setting for differing meal periods and differing menus according to types of service used in various food service operations. Teaches importance of the relationship between the kitchen and service staff; positions and responsibilities of dining room personnel; correct handling of guest checks, review of differing guest check systems, from manual to computerized, along with assets and liabilities of such systems; requirements for staffing the dining room for lunch operation.

CREDITS: 3 LECTURE: 1 OTHER: 4

CCI 168

MENU PLANNING & DEVELOPMENT

Presents the menu as the central influence on all food service functions. This unique approach clearly outlines both the "big picture" behind a well-run food service operation, and the practical details of costing, planning, analyzing, purchasing and production, beverage management, promotion, and service. Students will be able to clearly develop a menu and effectively use it as a management tool.

CREDITS: 2 LECTURE: 2

CCI 172**CUSTARDS AND FROZEN DESSERTS**

Preparation techniques and production skills for custards, puddings, Bavarians and mousses. Still-frozen and churn-frozen desserts production and presentations. Recommended prerequisites: CCI 144, Introduction to Baking Science; CCI 145, Basic Baking Principles; and Food Handler card or ServSafe Certificate.

CREDITS: 4 LECTURE: 2 LAB: 4

CCI 174**INTRODUCTION TO CAKES AND TORTES**

Production of cakes and tortes for a variety of operations including restaurants, bakeries and banquets; how to bake cakes properly and cool them according to different altitudes. Prepare torte and cake fillings, frostings and icings, assemble and decorate cakes and tortes for various occasions. Recommended prerequisites: CCI 145, Basic Baking Principles; and Food Handler card or ServSafe Certificate.

CREDITS: 4 LECTURE: 2 LAB: 4

CCI 176**FRUIT DESSERTS, PIES AND TARTS**

Basic pastry dough production including pâte brisée, pâte 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 desserts, pies and tarts. Recommended prerequisites: CCI 144, Introduction to Baking Science; CCI 145, Basic Baking Principles; and Food Handler card or ServSafe Certificate.

CREDITS: 3 LECTURE: 1 LAB: 4

CCI 199**SELECTED TOPICS CULINARY**

CREDITS: 1 TO 4

CCI 204**RESTAURANT MANAGEMENT AND SUPERVISION**

Introductory course in first-line supervision for a variety of positions including team leader, shift supervisor, kitchen manager, or sous chef. Includes topics on work management, from problem solving, running meetings, effective delegation, business communications, to how to lead effective teams. In effect, this course focuses on both the business and human relations viewpoints of supervision practices.

CREDITS: 3 LECTURE: 3

CCI 206**STOREROOM & INVENTORY CONTROLS**

Storeroom and inventory controls introduces student to the key concepts of purchasing from selection through procurement, receiving, storing and issuing. Physical planning, including placement of perishable and dry products, with in the storeroom and organization from a staffing and control perspective. Inventory controls of turnover, food and beverage costs. Security issues with vendors, employees and customers. Recommended prerequisite: Food Handler card or ServSafe Certificate.

CREDITS: 3 LECTURE: 3

CCI 208**FARM TO TABLE**

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. Learn relevant techniques—from sourcing sustainable local ingredients to preparing them—and the short- and long-term advantages of this vital practice. Understand small-scale farming and food production—from local farms to farmers' markets to the kitchen.

CREDITS: 3 LECTURE: 1 LAB: 4

CCI 240**ADVANCED ARTISAN BREADS**

Students will usually be working in pairs and focus on bread baking advanced techniques and European artistry, the slower approach to better bread making. The use of baker's percentages will constantly be re-enforced for troubleshooting, designing formulations and all commercial applications. Natural fermentation will be utilized along with commercial yeast. Students will continue to maintain an active sourdough starter, being responsible for their own and utilizing it when called for in class. Recommended prerequisites: CCI 145, Basic Baking Principles; CCI 146, Artisan Breads; and Food Handler card or ServSafe Certificate.

CREDITS: 4 LECTURE: 2 LAB: 4

CCI 242**PETITS FOURS AND CANDIES**

Students will learn sugar techniques for the production of petits fours including fondant, both boiled and rolled. Chocolate tempering techniques and the applications for candies, truffles and glazes. Selection and preparation of a variety of candies including soft and boiled. Mini-pastries using puff pastry and pâte à choux for petits fours sec and petits fours glace. Recommended prerequisites: CCI 174, Intro to Cakes and Tortes; and Food Handler card or ServSafe Certificate.

CREDITS: 3 LECTURE: 1 LAB: 4

CCI 244**SPECIALTY AND WEDDING CAKES**

The course will cover the assembling of specialty cakes and multi-tiered cakes, icing using both butter cream and rolled fondant for a variety of occasions. Decorating skills will be emphasized using various techniques including piping, painting, and fondant work. Basic cake baking skills using a variety of fillings will be included in the course materials. Recommended prerequisites: CCI 174, Intro to Cakes and Tortes; and Food Handler card or ServSafe Certificate.

CREDITS: 4 LECTURE: 2 LAB: 4

CCI 246**CHOCOLATE DESSERTS/DECOR**

Students will learn the history and procedures for making chocolate; how to make chocolate-based desserts; how to properly temper chocolate using direct, seeding and tabling (tablage) methods; effectively use chocolate for molds, candies and decorations. Recommended prerequisites: CCI 121, Hot Food Production I; and Food Handler card or ServSafe Certificate.

CREDITS: 4 LECTURE: 2 LAB: 4

CCI 248**PLATED DESSERTS AND PRESENTATIONS**

Students will learn the principle for plating and serving attractive presentations of desserts with appropriate garnishes and sauces. Additional presentation skills for use in different settings from retail bakery displays, a la carte restaurants, to large-volume banquets will give the student an appreciation of how important visual display is. Recommended prerequisites: CCI 121, Hot Foods Production I; CCI 145, Basic Baking Principles; and Food Handler card or ServSafe Certificate.

CREDITS: 4 LECTURE: 2 LAB: 4

CCI 260**WINE AND BEVERAGE**

Combines an understanding of the origin and production of spirits, wines, beers and ales with how they are to be served. Discusses how alcoholic beverages should be priced, purchased, inventoried and poured. Students will be exposed to mixology, glassware and the equipment that is customary to beverage operations. Beverage operations analysis for profitability is covered. Legal aspects of alcoholic beverage service will also be discussed including how to minimize legal exposure and proper methods of service control.

CREDITS: 3 LECTURE: 3

CCI 266**INTRODUCTION TO SUGAR ARTS**

Students will be introduced to sugar arts including basic sugar and isomalt techniques including cooking, cooling, adding color and storing. Use of sugar and pastillage for casting or molding sugar, spun sugar, pulled sugar, blown sugar, ribbons and flowers. Students will also learn showpiece design and will finish with a full sugar showpiece. Recommended prerequisites: CCI 145, Basic Baking Principles; and Food Handler card or ServSafe Certificate.

CREDITS: 3 LECTURE: 1 LAB: 4

CCI 280A**CO-OP WORK EXPERIENCE CULINARY**

Enhances student's knowledge, personal development, professional development and professional preparation by integrating academic study with practical experience. On-the-job training in a restaurant or food service environment. Instructor approval required.

CREDITS: 1 TO 3

CCI 280B**CO-OP WORK EXPERIENCE CULINARY**

Enhances student's knowledge, personal development, professional development, and professional preparation by integrating academic study with practical experience. On-the-job training in a restaurant or food service environment. Instructor approval required.

CREDITS: 1 TO 3

CCI 280C**CO-OP WORK EXPERIENCE CULINARY**

Enhances student's knowledge, personal development, professional development and professional preparation by integrating academic study with practical experience. On-the-job training in a restaurant or food service environment. Instructor approval required.

CREDITS: 1 TO 3

CCI 290**BAKING AND PASTRY CAPSTONE**

Baking and Pastry AAS students make a contribution of production and finished desserts and breads that support the student operated restaurant within the Cascade Culinary Institute. The food items are prepared using techniques and knowledge learned in all classes taken during their culinary education. Students are evaluated on the skills needed to support the service of a fine-dining meal: food safety and sanitation, yeast/quick bread preparations, laminated dough preparations, classical dessert preparation (i.e. pies, tarts, tortes, ice cream, sorbet, etc.), and final plate presentation as a representation of their learning experience within the Baking and Pastry program curriculum. This final capstone course is designed to serve as an expression of all the competencies learning within the program, and to provide a last opportunity for assessment and instructor evaluation of student skill sets prior to graduation. As a practical final, students are evaluated on the skills needed to create a fine-dining dessert banquet display to include showpiece, 8-10 inch entremet, plated frozen dessert, and bonbons/petits fours. Baking and Pastry students produce the banquet display twice during the term, once for faculty evaluation and review, which is integrated into the student-operated restaurant service. The second buffet serves as a showcase intended to include family and friends. All students must create and present a cost analysis, nutrition analysis, production schedule and recipe book as part of the final buffet. Program or instructor approval required. This course should be taken during the last term of AAS degree coursework.

CREDITS: 5 LAB: 15

CCI 291**CULINARY ARTS CAPSTONE**

Culinary Arts AAS students facilitate the food production and service of the student-operated restaurant within the Cascade Culinary Institute. The food items are prepared using techniques and knowledge learned in all classes taken during their culinary education. Students are evaluated on the skills needed to support the service of a fine-dining meal: food safety and sanitation, knife cuts, dry-heat cooking methods, moist-heat cooking methods, combination cooking methods, vegetable cookery, starch cookery, sauce cookery and final plate presentation as a representation of their learning experience within the Culinary Arts program curriculum. This final capstone course is designed to serve as an expression of all the competencies learned within the program and to provide a last opportunity for assessment and instructor evaluation of student skill sets prior to graduation. As a practical final, students are evaluated on the skills needed to create a fine-dining banquet for local patrons within the student-operated restaurant. Culinary Arts students produce the banquet

twice during the term, once for faculty evaluation and review, which is integrated into the student-operated restaurant service. The second buffet serves as a showcase intended to include family and community members. All students must create and present a cost analysis, nutrition analysis, production schedule and recipe book as part of the final buffet. Program or instructor approval required. This course should be taken during the last term of AAS degree coursework.

CREDITS: 9 LAB: 27

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. Recommended prerequisite: one year of high school algebra or MTH 60 equivalent. Not designed for science majors.

CREDITS: 4 LECTURE: 3 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. Should be taken in sequence. Recommended prerequisite: CH 104 or equivalent. Not designed for science majors.

CREDITS: 4 LECTURE: 3 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. Should be taken in sequence. Recommended prerequisite: CH 105 or equivalent.

CREDITS: 4 LECTURE: 3 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. Recommended prerequisite: MTH 95 or equivalent.

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. Recommended prerequisites: MTH 95 or equivalent, CH 221 or equivalent.

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-based equilibria, electrochemistry, nuclear chemistry, metals and organic compounds. The course is algebra-based, and includes supporting laboratory work. Recommended prerequisites: MTH 95 or equivalent, CH 222 or equivalent.

CREDITS: 5 LECTURE: 4 LAB: 3

CH 241 ORGANIC CHEMISTRY I

Explores bonding, structure, nomenclature, properties, syntheses and reactions of the major classes of organic molecules. Includes isomerism, stereochemistry, SN1, 2, E1 and 2 mechanisms. Supporting laboratory work is included. CH 241, CH 242 and CH 243 should be taken in sequence. Recommended prerequisite: CH 106 or CH 223, or equivalent.

CREDITS: 5 LECTURE: 4 LAB: 3

CH 242 ORGANIC CHEMISTRY II

Explores bonding, structure, nomenclature, properties, syntheses and reactions of the major classes of organic molecules. Alkenes, alkynes, aromatics, alkyl halides, alcohols, ether, amines and carbonyl compounds are included, as well as discussions of resonance and spectroscopy. Supporting labwork is included. CH 241, CH 242 and CH 243 should be taken in sequence. Recommended prerequisite: CH 241 or equivalent.

CREDITS: 5 LECTURE: 4 LAB: 3

CH 243 ORGANIC CHEMISTRY III

Explores bonding, structure, nomenclature, properties, syntheses and reactions of the major classes of organic molecules. Carbonyl compounds, polymers, and major classes or biomolecules are included. Supporting labwork is included. CH 241, CH 242 and CH 243 should be taken in sequence. Recommended prerequisite: CH 242 or equivalent.

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 Vista 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 075

BEGINNING EXCEL

Uses Microsoft Excel for Windows to efficiently create simple spreadsheets for business including editing, formatting and printing. Uses formulas and functions to calculate typical business solutions, create charts and use database features. Prerequisite: keyboarding skills and computer experience.

CREDITS: 2 LECTURE: 1 LAB: 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 prerequisites: 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 for Applications (VBA), a programming language used in the Microsoft Office applications as well as several non-Microsoft software products. Uses Excel VBA as programming environment and 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 prerequisites: 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 prerequisites: CIS 135DB and 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 pre- or corequisite: CIS 120.

CREDITS: 4 LECTURE: 3 LAB: 3

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 setup and plotting, and the program parameter file. Work will be completed with AutoCAD. Recommended prerequisite: CIS 125A1.

CREDITS: 4 LECTURE: 3 LAB: 3

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 prerequisite: 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, macros, what-if-analysis, data tables, advanced formulas, goal seek, solver, consolidating and importing data, and basic concepts of using VBA. Students will apply these Excel features to create and revise business worksheets. Recommended prerequisites: 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 CS3. Outcomes include an overall understanding of Flash as well as setting project requirements and identifying, building, and evaluating rich media elements. Recommended prerequisite: CIS 120 or instructor approval.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 125G**PHOTOSHOP**

Covers the learning objectives as outlined by Adobe to become an Adobe Certified Associate (ACA) in visual communication using Adobe Photoshop. Outcomes include an overall understanding of Photoshop as well as setting project requirements, identifying design elements, manipulating images and evaluating digital images. Recommended prerequisite: CIS 120 or instructor approval.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 125I**ADOBE ILLUSTRATOR**

The course follows the Adobe Certification Guidelines for Illustrator. The goal of this course is help students be prepared to take the Adobe® Illustrator Certification Exam. The Adobe Certified Expert (ACE) certification is internationally recognized. An Adobe Certified Expert (ACE) is a person who has demonstrated a professional level in proficiency with one or more Adobe software products. Prerequisite: CIS 120 or instructor approval.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 131**SOFTWARE APPLICATIONS**

Course outcomes focus on learning Word and Excel competencies as defined by the industry standard, Microsoft Office Specialist (MOS) certification for Office 2010. A brief introduction to other components of the "office suite" such as PowerPoint and Access is included. Recommended prerequisites: CIS 120 or IC³ certification and 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 such as form validation, cookies, and navigation menus. Recommended prerequisites: CIS 120 and CIS 195 or instructor approval.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 133P**INTRODUCTION TO PHP**

Expands on existing Web development skills by introducing PHP for server-side scripting. Students will learn to use PHP and MySQL (database) to create web sites with email forms, file submission forms, dynamic content, customer/client logins, and discussion boards. Recommended prerequisites: CIS 120, CIS 122 and CIS 195 or instructor approval.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 135A1**AUTODESK REVIT 1**

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 prerequisite: CIS 125A1.

CREDITS: 3 LECTURE: 2 LAB: 3

CIS 135A2**AUTODESK REVIT 2**

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 prerequisite: CIS 135A1.

CREDITS: 3 LECTURE: 2 LAB: 3

CIS 135C1**AUTOCAD CIVIL 3-D**

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 prerequisite: CIS 125A2.

CREDITS: 3 LECTURE: 2 LAB: 3

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, MySQL and Oracle. Recommended prerequisites: CIS 120 or IC³ certification, CIS 131 and MTH 060/085 or BUS 104.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 135M1

AUTODESK INVENTOR I

First course in a two-term sequence introducing mechanical drafting with AutoDESK Inventor. Will develop fundamental knowledge in the areas of part and sheetmetal modeling, data management and layout presentation. Recommended prerequisite or recommended corequisite: CIS 125A1.

CREDITS: 3 LECTURE: 2 LAB: 3

CIS 135M2

AUTODESK INVENTOR II

Second course in a two-term sequence introducing mechanical drafting with AutoDESK Inventor. Will continue learning Inventor aspects of comprehensive assemblies, working drawing sets, motion analysis, content reuse, design for manufacturability and Inventor Studio. Recommended prerequisite: CIS 135M1.

CREDITS: 3 LECTURE: 2 LAB: 3

CIS 135S1

SOLIDWORKS 1

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 LAB: 3

CIS 140

A+ ESSENTIALS

For anyone who owns a computer or is interested in a job supporting microcomputers as well as those seeking the vendor neutral CompTIA A+ Essentials certification (220-701). Useful for PC hobbyists wishing to transition their skills to the workforce. It introduces the software skill set required of an entry-level computer technician, including operating system fundamentals, software installation and configuration and troubleshooting. Recommended prerequisite: CIS 120 and CIS 131.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 145

PC TECHNICIAN

Course reviews the skills and knowledge associated with the CompTIA's A+ 220-702 (Practical Application) objectives. Completion of this course prepares the student for an entry-level position (technical support specialist, enterprise technician, IP administrator, field service technician, PC or support technician, etc.) supporting personal computer hardware. Technical support specialists install, configure, upgrade, modify, clean and repair computer hardware and software. Recommended prerequisites: CIS 120 and CIS 140.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 151C

CISCO INTERNETWORKING

First of a three-course sequence for preparation of the Cisco Certified Network Associate (CCNA) certification exam.

"Cisco Internetworking" implements Cisco's online semester 1 curriculum developed by Cisco Systems experts. Covers OSI models, LANs, cabling, cabling tools, topologies, networking devices, IP addressing, network standards and various protocols. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term. Recommended prerequisites: CIS 70, MTH 20, or field experience.

CREDITS: 4 LECTURE: 3 LAB: 3

CIS 152C

CISCO ROUTER CONFIGURATION

Second of a three-course sequence for the preparation of the Cisco Certified Network Associate (CCNA) certification exam.

"Cisco Router Configuration" implements Cisco's online semester 2 curriculum developed by Cisco Systems experts. Topics include commands used for configuring and monitoring a Cisco 2600 series router. Also included are commands used to secure a LAN. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term. Recommended prerequisite: CIS 151C.

CREDITS: 4 LECTURE: 3 LAB: 3

CIS 154C

CISCO VLAN AND WAN TECHNOLOGIES

Third of three-course sequence for the preparation of the Cisco Certified Network Associate (CCNA) certification exam. Cisco VLAN and WAN technologies implement Cisco's online semester 3 and semester 4 curriculum developed by Cisco Systems experts. Topics include LAN switches, VLAN, LAN and WAN design, routing protocols and WAN protocols. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term. Recommended prerequisite: CIS 152C.

CREDITS: 4 LECTURE: 3 LAB: 3

CIS 160

COMPUTER SCIENCE ORIENTATION

Gives a broad overview of the discipline of computer science. Students will learn about the foundations of computer science such as problem solving and algorithms, programming concepts and computer hardware. Students will also research different careers available in the computer science field and reflect on some of the influences computers have had and will continue to have on society. Students will also have the opportunity to write a few programs in a very low-level and a very high-level language. Strongly recommend some familiarity with programming concepts. Recommended prerequisites: CIS 120 and MTH 095 or instructor approval.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 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. Recommended prerequisites: MTH 111 and CIS 160 or previous experience or instructor approval.
CREDITS: 4 LECTURE: 3 LAB: 3

CIS 162
COMPUTER SCIENCE II
 Continuation of CIS 161. Emphasizes data structures, algorithm analysis and software engineering methods. Recommended preparation: CIS 161 or instructor's permission.
CREDITS: 4 LECTURE: 3 LAB: 3

CIS 178
INTERNET IN DEPTH
 Explores the history and philosophy of the Internet as well as its use as a tool for research, communication and entertainment. Students will demonstrate use and understanding of online applications (productivity software, image editing, education, etc.), communication tools (blogs, discussion boards, social networking, email, IM, etc.), and basic Web development concepts (Microsoft Expression Web, usability/design, FTP, etc.). Recommended prerequisite: CIS 120 or instructor approval.
CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 179
NETWORKING ESSENTIALS
 Introduces current network technologies for small local area networks (LANs) and wide area networks (WANs), and the Internet. Introduces hardware, software, terminology, components, design, and connections of a network as well as topologies and protocols for LANs and WANs. Provides information necessary to pass the CompTIA Network+ (c) exam (N10-003, 2007 Edition). Also provides information for those who support or administer networks. Recommended prerequisites: CIS 120 and CIS 140.
CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 195
WEB DEVELOPMENT I
 Explores the use of development tools, HTML/XHTML and CSS to create valid websites for a variety of topics. Topics include site planning, design, navigation, usability and publishing. Recommended prerequisite: CIS 120 or instructor approval.
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 prerequisites: 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. Recommended prerequisite: instructor approval.
CREDITS: 1 TO 7

CIS 235
INFORMATION TECHNOLOGY IN BUSINESS
 Uses advanced software (Word 2007, Excel 2007, PowerPoint 2007 and Access 2007) to solve and analyze business problems using integration of the applications in a business environment. Recommended prerequisites: 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 prerequisites: 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 prerequisites: 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. Students learn to write complicated interactive and embedded SQL statements and learn the implications of multi-user database applications. Recommended prerequisites: CIS 122 and CIS 275 or instructor approval.
CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 279AD
WINDOWS SERVER 2008, ACTIVE DIRECTORY, CONFIGURING
 Introduces students to Microsoft Windows 2008 Active Directory and prepares them to plan, configure and administer an Active Directory infrastructure. Provides the information necessary to pass the Microsoft Certification exam 70-640, Windows Server 2008 Active Directory, Configuring. Recommended prerequisites: CIS 120, CIS 130, CIS 140, and CIS179 or instructor approval.
CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 279ES**EXCHANGE SERVER 2007, CONFIGURING**

Introduces students to Microsoft Exchange Server 2007 and prepares them to plan, configure, and administer an Exchange Server 2007 electronic communications infrastructure.

Provides the information necessary to pass the Microsoft Certification exam, 70-266: Exchange server 2007, Configuring. Recommended prerequisites: CIS 120, CIS 131, CIS 140 and CIS 179 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 prerequisite: CIS 120 or instructor approval.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 279NE**MANAGING A WINDOWS 2003 NETWORK ENVIRONMENT**

For anyone who wants to learn how to install, configure, administer and support primary services in the Windows Server 2003 operating system as well as those seeking Microsoft certification 70-290. Recommended prerequisites: CIS 120, CIS 140 or instructor approval.

CREDITS: 4 LECTURE: 3 LAB: 3

CIS 279NI**WINDOWS SERVER 2008, NETWORK INFRASTRUCTURE, CONFIGURING**

Introduces students to advanced configuration principles for Microsoft Windows 2008, including DNS, DFS, IPv4, IPv6, DHCP, WSUS, and GPO. The class also provides the information necessary to pass the Microsoft Certification exam 70-642, Windows Server 2008 Network Infrastructure, Configuring. Recommended prerequisites: CIS 120 and CIS 131, or CIS 140, CIS 179 and CIS 279SA or CIS 279V or instructor approval.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 279SA**WINDOWS SERVER 2008, SERVER ADMINISTRATOR**

Introduces students to basic administrative principles for Microsoft Windows 2008, and prepares them to manage the server operating system, file, and directory services as well as also distributing software and updates, monitoring server performance and troubleshooting. The class also provides the information necessary to pass the Microsoft Certification exam 70-646, Windows Server 2008, Server Administrator. Recommended prerequisites: CIS 120 and CIS 131, CIS 140 and CIS 179 or instructor approval.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 279SE**SECURITY +**

CompTIA Security+ is an international, vendor-neutral certification that proves competency in system security, network infrastructure, access control and organizational security. Major organizations that employ CompTIA Security+ certified staff include Booz Allen Hamilton, Hewlett-Packard, IBM, Motorola, Symantec, Telstra, Hitachi, Ricoh, Lockheed Martin, Unisys, Hilton Hotels Corp., General Mills, the U.S. Navy, Army, Air Force and Marines. Recommended prerequisites: CIS120, CIS131, CIS140, CIS179 and CIS279V or instructor approval.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 279V**WINDOWS VISTA**

Prepares the student for the Microsoft Certified Technology Specialist examination on the Vista operating system (70-620). Includes the beginning information and hands-on practice students need to build the knowledge and skills needed for IT Professional certifications such as Enterprise Support Technician, Network Systems Administrator, or Network Systems Engineer. Recommended prerequisites: CIS 120, CIS 131, CIS 140, and CIS 179 or instructor approval.

CREDITS: 4 LECTURE: 3 LAB: 3

CIS 279W7**WINDOWS 7**

This course prepares the student for the Microsoft Certified Technology Specialist examination on the Windows 7 operating system (# 70-680). It includes the beginning information and hands-on practice students need to build the knowledge and skills needed for IT Professional certifications such as MCITP: Enterprise Administrator, and Enterprise Desktop Administrator. Recommended prerequisites: CIS 120, CIS 131, CIS 140 and CIS 179 or instructor approval.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 279XP**WINDOWS XP PROFESSIONAL**

For anyone who wants to learn how to install, configure, customize and troubleshoot Microsoft Windows XP Professional as well as those seeking Microsoft certification 70-290. Recommended prerequisites: CIS 120 or CIS 131, CIS 140 or instructor approval.

CREDITS: 4 LECTURE: 3 LAB: 3

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. Recommended prerequisite: instructor approval.

CREDITS: 1 TO 3

CIS 295**WEB DEVELOPMENT II**

Expands on existing HTML/XHTML/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 generating dynamic content (MySQL). Recommended prerequisite: CIS 195 or instructor approval.

CREDITS: 4 LECTURE: 3 OTHER: 2

CIS 299**SELECTED TOPICS: COMPUTER INFORMATION TECHNOLOGY**

CREDITS: 1 TO 7

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 prerequisite: SPAN 101.

CREDITS: 2 LECTURE: 2

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. May be repeated for six credits. Students must pass a criminal history background check. Instructor approval required.

CREDITS: 1 TO 3

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 Occupational Safety and Health Administration (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 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 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 130, DA 134, DA 160, DA 181, DA 190

CREDITS: 4 LECTURE: 2 LAB: 4

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 145

CREDITS: 3 LECTURE: 3

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 120, DA 134, DA 160, DA 181, DA 190

CREDITS: 3 LECTURE: 2 LAB: 3

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 135, DA 150, DA 151.

CREDITS: 3 LECTURE: 2 LAB: 3

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 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. Prerequisite: entrance into the Dental Assisting program. Corequisites: DA 120, DA 130, DA 160, DA 181, DA 190.

CREDITS: 2 LECTURE: 2

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 and mounting 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. Prerequisite: DA 134. Corequisites: DA 131, DA 150, DA 151.

CREDITS: 3 LECTURE: 2 LAB: 3

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.

CREDITS: 3 LECTURE: 3

DA 150

INTRODUCTION 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 131, DA 135, DA 151.

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 131, DA 135, DA 150.

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 130, DA 134, DA 181, DA 190.

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 120, DA 130, DA 134, DA 160, 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 120, DA 130, DA 134, DA 160, 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 TO 10

DA 199**SELECTED TOPICS: DENTAL ASSISTING**

CREDITS: 4

DA 999**DENTAL ASSISTING PROGRAM**

CREDITS: 14 LECTURE: 12 OTHER: 4

DIETARY MANAGEMENT**DM 111****PRACTICUM: RESTAURANT MANAGEMENT AND SUPERVISION**

Practical application of concepts presented in Restaurant Management and Supervision (CCI 204). Includes work experience, project completion and completion of a notebook. Corequisite: CCI 204 Restaurant Management and Supervision.

CREDITS: 1 OTHER: 3

DM 121**PRACTICUM: SANITATION AND SAFETY FOR MANAGERS**

Practical application of concepts presented in CCI 102 Sanitation and Safety for Managers. Includes work experience, project completion and completion of a notebook. Corequisite: CCI 102 Sanitation and Safety for Managers.

CREDITS: 1 OTHER: 3

DM 131**PRACTICUM: STOREROOM AND INVENTORY CONTROLS**

Practical application of concepts presented in Storeroom and Inventory Controls (CCI 206). Includes work experience, project completion and completion of a workbook. Corequisite: CCI 206 Storeroom and Inventory Controls.

CREDITS: 1 OTHER: 3

DM 210**NUTRITION THERAPY**

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. Corequisite: DM 211 Practicum: Nutrition Therapy.

CREDITS: 3 LECTURE: 3

DM 211**PRACTICUM: NUTRITION THERAPY**

Practical application of concepts presented in Nutrition Therapy. Includes work experience, attendance at patient care conferences and completion of a notebook. Corequisite: DM 210 Nutrition Therapy.

CREDITS: 1 OTHER: 3

DM 221**PRACTICUM: CULINARY NUTRITION**

Practical application of concepts presented in Culinary Nutrition (CCI 110). Includes work experience, project completion and completion of a notebook. Corequisite: CCI 110, Culinary Nutrition.

CREDITS: 1 OTHER: 3

EARLY CHILDHOOD EDUCATION**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.

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.

CREDITS: 4 LECTURE: 3 OTHER: 3

ED 152**FAMILY, SCHOOL AND COMMUNITY RELATIONSHIPS IN ECE**

Introduces communication skills needed to enhance partnerships between families, schools and communities in early childhood education. This course is considered a Human Relations component. 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.

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.

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.

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 CHILDHOOD EDUCATION**

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 prerequisites: WR 121, ED 140, ED 150, and 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 prerequisite: 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.

CREDITS: 3 LECTURE: 2 OTHER: 3

ED 299**SELECTED TOPICS: EARLY CHILDHOOD EDUCATION**

CREDITS: 1 TO 4



photo by David Morris

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 pre- or corequisites: 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 pre- or corequisites: 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 prerequisite: 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 prerequisites: 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--its past, present, and future. Introduces the historical, social, philosophical, political, legal and economic foundations of education in Oregon, the United States, and other countries to provide a framework from which to analyze contemporary educational issues in various schools, communities, and workplaces. Recommended prerequisite: 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 prerequisite: WR 121.

CREDITS: 3 LECTURE: 3

ED 253

LEARNING ACROSS THE LIFE SPAN

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 prerequisite: WR 121.

CREDITS: 3 LECTURE: 3

EMERGENCY MEDICAL SERVICES

EMT 151

EMERGENCY MEDICAL TECHNICIAN BASIC PART A

Follows the approved Oregon EMS Division and National Registry of EMT. Upon successful completion of the two-term (140-hour) program, the candidate will be eligible for Oregon DHS EMS testing at National Registry EMT Basic level. Mandatory prerequisites: must meet requirements of enrollment regarding entrance testing and vaccinations records. Only students who successfully pass EMT Basic Part A are allowed to enroll in EMT Basic Part B.

CREDITS: 5 LECTURE: 4 LAB: 3

EMT 152

EMERGENCY MEDICAL TECHNICIAN BASIC PART B

Follows the approved Oregon Department of Human Services-EMS and National Registry of EMTs curriculum for EMT Basic. Upon successful completion of the two-term (140 hour) program, the candidate will be eligible for Oregon EMS testing at National Registry EMT Basic level. Mandatory prerequisites: successful completion of EMT 151 (grade of 75% and 80% attendance), students must maintain current immunizations and hold current American Heart Association HCP CPR card.

CREDITS: 5 LECTURE: 4 LAB: 3

EMT 165

EMERGENCY MEDICAL TECHNICIAN-INTERMEDIATE PART A

Covers theory and practical applications including responsibilities delegated to the Oregon EMT-1 by the Department of Health for the state of Oregon. Incorporates discussion, didactic written demonstration, and practical demonstration with applications for the following: roles and responsibilities, ethics, HIPPA, patient assessment--medical and traumatic, oxygenation, ventilation, airway adjuncts, shock management, intravenous and intraosseous therapy, basic EKG monitoring and, when applicable, defibrillation and/or proper pharmacology medication interventions, and proper EMT-Intermediate protocols. Upon successful completion of the two-term course (76-hour didactic with 44 hours clinical skills program), the candidate will be eligible for the Oregon DHS EMS testing at an Oregon EMT Intermediate level at an approved Oregon site. Student must hold a current Oregon EMT-B certification and show proof of current immunizations required by the accrediting agency, the DHS office. HCP, CPR and AED certification must be on file prior to acceptance into the course. All students must meet all requirements of enrollment entrance testing and vaccinations records. Only students who successfully pass EMT Intermediate Part A are allowed to enroll in EMT Intermediate Part B.

CREDITS: 4 LECTURE: 3 LAB: 3

EMT 166

EMERGENCY MEDICAL TECHNICIAN INTERMEDIATE PART B

Covers theory and practical applications including responsibilities delegated to the Oregon EMT-1 by the Department of Health for the state of Oregon. Incorporates discussion, didactic written demonstration, and practical demonstration with applications for

the following: roles and responsibilities, ethics, HIPPA, patient assessment--medical and traumatic, oxygenation, ventilation, airway adjuncts, shock management, intravenous and intraosseous therapy, basic EKG monitoring and, when applicable, defibrillation and/or proper pharmacology medication interventions, and proper EMT-Intermediate protocols. Upon successful completion of the two-term course (76-hour didactic with 44 hours clinical skills program), the candidate will be eligible for the Oregon DHS EMS testing at an Oregon EMT Intermediate level at an approved Oregon site. Mandatory prerequisite: current immunizations required by the accrediting agency the Oregon DHS office. Oregon Basic plus HCP, CPR and AED certification must be on file prior to acceptance into the course. All students must meet all requirements of enrollment regarding entrance testing and vaccinations records. Only students who successfully pass EMT Intermediate Part A (75% grade and 80% attendance) are allowed to enroll in EMT Intermediate Part B.

CREDITS: 4 LECTURE: 3 LAB: 3

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

Covers ambulance operations, laws, maintenance and safety, emergency response driving and route planning.

CREDITS: 2 OTHER: 4

EMT 175

INTRODUCTION TO EMERGENCY SERVICES

Mandatory introductory course for all students seeking to enter either the Structural Fire or EMS degree programs. Includes a broad-based overview of the career, with emphasis on fire behavior, history of fire departments, organizational structure and terminology of contemporary structural fire and EMS agencies. Introduces various equipment and tools including hand tools, hose ladders and protective equipment used to combat fires and provide emergency medical care within the Fire Service. Also discusses other allied functions such as training, public education, prevention, investigation and inspections.

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. Offered fall and spring term.

CREDITS: 3 LECTURE: 3

**EMT 290
EMERGENCY MEDICAL TECHNICIAN PARAMEDIC
PART 1**

These courses make up the core of the paramedic course requirements. Includes 300+ hours of didactic, 300+ hours of clinical and 300+ hours of field internship listed as "co-op work experience." This rigorous program follows the DOT National Registry curriculum, and successful candidates will be eligible for testing at the National Registry EMT Paramedic level. Course will include required weekend coursework, and a high degree of dedication from the student. Note: entrance into the EMT Paramedic course at COCC is a selective process, and students entering must meet AAS EMS degree requirements as required by the Oregon Human Services EMS administrative rules. Candidates successfully completing EMT Basic certification exams will be eligible for enrollment in the EMT Paramedic portion of the program if the aforementioned selective admission and AAS degree requirements have been met. Mandatory prerequisites: proof of current immunizations, current Oregon EMT-B certification and acceptance into the second-year Paramedic course. Concurrent enrollment in EMT 290 (lab) and EMT 291 clinic.

CREDITS: 8 OTHER: 9

**EMT 291
EMERGENCY MEDICAL TECHNICIAN PARAMEDIC
PART 1 CLINICAL**

These courses make up the core of the paramedic course requirements. Includes 300+ hours of didactic, 300+ hours of clinical and 300+ hours of field internship listed as "co-op work experience." This rigorous program follows the DOT National Registry curriculum, and successful candidates will be eligible for testing at the National Registry EMT Paramedic level. This course will include required weekend coursework, and a high degree of dedication from the student. Note: Entrance into the EMT paramedic course at COCC is a selective process, and students entering must meet AAS EMS degree requirements as required by the Oregon Human Services EMS administrative rules. Candidates successfully completing EMT Basic certification exams will be eligible for enrollment in the EMT Paramedic portion of the program if the aforementioned selective admission and AAS degree requirements have been met. Concurrent enrollment in EMT 290, Paramedic Part 1 required.

CREDITS: 3 OTHER: 9

**EMT 292
EMERGENCY MEDICAL TECHNICIAN PARAMEDIC PART 2**

These courses make up the core of the paramedic course requirements. Includes 300+ hours of didactic, 300+ hours of clinical and 300+ hours of field internship listed as "co-op work experience." This rigorous program follows the DOT National Registry curriculum, and successful candidates will be eligible for testing at the National Registry EMT Paramedic level. This course will include required weekend coursework, and a high degree of dedication from the student. Note: Entrance into the EMT Paramedic course at COCC is a selective process, and students entering must meet AAS EMS degree requirements as required by the Oregon Human Services EMS administrative rules. Candidates successfully completing EMT Basic certification exams will be eligible for enrollment in the EMT Paramedic portion of the program if the aforementioned selective admission and AAS degree requirements

have been met. Mandatory prerequisites: successful completion of EMT 290, maintain proof of current immunizations. Concurrent enrollment in EMT 293, Paramedic Lab required.

CREDITS: 8 LECTURE: 6 LAB: 6

**EMT 293
EMERGENCY MEDICAL TECHNICIAN PARAMEDIC
PART 2 CLINICAL**

These courses make up the core of the paramedic course requirements. Includes 300+ hours of didactic, 300 hours of clinical and 300+ hours of field internship listed as "co-op work experience." This rigorous program follows the DOT National Registry curriculum, and successful candidates will be eligible for testing at the National Registry EMT Paramedic level. This course will include required weekend coursework, and a high degree of dedication from the student. Note: Entrance into the EMT Paramedic course at COCC is a selective process, and students entering must meet AAS EMS degree requirements as required by the Oregon Human Services EMS administrative rules. Candidates successfully completing EMT Basic certification exams will be eligible for enrollment in the EMT Paramedic portion of the program if the aforementioned selective admission and AAS degree requirements have been met. Prerequisite: EMT 291, EMT Paramedic Part 1 Clinical. Concurrent enrollment in EMT 292 required.

CREDITS: 3 OTHER: 9

**EMT 294
EMERGENCY MEDICAL TECHNICIAN PARAMEDIC PART 3**

These courses make up the core of the paramedic course requirements. Includes 300+ hours of didactic, 300+ hours of clinical and 300+ hours of field internship listed as "co-op work experience." This rigorous program follows the DOT National Registry curriculum, and successful candidates will be eligible for testing at the National Registry EMT Paramedic level. This course will include required weekend coursework, and a high degree of dedication from the student. Note: Entrance into the EMT paramedic course at COCC is a selective process, and students entering must meet AAS EMS degree requirements as required by the Oregon Human Services EMS administrative rules. Candidates successfully completing EMT Basic certification exams will be eligible for enrollment in the EMT Paramedic portion of the program if the aforementioned selective admission and AAS degree requirements have been met. Prerequisites: successful completion of EMT 292, maintain proof of current immunizations. Concurrent enrollment in EMT 295 required and EMT 294 Paramedic Lab.

CREDITS: 8 LECTURE: 6 LAB: 6

**EMT 295
EMERGENCY MEDICAL TECHNICIAN PARAMEDIC
PART 3 CLINICAL**

These courses make up the core of the paramedic course requirements. Includes 300+ hours of didactic, 300+ hours of clinical and 300+ hours of field internship listed as "co-op work experience." This rigorous program follows the DOT National Registry curriculum, and successful candidates will be eligible for testing at the National Registry EMT paramedic level. This course will include required weekend course work, and a high degree of dedication from the student. Note: Entrance into the EMT paramedic course at COCC is a selective process, and

students entering must meet AAS EMS degree requirements as required by the Oregon Human Services EMS administrative rules. Candidates successfully completing EMT basic certification exams will be eligible for enrollment in the EMT paramedic portion of the program if the aforementioned selective admission and AAS degree requirements have been met. Prerequisite: EMT 293. Concurrent enrollment in EMT 294 required.
CREDITS: 3 OTHER: 9

EMT 299
SELECTED TOPICS: EMERGENCY MEDICAL
TECHNICIAN
CREDITS: 5

ENGINEERING & ENGINEERING TECHNOLOGY

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 first-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 prerequisites: PH 212/202 and MTH 251/252.
CREDITS: 4 LECTURE: 3 LAB: 3

ENGR 202
ELECTRICAL FUNDAMENTALS II
Topics covered in this course include: AC and second-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 prerequisites: 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 prerequisites: 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 prerequisites: 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 prerequisites: 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 prerequisite: MTH 112.
CREDITS: 3 LECTURE: 2 LAB: 2

FOREIGN LANGUAGES

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. 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 FR101 material, and are encouraged to review French 101 concepts and vocabulary prior to class. Recommended prerequisites: 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 prerequisites: 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 course; class taught mostly in French. Recommended prerequisite: FR 103 or equivalent, or instructor approval. Course should be taken in sequence.

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 course; class taught mostly in French. Recommended prerequisite: FR 201 or equivalent, or instructor approval. Course should be taken in sequence.

CREDITS: 4 LECTURE: 4

FR 203**SECOND YEAR FRENCH III**

Continues the work of French 202, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Incorporates culture, regionalisms, and argot; class taught mostly in French. Recommended prerequisite: FR 202 or equivalent, or instructor approval. Course should be taken in sequence.

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 nondegree-seeking student. Counts only as an elective. Recommended prerequisite: FR 103, equivalent 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 nondegree-seeking student. Counts only as

an elective. Recommended prerequisite: FR 211 or FR 201, equivalent 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 nondegree-seeking student. Counts only as an elective. Recommended prerequisite: FR 212 or 202, equivalent 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 take the Spanish placement test which is available at www.cocc.edu/spt.

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, 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. Class begins with a review of Spanish 101. Students are encouraged to review Spanish 101 concepts and vocabulary prior to class. Recommended prerequisites: SPAN 101, one year of high school Spanish, placement test score of 176-225 (www.cocc.edu/spt), 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, direct object pronouns (lo, la), 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. Class begins with an overview of SPAN 101 and 102, however, students are encouraged to review the concepts of SPAN 101 and 102 prior to class. Recommended prerequisites: SPAN 102, two years of high school Spanish, placement test score of 226-280 (www.cocc.edu/spt), 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 Spanish 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, polite commands, the present tense of the subjunctive mood, the imperfect progressive and vocabulary which includes the following categories: family and relatives, childhood activities, geography, climate, transportation, ecology, environment, animals, automobiles, driving and trips. Recommended prerequisites: SPAN 103, three years of high school Spanish, placement test score of 281-360 (www.cocc.edu/spt), 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 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: the human body, illnesses, symptoms, health, medicines, medical professions, accidents, emergencies, materials that things are made of, clothing and jewelry, shopping and appliances. Recommended prerequisites: SPAN 201, four years of high school Spanish, placement test score of 361-430 (www.cocc.edu/spt), 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 prerequisites: SPAN 202, four years of high school Spanish, placement test score of 431-550 (www.cocc.edu/spt), 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 pre- or corequisite: 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 pre- or corequisite: 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 pre- or corequisite: 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

FOREST RESOURCE 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 newcomers 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 four-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 repair of saws are 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 taken 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 prerequisite: 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 prerequisite: 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 prerequisite: 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 prerequisite: 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 prerequisite: 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 require 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 prerequisites: BI 102 or BI 213 or FOR 241A.

CREDITS: 2 OTHER: 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 prerequisites: 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 prerequisite: 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 prerequisite: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

CREDITS: 4 LECTURE: 3 LAB: 2

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 prerequisite: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

CREDITS: 4 LECTURE: 3 LAB: 2

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 prerequisite: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

CREDITS: 4 LECTURE: 3 LAB: 2

GS 107**PHYSICAL SCIENCE: ASTRONOMY**

Introduction to astronomy including solar system, stellar systems and cosmology. Some individual observing may be required. Recommended prerequisite: one year of high school algebra or equivalent or concurrent enrollment in MTH 60.

CREDITS: 4 LECTURE: 3 LAB: 2

GS 108**PHYSICAL SCIENCE: OCEANOGRAPHY**

Survey course that includes topics from four main areas of oceanography: geology of ocean basins and coasts; waves and currents; sea water chemistry; and marine biology. Recommended prerequisite: one year of high school algebra or equivalent or concurrent enrollment in MTH 60. Required: one daylong field trip. Currently offered online only.

CREDITS: 4 LECTURE: 3 LAB: 2

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 prerequisite: 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. Corequisite: GEOG 265.

CREDITS: 5 LECTURE: 4 OTHER: 2

GEOG 267**GEODATABASE DESIGN**

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 prerequisite: 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 prerequisite: 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 prerequisite: 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 the user interface for ArcGIS software. Emphasis is placed on creating customized applications. Usually offered winter term. Recommended prerequisite: 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 prerequisites: 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 prerequisite: 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 prerequisite: 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 prerequisite: writing placement test score that places the student in WR 65 or WR 75.

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 prerequisite: writing placement test score that places the student in WR 65 or WR 75.

CREDITS: 4 LECTURE: 4

GEOG 190**ENVIRONMENTAL GEOGRAPHY**

Introductory view of the environment and how it is shaped by and shapes human activity. Includes famine, water resources, deforestation, biodiversity and land-use practices. Recommended prerequisite: 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 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 prerequisite: 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 prerequisite: 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 prerequisite: 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 prerequisites: WR 065 and LIB 127.

CREDITS: 3 LECTURE: 3

GEOG 208**PHYSICAL GEOGRAPHY: LANDFORMS AND WATER**

Introduction to the science of landforms and the processes that form them. We will study the surface of the earth and the internal and external forces that affect different types of landform development. We 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: 4

GEOG 209**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: 4

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 prerequisite: 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 prerequisite: 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 prerequisite: 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 prerequisite: 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.

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 prerequisite: WR 121.

CREDITS: 3 LECTURE: 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, acid rain, ozone depletion and climate. Recommended prerequisite: 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 162****REGIONAL GEOLOGY**

Consists of field studies of selected areas with emphasis on relationship between rock type, geologic setting and topography. Includes lectures, laboratory and weekend field trips. Topic areas include Cascade Volcanoes (G 162CV), Geology of the Pacific Northwest (G 162NW) and Geology of Oregon (G 162OR).

CREDITS: 3 LECTURE: 1 LAB: 6

G 162CV**CASCADE VOLCANOES**

CREDITS: 3 LECTURE: 1 LAB: 6

G 162NW**GEOLOGY OF THE PACIFIC NORTHWEST**

CREDITS: 3 LECTURE: 1 LAB: 6

G 162OR**GEOLOGY OF OREGON**

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 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 prerequisite: G 201.

CREDITS: 3 LECTURE: 2 LAB: 3

**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 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 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, 180s, 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 the 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**

Introduces a variety of exercises that will increase cardiovascular, endurance, strength and flexibility in a team atmosphere. Focus will be on improving strength and aerobic fitness in one workout, 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 obliques, the back, quadriceps, hamstrings, glutes and triceps.

CREDITS: 1 OTHER: 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**

Three types of cycling modes are offered at varying times throughout the year: road cycling, indoor studio cycling or mountain biking on local trail systems.

CREDITS: 1 LAB: 3

**HHP 185DA
AEROBIC DANCE I-TURBO AND KICKBOXING**

Kickboxing class incorporating traditional aerobic moves along with some resistance and abdominal training. Turbokick 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 185GM
GOLF ADVANCED**

Designed for skilled golfers looking to improve on the fundamentals of golf. This course will also place emphasis on the mental game of golf, rules and etiquette of golf, as well as increasing skills on irons, woods, sand play, putting and chipping/pitching.

CREDITS: 1 LAB: 3

**HHP 185GN
GYMNASTICS**

Along with an opportunity for improving fitness, this class will provide an insight into the history of gymnastics, its benefit to other sports, specific body positions used, skill progression, various conditioning activities appropriate for age and abilities, and the coaching and judging details of gymnastics.

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 prerequisite: HHP 185KA.

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 OTHER: 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 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 prerequisite: 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 swimming 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 OTHER: 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 prerequisite: HHP 185TA.

CREDITS: 1 LAB: 3

HHP 185TF**TOTAL FITNESS**

High intensity and very demanding class designed for those with a high level of mobility. 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 prerequisite: HHP 185TI, Beginning Tai Chi/Qigong. 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 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 prerequisite 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 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 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- A dynamic flow of yoga linking breath and movement for a strengthening cardio practice set to rock and popular music. Emphasis is on Astanga Yoga in the tradition of Sri Jayakumar Swamysree from the University of Mysore, India. A combination of Vinyasa, Vini and Astanga styles of yoga 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 toward relaxing the mind and body, adding flexibility and allowing quiet moments during the yoga practice.

CREDITS: 1 OTHER: 3

**HHP 188
SPECIAL STUDIES: HHP
CREDITS: 1 TO 6**

**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 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.
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 pre- or corequisites: WR 121 and 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 pre- or corequisites: WR 122 or WR 227 and BI 121.
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.
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.
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.
CREDITS: 3 LECTURE: 3

HEALTH AND HUMAN PERFORMANCE: HEALTH CLASSES

**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 HEALTH CARE
PROVIDER**
Basic Life Support Health Care 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. Both one- and two-

person CPR will be taught as well as compression-only CPR. 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 prerequisite: MTH 20.

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 prerequisite: WR 121.

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 prerequisite: WR 121.

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

Examines the interrelationships between biological, social, psychological, intellectual, spiritual, emotional, cultural and environmental factors. Examines the influences that these

factors have on individual behaviors related to promoting health, preventing illness and coping with illness. Also reviews education, research and counseling activities that promote health, prevent or treat illness, identify health risk factors and analyze the health care system. Recommended prerequisite: WR 121.

CREDITS: 3 LECTURE: 3

HHP 252 FIRST AID & HCP PROVIDER CPR

The course will be devoted entirely to the instruction of First Aid and 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 (greater than 80 percent on the three written exams and greater than 80 percent on the practical exam), students will receive a National Safety Council Standard First Aid card valid for three years and an American Heart Association (AHA) Health Care Provider (HCP) Basic Life Support (BLS) (Adult & Pediatric CPR) card valid for two years.

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 pre- or corequisites: WR 75, WR 60 and/or WR 65 and MTH 20.

CREDITS: 3 LECTURE: 3

HHP 258 HOLISTIC WELLNESS

This class addresses the impact that lifestyle plays on health and illness, models of health behavior change, the biomedical model flaws, and alternative health care options in managing and preventing chronic disease. Recommended prerequisite: WR 121.

CREDITS: 3 LECTURE: 3

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.

CREDITS: 3 LECTURE: 3

HHP 280 CO-OP WORK EXPERIENCE - HEALTH AND HUMAN PERFORMANCE

Provides practicums by the department in conjunction with the community in recreation, youth sports, intramurals, strength and conditioning, fitness programming, exercise science, and health promotion. Students must be approved for enrollment by an HHP advisor before registering for this course.

CREDITS: 1 TO 3

HHP 291 LIFEGUARD TRAINING

Provides awareness of common hazards associated with various types of aquatic facilities and develops knowledge and skills to eliminate or minimize such hazards. Course develops skills necessary to recognize a person in a distress or drowning situation and helps students understand the lifeguard/employer and lifeguard/patron relationships. Provides explanations, demonstrations, practice and a review of the rescue skills essential for lifeguards.

CREDITS: 2 LECTURE: 1 LAB: 2

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 pre- or corequisites: WR 121, MTH 20.

CREDITS: 3 LECTURE: 3

HHP 299 SELECTED TOPICS: HEALTH AND HUMAN PERFORMANCE

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

This class is 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 specialties in the field. The course includes the history of programs, an introduction to theories, current topics, career options and preparation needed for those careers. This 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.

CREDITS: 3 LECTURE: 3

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/group travel skills. Students must have completed an Avalanche Level I course within the past five years. Recommended prerequisites:

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/reviewing transceiver search techniques (single and multiple burial), snowpack assessment (through test pit, test pit plus, and full pit), and safe travel practices/group travel skills. Students must have completed an Avalanche Level I or Level I Refresher course within the past five years. Recommended prerequisites: 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 prerequisite: 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. How to prepare professional resumes, cover letters, experience resumes, and professional portfolios will be addressed. Professional development opportunities such as conferences, certifications, trainings, etc. will be discussed, as will current research and trends in employment in outdoor leadership-related fields.

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 prerequisites: OL 111, OL 253 and OL 255. Recommended pre- or corequisite: WR 122. 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**

This course is designed to educate the student on how to travel safely for extended periods in the back country. The essentials of life (water, food and shelter/clothing) and how they can be provided in an outdoors setting will be presented. Related topics such as navigation, back-country medicine and wilderness use/wilderness concepts will also be discussed. Class time will be composed of lecture, discussion and lab (demonstration,

practical application and practice). In addition, students will conduct one solo overnight and one group weekend outing.

CREDITS: 3 LECTURE: 2 LAB: 3

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 foundation course and a recommended prerequisite to OL 294CC, as well as OSU-COCC courses. Recommended prerequisites: OL 111, OL 253, and OL 255. Recommended pre- or corequisite: WR 122. Instructor permission required.

CREDITS: 3 LECTURE: 2 LAB: 3

OL 273**OUTDOOR RECREATION LEADERSHIP**

This course provides both theoretical and practical knowledge of groups in outdoor setting. Topics are presented in lecture, discussed in various leadership scenarios, and then applied in group outings that the students plan and lead. Special emphasis is placed on group safety issues, risk assessment and risk management. Recommended prerequisites: OL 111, OL 253 and OL 255. Recommended pre- or corequisite: WR 122. Instructor permission required.

CREDITS: 3 LECTURE: 2 LAB: 3

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. Recommended pre- or corequisite: OL 271. Instructor permission required.

CREDITS: 3 LECTURE: 1.5 LAB: 4.5

OL 294RC**TEACHING ROCK CLIMBING**

This course is designed as an introduction to guiding in 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 situations (this course will not teach beginning-level material except in how to teach such material to the client). 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 guiding



clients in a variety of rock climbing situations. Recommended prerequisite: HHP 185WW-Beginning Rock Climbing. Instructor permission required.

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.

A background in camping/outdoor living skills is strongly recommended. Recommended pre- or corequisite: HHP185WW-Rafting I and OL 255. Instructor permission required.

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.

CREDITS: 3 LECTURE: 3

AH 112

MEDICAL TERMINOLOGY II

Covers terminology pertaining to pharmacology, nervous, 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. Recommended prerequisite: AH 111.

CREDITS: 3 LECTURE: 3

HIT 103

HEALTH INFORMATION SYSTEMS AND PROCEDURES

Provides an overview of health care delivery system and health information field. Includes origin and uses of health records, admitting functions, filing and numbering systems, interdepartmental communication, computation of basic census data, micrograph concepts, and electronic data interchange. Lab will include application of health care procedures via the AHIMA Web-based Virtual Lab. Students entering HIT 103 are required to have a criminal history check. Students with a felony conviction on their records may be prevented from entering the program. Offered fall term.

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 will include application of health care procedures via the AHIMA Web-based Virtual Lab. Enrollment limited to HIT majors. Prerequisite: HIT 103 or instructor approval. Offered winter term.

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. 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 or instructor approval. Offered spring term.

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 and perfection. Students will spend 12 hours per week in lab. This time affords the opportunity to obtain entry-level transcription skills. Required for Medical Transcription certificate. Prerequisite: completion of HIT program first-year curriculum or instructor approval. 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 winter and spring term.

CREDITS: 2 LECTURE: 2

HIT 182**INTRODUCTION TO MEDICAL CODING**

Explores the history, arrangement and application of ICD-9-CM and CPT coding systems. ICD-9-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 payor requirements will be explored and applied including reporting of ICD-9-CM/CPT codes, inpatient and ambulatory reporting/billing. Recommended pre- or corequisites: AH 111, AH 112, BI 231, BI 232, BI 233, AH 113, HIT 103, HIT 104, or instructor approval. Offered spring term.

CREDITS: 4 LECTURE: 4

HIT 183**HEALTH INFORMATION SEMINAR**

Provides overview of Health Information Technology program. Discusses the health information profession as a career; job application; assertiveness; vital statistics; human relations and other related health care industry topics. Tour of a health care facility. Offered fall term.

CREDITS: 1 LAB: 2

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: completion of first-year HIT curriculum 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: 4

HIT 201**LEGAL ASPECTS MEDICAL RECORDS**

Emphasizes the legal system, hospital and staff liability, privacy, confidentiality and legal requirements affecting the control and release of health information and medical records. Offered fall term. Prerequisite: Completion of first-year HIT program curriculum; enrollment limited to second-year HIT majors or instructor approval. Offered winter term.

CREDITS: 4 LECTURE: 4

HIT 203**HEALTH CARE 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 or instructor approval. 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 or instructor approval. 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 or instructor approval. 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 or instructor approval. 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 facilitywide 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 or instructor approval. 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 operations in the ICD-9-CM system. Prerequisites: Completion of first-year HIT program curriculum; enrollment limited to second-year HIT majors or instructor approval. 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 or instructor approval. Strongly recommend ICD-9-CM coding skills. Offered fall term.

CREDITS: 4 LECTURE: 4

HIT 285**ADVANCED CODING CLASSIFICATIONS**

This course is designed to provide advanced-level, hands-on application of ICD-10-CM/PCS (and ICD-9-CM until the complete transition). Utilizing patient charts and case studies, students will apply coding guidelines to accurately code diseases and injuries of multiple body systems. Students will explore the history, arrangement, and application of ICD-10-CM/PCS. ICD-10-CM's conventions, updates, influencing entities and how these expectations are communicated to health care providers and coding clearinghouses, in addition to ethical and quality coding, coder responsibilities, etc. will also be covered. Instructor approval required. Offered spring term.

CREDITS: 3 LECTURE: 3

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 completed first year and second year of HIT curriculum 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.

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 or instructor approval. 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. May be repeated once.

CREDITS: 1 LECTURE: 1

HIT 299**SELECTED TOPICS: HEALTH INFORMATION TECHNOLOGY**

CREDITS: 4

HISTORY**HST 101****HISTORY OF WESTERN CIVILIZATION**

Surveys political, social and cultural changes from prehistoric times to the early Medieval period. Emphasizes the great civilizations of the ancient world, contributions of the Greeks and Romans and the establishment of early European civilization. Need not be taken in sequence. Recommended pre- or corequisite: WR 121.

CREDITS: 4 LECTURE: 4

HST 102**HISTORY OF WESTERN CIVILIZATION**

Surveys development of European civilization from the high Medieval period through the 1700s. Focuses on 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 pre- or corequisite: WR 121.

CREDITS: 4 LECTURE: 4

HST 103**HISTORY OF WESTERN CIVILIZATION**

Explores western European civilization from French Revolution to present. Focuses on the establishment of nations, the Industrial Revolution, major wars of the 19th and 20th centuries, and social and cultural trends accompanying these events. Need not be taken in sequence. Recommended pre- or corequisite: WR 121.

CREDITS: 4 LECTURE: 4

HST 104**WORLD HISTORY**

World civilizations and their historical interactions. Origins of civilizations in the Middle East, the Mediterranean area, Africa, China, Indian subcontinent and the Americas. Chronologically, covers the period from prehistory to the end of the classical era. Need not be taken in sequence. Recommended pre- or corequisite: WR 121.

CREDITS: 4 LECTURE: 4

HST 105**WORLD HISTORY**

World civilizations and their historical interactions. Traces the post-classical through early modern period in Europe and China, the spread of Islamic empires in Africa, India, Middle East and Western Europe's first worldwide expansion. Need not be taken in sequence. Recommended pre- or corequisite: WR 121.

CREDITS: 4 LECTURE: 4

HST 106**WORLD HISTORY**

World civilizations and their historical interactions. Impact of industrialization and imperialism in both a Western context and a non-Western context; the modern period of world history with a focus on WWI, WWII and postwar reordering of world civilizations. Need not be taken in sequence. Recommended pre- or corequisite: 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**HISTORY OF THE UNITED STATES**

Surveys the development of America through the end of the Civil War. Examines the interaction of Native American Nations with the culturally diverse European settlers. This time period includes the colonial period, Revolutionary War, birth of a new nation, expansion from ocean to ocean, and unexpected disintegration into a Civil War pitting brother against brother. Recommended pre- or corequisite: WR 121.

CREDITS: 4 LECTURE: 4

HST 202**HISTORY OF THE UNITED STATES**

Surveys 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 20th century. Recommended pre- or corequisite: 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 pre- or corequisite: 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 pre- or corequisite: 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 pre- or corequisite: 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 pre- or corequisite: 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 pre- or corequisites: 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 pre- or corequisite: 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 pre- or corequisite: 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 pre- or corequisite: WR 121.

CREDITS: 4 LECTURE: 4

HST 260**HISTORY OF THE MIDDLE EAST**

The Middle East is considered to be home of the three great monotheisms of Western theology and much of today's philosophy. This course will cover the 4,000 years of history from origins to the modern era, providing students with a foundation to evaluate current events in the context of Middle Eastern influences.

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 pre- or corequisites: 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 pre- or corequisite: 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 prerequisite: 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 prerequisite: 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.

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.

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 prerequisite: Reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.

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.

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 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. May be taught with a MIC and/or WIC designation. Recommended prerequisite: 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. May be taught with a MIC and/or WIC designation. Recommended prerequisite: 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 prerequisite: 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. May be taught with a MIC and/or WIC designation. Recommended prerequisite: 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. May be taught with a MIC and/or WIC designation. Recommended prerequisite: 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. May be taught with a MIC and/or WIC designation. Recommended prerequisite: 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. May be taught with a MIC and/or WIC designation. Recommended prerequisite: WR 121.

CREDITS: 4 LECTURE: 4

HUM 261**POPULAR CULTURE: SCIENCE FICTION**

Focuses on the significance of science, technology and the idea of the future as revealed in popular culture through fiction, film, music, comics and advertising. May be taught with a WIC designation. Recommended prerequisite: 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 fiction, film, song, art and advertising. May be taught with a WIC designation. Recommended prerequisite: 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 fiction, film, television, comics and journalism. May be taught with a WIC designation. Recommended prerequisite: 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 fiction, film, advertising and journalism. May be taught with a WIC designation. Recommended prerequisite: 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. May be taught with a WIC designation. Recommended prerequisite: 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 travel memoirs, journalism, advertising, educational videos and feature films that critique touristic assumptions. May be taught with a WIC designation. Recommended prerequisite: 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, yuppies, communes, and ultimately the breakdown of the counterculture movement and its rejection in the punk movement of the late 1970s. Recommended prerequisite: WR 121.

CREDITS: 4 LECTURE: 4

HUM 268**DIGITAL GAMES CULTURE**

Like the currently listed sequence of popular culture courses, Digital Games Culture will apply the same level of analytical inquiry into the subject matter that has led to the series creation and transfer viability. Provides students interested in the subject area the opportunity to engage in the field of video games studies and its primary scholarship prior to moving on to upper-division coursework. Recommended prerequisite: 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 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. May be taught with a MIC and/or WIC designation. Recommended prerequisite: 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 pre- or corequisite: J 216.

CREDITS: 1 LAB: 3

J 216
REPORTING 1

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 are explored. Open to all students. Recommended prerequisite: WR 121 or instructor approval.

CREDITS: 3 LECTURE: 3

J 217
REPORTING 2

A continuation of Reporting 1 with emphasis placed on comprehensive news story writing, covering speeches and meetings and interviewing. Recommended prerequisite: 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. This course is for students at the WR 60/65 level who want an introduction to information resources and research skills.

CREDITS: 1 LECTURE: 1

LIB 127
INFORMATION RESEARCH SKILLS

Introduces the competencies and skills students need to locate, retrieve, evaluate, analyze and use information at the college level.

CREDITS: 2 LECTURE: 2

LIB 199
SPECIAL TOPICS: LIBRARY

CREDITS: 1 TO 3

LIB 227
MAPPING INFORMATION 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



photo by David Morris

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. May be taught with WIC designation. Recommended prerequisite: Reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.

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 prerequisite: Reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.

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 prerequisite: Reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.

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 prerequisite: Reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.

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 prerequisite: Reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.

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 prerequisite: Reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.

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.

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 prerequisite: 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 prerequisite: 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 folk epic, chivalric romance, morality play and folk ballad, lyric poetry, drama, the speculative essay and the novel are studied. Explores relations between texts and their cultural and historic contexts. Need not be taken in sequence. Recommended prerequisite: 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. May be taught with a WIC designation. Recommended prerequisite: WR 121.

CREDITS: 4 LECTURE: 4

**ENG 212W
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 prerequisite: WR 121.

CREDITS: 4 LECTURE: 4

**ENG 221
INTRODUCTION TO CHILDREN'S LITERATURE**

Provides an overview of children's literature 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 prerequisite: Reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.

CREDITS: 4 LECTURE: 4

**ENG 232C
TOPICS IN AMERICAN LITERATURE: CONTEMPORARY FICTION**

In-depth study of several works of contemporary (late 20th/early 21st century) American fiction. Recommended prerequisite: WR 121.

CREDITS: 4 LECTURE: 4

**ENG 232M
TOPICS IN AMERICAN LITERATURE: LITERATURE & MEDICINE**

This course examines fiction, poetry, drama and creative non-fiction by and about members of the health professions. Our goal is to examine how health and healing are presented in literature from the perspectives of nurses, physicians and other health workers. Recommended prerequisite: 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 heroines, 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 prerequisite: Reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.

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. May be taught with WIC designation. Recommended prerequisite: 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. May be taught with a WIC designation.

Recommended prerequisite: 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, celebrities, rituals and celebrations. Recommended prerequisite: Reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.

CREDITS: 4 LECTURE: 4

**ENG 260W
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 prerequisite: 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

MET 160

MATERIALS ENGINEERING

A continuation of quality assurance topics focused on materials testing. Includes shear, hardness, tensile and compression testing and other material analyzing techniques. Prerequisite: instructor approval.

CREDITS: 2 LAB: 6

MFG 100

MANUFACTURING 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 3 LAB: 9

MFG 105

WELDING TECHNOLOGY II

Intermediary course focused on welding carbon steel plate in specific out-of-position setups. Includes continuing practice in GMAW and SMAW welding and interpretation of inspection standards related to weld quality. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 3 LAB: 9

MFG 107

WELDING TECHNOLOGY III

Final course offered in the one-year certificate 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 prerequisites: MFG 100, Manufacturing Orientation instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 3 LAB: 9

MFG 112

MANUFACTURING PROCESSES II

Introduction to computer numerical control programming and operations including feed and speed calculations, drilling canned cycles, and development of necessary programming documentation. Continued milling machine and lathe practice. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 3 LAB: 9

MFG 114

MANUFACTURING PROCESSES III

Final course in the one-year certificate manufacturing processes series. Continued student proficiency development in the operation of basic machine tools and computer numerical control operations. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites:

MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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, geometric dimensioning and tolerancing (GD&T), and pneumatic gauging topics. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisite: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 202**METALS PREPARATION**

Bandsaw, cold saw auto-top 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 203**LAYOUT**

Semi-precision and precision layout practices. Includes height gauge operations, surface plate setups, bolt circle layout, and the use of hand and power tools to produce accurate workpiece profiles. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 205**DRILL PRESS**

Drill press operations training. Includes safety, machine nomenclature, measuring and sharpening drills, machine setup, cutting tool selection, magnetic-based drill, electric drill motor, and radial arm drill operations. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 210**VERTICAL MILLING**

Vertical milling machine operations. Includes safety, work holding, table setups, power feeds, digital read-out operation, cutter selections, climb and conventional cutting and spindle speed changes. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 211**CNC MILL OPERATOR**

Computer-numerical-control, turning-center operator training. Includes safety, machine maintenance, tool offsets, controller editing and operations, cutting tool setups, carbide insert and holders, and part running. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 213**CNC TURNING OPERATOR**

Computer-numerical-control, turning-center operator training. Includes safety, machine maintenance, systems coordination, tool length offsets, controller editing and operations, overrides, tool setups and loading, carbide insert and holder selections, tool vectors, and part running. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 214**LATHE OPERATOR I**

Introductory manual lathe operations training. Includes safety, machine maintenance, quick-change tooling, chuck setups, compound taper cutting, general turning and drilling operations. Prerequisites: instructor approval. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 1/2-D and 3-D milling operations using wire frame and solids model geometry. A student considering this course should be familiar with CNC milling machine operations and G & M programming. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 238**OPTICAL COMPARATOR**

Optical comparator operations. Includes operation of H-14 metrology controller, stage setup and fixturing, inspection of rectangular and round workpieces. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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. Prerequisites: instructor approval.

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 prerequisite: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation, 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 non-destructive inspection techniques that are utilized by welders and inspectors to interpret and monitor AWS quality standards. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 264**AUTOMATED WELDING AND CUTTING**

Cutting and welding steel shapes using numerically controlled processes. Includes cutting torch settings, setup, maintenance practices and plasma cutting exercises. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 267**OXYGEN-FUEL AND PLASMA CUTTING**

Gas torch, air carbon arc, and plasma gas cutting. Includes torch setup and maintenance, flame setting, diagnostics, track torch operations, circle cutting and carbon arc scarfing practice. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 271**SMAW I**

Shielded metal arc welding. Includes machine setup, fillet and groove welds on plain carbon steel in all positions. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 272**GMAW I**

Gas metal arc welding. Includes machine setup for short-circuiting and spray transfer on plain carbon steel. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 273**SMAW II**

Shielded metal arc welding. Includes machine setup, groove welds on plain carbon steel plate, stainless steel plate, and pipe. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 274**GMAW II**

Gas metal arc welding. Includes machine setup for groove welds on plain carbon steel pipe and plate and aluminum plate. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 275**SMAW III**

Shielded metal arc welding. Includes machine setup, groove welds on plain carbon steel to a limited plate thickness of 3/4" and pipe in all positions. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 276**GMAW III**

Gas metal arc welding. Includes machine setup, groove welds on plain carbon steel and stainless steel in all positions. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 280**CO-OP WORK EXPERIENCE MANUFACTURING**

Credit granted for applicable on-the-job work experience. Minimum of 33 hours of work for each credit granted. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 282**FCAW I**

Flux core arc welding. Includes machine setup for fillet and groove welds on plain carbon steel in all positions. Limited thickness to 3/4" plate. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 283**GTAW II**

Gas tungsten arc welding. Includes machine setup for fillet and groove welds on plain carbon steel, aluminum, stainless steel tubing and plate in all positions. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 284**FCAW II**

Flux core arc welding. Includes machine setup for fillet and groove welds on pipe and plain carbon steel plate to a limited plate thickness of 3/4". Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 285**GTAW III**

Gas tungsten arc welding. Includes machine setup, groove welds on plain carbon, aluminum and stainless steel pipe in all positions. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 2 LAB: 6

MFG 286**FCAW III**

Flux core arc welding. Includes machine setup and groove welds on plain carbon steel plate and pipe in limited positions to a plate thickness of less than 3/4". Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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 prerequisites: MFG 100, Manufacturing Orientation and instructor's 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, setup, testing, grinding samples and evaluation. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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, setup, testing and evaluation activities. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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, setup, testing and evaluation activities. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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, setup, testing and evaluation activities. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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, setup, testing, grinding samples and evaluation. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's 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, setup, testing and evaluation activities. Recommended prerequisites:

MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 1 LAB: 3

MFG 296**CERTIFICATION TEST PREPARATION SME**

Testing materials preparation for Society of Manufacturing Engineers Certification Testing. Includes setup, testing and evaluation activities. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 1 LAB: 3

MFG 297**CERTIFICATION TEST PREPARATION NAIT**

Testing materials preparation for NAIT Certification Testing. Includes setup, testing and evaluation activities. Recommended prerequisites: MFG 100, Manufacturing Orientation and instructor's approval.

CREDITS: 1 LAB: 3

MASSAGE THERAPY**LMT 095****INTRODUCTION TO A MASSAGE CAREER**

This introductory course will allow a student to explore the education and academic requirements of the LMT program and the requirements for massage therapy licensure in Oregon.

CREDITS: 1 LECTURE: .5 LAB: 1.5

LMT 113**KINESIOLOGY I**

An 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. This is the first part of a four-part series of Kinesiology for massage therapists. Prerequisite: entrance into the Massage Therapy program.

Corequisites: LMT 130, LMT 155, LMT 170

CREDITS: 3 LECTURE: 2 LAB: 3

LMT 118**KINESIOLOGY II**

The study of the muscles of the head, neck and upper body that will include origin, insertions, actions, nerves, joints and the boney landmarks. Palpation skills will be emphasized. This is the second of a four-part series of Kinesiology for massage therapists. Recommended prerequisite: completion of LMT 113. Corequisites: LMT 130, LMT 155, LMT 170 and BI 121 or equivalent.

CREDITS: 4 LECTURE: 3 LAB: 3

LMT 124**KINESIOLOGY III**

The study of the muscles of the trunk and thigh that will include origin, insertions, actions, nerves and the boney landmarks. Palpation skills will be emphasized. This is the third of a four-part series of Kinesiology for massage therapists. Recommended prerequisite: completion of LMT 118.

CREDITS: 3 LECTURE: 2 LAB: 3

LMT 128**KINESIOLOGY IV**

The study of the muscles of the lower body that will include origin, insertions, actions, nerves, joints and boney landmarks. Palpation skills will be emphasized. This is the last of a four-part series of Kinesiology for massage therapists. Recommended prerequisite: completion of LMT 124.

CREDITS: 3 LECTURE: 2 LAB: 3

LMT 130**MASSAGE FUNDAMENTALS**

Will introduce the student to the fundamental skills needed to lay the foundation of an entry-level massage therapist. These skills will include: the history of massage, positive body mechanics, basic medical terminology, universal sanitation precautions, draping, communication and the effects of Swedish Massage strokes. Corequisites: LMT 113, LMT 155, and LMT 170.

CREDITS: 2 LECTURE: 2

LMT 140**PATHOLOGY**

This is the study of basic indications and effects of massage therapy on the human body systems. Contraindications to massage therapy will be discussed. The basic mechanisms of the disease process and medical terminology will be reviewed. Recommended prerequisites: BI 121, 122 or BI 231, 232, 233.

CREDITS: 4 LECTURE: 4

LMT 145**MASSAGE I**

This course will build the fundamental Swedish massage techniques and SOAP charting skills as required for an entry-level massage therapist. The theory of massage, physiological effects, and practical application will be incorporated into the development of a massage therapy routine. Recommended prerequisite: LMT 113.

CREDITS: 4 LECTURE: 2.5 LAB: 4.5

LMT 150**MASSAGE II**

Students progress to level two by learning how to do basic assessment of a client and how to design a treatment plan. SOAP charting is learned and practiced. Students also learn the theory and practice of various modalities such as sports massage, deep tissue, trigger point therapy, muscle energy technique and PNF stretching. Recommended prerequisites: BI 121, BI 122, LMT 145, LMT 113 and LMT 118.

CREDITS: 4 LECTURE: 2.5 LAB: 4.5

LMT 155**EASTERN THEORY & PRACTICE**

This course has been designed to provide a basic introduction to Eastern philosophy that includes healing modalities and techniques. This course is philosophically neutral. Recommended prerequisite: BI 121 or BI 221. Corequisites: LMT 113, LMT 130 and LMT 170.

CREDITS: 2 OTHER: 4

LMT 160**HYDROTHERAPY**

Introduces the principles and techniques of the effects of water in its three forms: solid, liquid and vapor while working within the massage therapy profession. Recommended prerequisites: BI 121 and BI 122 or equivalent.

CREDITS: 1 OTHER: 2

LMT 170**PROFESSIONAL ETHICS AND RULES**

Introduces and examines the professional boundaries, ethics, rules and laws that govern the practice of massage therapy. Oregon Administrative Rules and Statutes that apply to licensed massage therapists will be discussed. Prerequisite: entrance into the Massage Therapy program. Corequisites: LMT 113, LMT 130, LMT 155.

CREDITS: 2 LECTURE: 2

LMT 175**CLINIC I**

Students will practice basic relaxation massage on the general public while demonstrating professionalism, client communication, client consent and client safety during this supervised clinic. Recommended prerequisite: LMT 145.

CREDITS: 2 LECTURE: 1 LAB: 3

LMT 180**CLINIC II**

Students will practice treatment and relaxation massage on the general public. SOAP charting, treatment plans and assessments will be practiced. Students will demonstrate professionalism, client communication, client consent and client safety during this supervised clinic. Recommended 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 210**ADVANCED CLINIC**

A case study and discussion course for advanced treatment students. A public clinic may be available for the students to practice their treatment skills. Recommended prerequisite: one-year certificate, LMT or other related health professional.

CREDITS: 2 LECTURE: 1 OTHER: 3

LMT 240**NEUROMUSCULAR TREATMENTS**

Advanced myofascial coursework that focuses on the treatment of specific injuries and conditions that fall within the scope of a licensed massage therapist. Treatment protocols will be practiced. This course will be offered in two sections: trunk and extremities. Recommended prerequisite: one-year massage certificate, current LMT or other related health professional.

CREDITS: 5 LECTURE: 4 LAB: 3

LMT 245**EFFECTIVE OFFICE DECISIONS**

This course will address common issues an LMT may encounter in a massage therapy business including insurance billing, credentialing, retail selling and niche marketing. An emphasis is placed on developing strategies that involve office management decisions relating to a massage therapy practice.

CREDITS: 2 LECTURE: 2

LMT 250**CRANIAL SACRAL LEVEL I**

This course will offer a craniosacral approach to massage therapy emphasizing subtle palpation skills and relevant anatomy. The history and theory of craniosacral will be explored. Recommended prerequisite: one-year certificate, LMT or other related health 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.

CREDITS: 3 LAB: 6

LMT 260**SPA TREATMENTS**

This course will focus on treatments commonly used in spa facilities. A variety of spa treatments will be practiced in the classroom. Spa visits may be incorporated into this course. Contraindications, hygiene, sanitation and spa etiquette will be included. Recommended prerequisite: one-year certificate, LMT or other related health professional.

CREDITS: 5 LECTURE: 4 LAB: 3

LMT 265**SPORTS MASSAGE**

Introduces the principles and techniques of massage that relates to sports and exercise. Deep-tissue and muscle-energy techniques specific to athletes are explored. Relevant anatomy, physiology and assessment are included that may assist in the rehabilitation of sports injuries.

CREDITS: 3 LAB: 6

LMT 270**CLINICAL ASSESSMENTS**

This is a nontreatment course that will evaluate and assess ROM, posture and gait when determining massage therapy treatment options. Students taking Advanced Treatment courses are advised to enroll. Recommended prerequisite: one-year certificate, LMT or other related health professional.

CREDITS: 4 LECTURE: 3 LAB: 3

LMT 288**SPECIAL STUDIES: LICENSED MASSAGE THERAPY**

Specific coursework related to massage therapy. Recommended prerequisite: one-year certificate, LMT or other related health profession.

CREDITS: 4

LMT 295**INTEGRATED THERAPIES**

This course will enhance a student's skills and techniques when utilizing appropriate modalities best suited for a holistic massage session. The history, cultural aspects and benefits of these modalities will be examined. Recommended prerequisite: one-year certificate, LMT or other related health professional.

CREDITS: 3 LECTURE: 2 LAB: 3

LMT 299**SELECTED TOPICS: LICENSED MASSAGE THERAPY**

Selected topics related to massage therapy. Recommended prerequisite: one-year certificate, LMT or other related health profession.

CREDITS: 7

LMT 999**FIRST TERM LICENSED MASSAGE THERAPY 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 prerequisite: 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 Addiction 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 prerequisite to MTH 60. Recommended prerequisites: 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 prerequisite: 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 prerequisite: 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, CADD and GIS, among others. Includes introduction to algebra and geometry with a focus on units of measurement, formula manipulation, solving linear and literal equations, lines in the Cartesian plane, exponents, three-dimensional geometry, simultaneous equations and preparation for trigonometry. Real-world applications and analyzing data are emphasized. Recommended prerequisite: 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, CADD and GIS, among others. Includes a review of geometry and a thorough discussion of trigonometry with an introduction to vectors and their applications. The second half of the term includes an introduction to functions and their applications including graphing equations, developing equations from graphs, analysis of linear and non-linear functions and functions as models. Students will work in teams to develop and analyze a complex, real-world application and submit a technical report detailing the results. A graphing calculator is required. TI-83 or TI-84 recommended. Recommended prerequisite: MTH 85 or equivalent.

CREDITS: 4 LECTURE: 4

MTH 095**INTERMEDIATE ALGEBRA**

Provides the algebra foundation necessary to study college-level mathematics. Includes systems of equations and inequalities, functions, rational expressions and equations, roots, radicals, complex numbers, quadratic equations and inequalities. Recommended prerequisite: MTH 65 or equivalent. Graphing calculator required. TI-83 or TI-84 recommended.

CREDITS: 4 LECTURE: 4 OTHER: 2

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 basic concepts of contemporary mathematics to students who are not planning further study of mathematics. 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. Major goal of the course is to capture the interest of the liberal arts major while stressing the importance of a working knowledge of math in today's society. 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 prerequisite: 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. Concurrent enrollment in MTH 111 required.

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 prerequisite: 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. Recommended prerequisite: 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 211W
FUNDAMENTALS OF ELEMENTARY MATHEMATICS I -
WIC**

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 prerequisite: MTH 95 or equivalent.

CREDITS: 4 LECTURE: 4

**MTH 212W
FUNDAMENTALS OF ELEMENTARY MATHEMATICS II -
WIC**

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 prerequisite: MTH 211 or equivalent.

CREDITS: 4 LECTURE: 4

**MTH 213W
FUNDAMENTALS OF ELEMENTARY MATHEMATICS III -
WIC**

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 prerequisite: MTH 211.

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 prerequisite: MTH 111. A graphing calculator is required. TI-83 or TI-84 recommended.

CREDITS: 4 LECTURE: 4

**MTH 243
MATHEMATICS FOR MANAGEMENT/LIFE/SOCIAL
SCIENCE**

Introduces linear programming, probability and descriptive statistics for students majoring in business and social sciences. Includes graphical and algebraic techniques of solving linear programming problems, descriptive statistics, graphs of data, basic probability theory, random variables, and binomial and normal probability distributions. Recommended prerequisite: MTH 111 or instructor approval. A graphing calculator is required. TI-83 or TI-84 recommended.

CREDITS: 4 LECTURE: 4

**MTH 244
INTRODUCTION TO METHODS OF PROBABILITY AND
STATISTICS**

Introduces methods of inferential statistical analysis. Includes sampling techniques, introduction to binomial and normal distributions, sampling distributions, the central limit theorem, confidence intervals, hypothesis testing for one and two-sample data, and tests of association: linear regression and categorical analysis. Real-world data sets and group activities are emphasized. Students will be introduced to and use a standard statistical software package. A graphing calculator is required. TI-83 or TI-84 recommended. Basic computer skills (especially spreadsheet knowledge) are desirable. Prerequisites: "C" or better in MTH 243 or MTH 243 equivalency met or instructor approval.

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 prerequisites: 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, population dynamics and stochastic models. 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 prerequisite: 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 prerequisite: MTH 252.

CREDITS: 4 LECTURE: 3 LAB: 3

MTH 254 VECTOR CALCULUS I

Introduces concepts of vector calculus to science and engineering students. Includes introduction to linear algebra, 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 prerequisite: 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 prerequisite: 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 prerequisite: 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 for handling infectious and biohazardous material, preparing patients for and assisting with routine and specialty physical examinations, taking vital signs, performing patient interview and history, ensuring proper medical record documentation, pediatric care, immunization knowledge, and preparing and maintaining examination and treatment areas. Math component includes basic skills review in preparation for understanding and calculating medication dosages. Must be enrolled in the Medical Assistant program to register in this course. Corequisite: MA 125. Prerequisites: WR 65 or WR 75 or WR 95, MTH 20 or higher, AH 111 and AH 112.
CREDITS: 3 LECTURE: 2 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 American Association of Medical Assistants. Basic principles include: surgical aseptic technique; preparing patient for and assisting with procedures, treatments and minor office surgery; post-operative patient care; preparing patient for, performing and understanding purpose and significance of diagnostic testing and screening; injections; and applying basic pharmacology principles to prepare and administer oral and parenteral medications. Math component includes understanding and applying methods of dosage calculation to prepare and administer medication as directed by physicians. Prerequisite: MA 113, Introduction to Medical Assisting and MA 125, Medical Office Procedures I. Corequisites: MA 135.
CREDITS: 4 LECTURE: 3 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. Includes maintaining professionalism and confidentiality. Also includes communication and acceptable written communication styles within the medical setting, telephone techniques, accurate medical record preparation, documentation and maintenance, legal concepts, scheduling, monitoring appointments and emergency response and preparedness. Must be enrolled in the Medical Assistant program to register. Corequisites: MA 113.
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: injections: phlebotomy; performing and understanding purpose and significance of microbiological diagnostic testing; maintaining certificates and accreditation; performing spirometry testing, teaching peak flow meters and initiating nebulizer treatments, interventions for office emergencies, performing and understanding purpose and significance of diagnostic testing (such as electrocardiogram) and screening, monitoring legislation related to current health care practices and applying advance pharmacology principles to understand purpose and significance of oral and parenteral medications. Math component includes applying methods of dosage calculation to prepare and administer medication as directed by physicians. Prerequisites: MA 123, Medical Assisting Basic Procedures and MA 135, Medical Office Procedures II. Corequisite: 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 bookkeeping procedures and special accounting entries; an introduction to coding systems; insurance billing, procedures and regulations; medical transcription; maintenance of inventory and supplies; and computer applications for office procedures. Prerequisites: MA 113, Introduction to Medical Assisting and MA 125, Medical Office Procedures I. Corequisites: MA 123.

CREDITS: 4 LECTURE: 4

MA 145**COMPUTERIZED MEDICAL OFFICE PROCEDURES**

Computers are an integral part of today's medical facilities. They are the method of choice for managing patient demographics; appointment scheduling; processing billing for insurance and patients; tracking accounts receivable aging and status; and generating reports related to practice finances. This course gives students training necessary to successfully complete these administrative tasks. Prerequisites: MA 123, MA 135.

Recommended prerequisite: CIS 120. Corequisites: MA 133

CREDITS: 1 LAB: 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. Provides students with the opportunity to perform clearly identified competencies within the clinical setting. Students must have a total of five clinical credits. Practicum work to earn clinical credits begins once all coursework is completed. A minimum of 160 hours in the clinical setting is required.

Instructor approval required.

CREDITS: 5 OTHER: 16

MA 199**SELECTED TOPICS: MEDICAL ASSISTANT**

CREDITS: 1 TO 4

MA 999**MEDICAL ASSISTING PROGRAM**

CREDITS: 7 LECTURE: 6 LAB: 3

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 course is open to any student in any course of study. Recommended prerequisite: 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 the ability to read different types of maps, plan routes and find locations 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 course is open to any student in any course of study. Recommended prerequisite: 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: 3.6

MS 205**OCS PHASE I**

Intensive two week pre-commissioning phase held during summer term. Course is focused 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 OF 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 course is open to any student in any course of study. Recommended prerequisite: MS 113.

CREDITS: 2 OTHER: 4

MS 212**AMERICAN MILITARY HISTORY**

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 prerequisite: MS 211.

CREDITS: 2 OTHER: 4

MS 213**MAP READING AND LAND NAVIGATION**

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 prerequisite: MS 212.

CREDITS: 2 OTHER: 4

MS 299**SELECTED TOPICS: MILITARY SCIENCE**

CREDITS: 4 LECTURE: 4 LAB: 12 OTHER: 12

MUSIC**MUS 188****SPECIAL STUDIES: MUSIC**

CREDITS: 1 TO 3

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, 202 or 203 Understanding Music.

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 prerequisite: MUS 101 or equivalent. Recommended corequisite: 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 prerequisite: MUS 111. Recommended corequisite: 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 prerequisite: MUS 112. Recommended corequisite: 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 Music Theory IB. Recommended prerequisite: 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 Music Theory IC. Recommended prerequisite: MUS 115.

CREDITS: 2 LECTURE: 2

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, Music Fundamentals.
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, Music Fundamentals.
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, Music Fundamentals.
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 year.
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 prerequisite: MUS 113. Recommended corequisite: 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 prerequisite: MUS 211. Recommended corequisite: 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 prerequisite: MUS 212. Recommended corequisite: 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 prerequisite: MUS 116. Recommended corequisite: 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 prerequisite: MUS 214. Recommended corequisite: 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 prerequisite: MUS 215. Recommended corequisite: 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. Not offered every year.

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.

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 corequisite: MUS 197A, College Choir. Contact Choral program director for information about required audition.

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.

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.

CREDITS: 2 LECTURE: 2

**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. Contact Choral program director for information about required audition.

CREDITS: 2 LECTURE: 1 LAB: 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

NURSING

5.715

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

5.716

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 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, 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 Health Care Provider CPR card, pass a criminal history check, 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 that may have taken their nursing assistant class more than one year prior to entering the nursing program. Corequisites: 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 students 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 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.

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

OREGON GREEN TECHNOLOGY

GT 101

INTRODUCTION TO INDUSTRIAL SUSTAINABILITY

Students explore a broad overview of sustainability and environmental engineering. Students learn the principles, concepts and technology of alternative resources including power production by wave energy, wind energy, solar energy, hydrogen-fuel devices and other emerging alternative power generation systems. Students learn the basics of sustainability in an industrial context, including energy conservation, waste reduction and preventive maintenance. Recommended prerequisite: instructor approval.

CREDITS: 3 LECTURE: 3

GT 102

GREEN INDUSTRIAL SAFETY

Students learn the essential skills needed to develop and maintain safe work habits in various industrial workplaces following OR-OSHA guidelines, including general accident prevention. Students demonstrate safe use of tools/equipment commonly found in a variety of manufacturing and construction industries. Emphasis will be put on safety procedures leading to sustainable practices and results. Recommended prerequisite: GT 101.

CREDITS: 2 LECTURE: 2

GT 103

MECHANICAL SYSTEMS

This course focuses on learning the fundamentals of mechanical power. Students learn common mechanical components from nuts and bolts to gears, gear boxes, shafts and bearings. Students perform common mechanical tasks, and learn to fine-tune drive systems involving belts, chains, etc. This course demonstrates the importance of lubrication in maintaining gears and other movable parts, and emphasizes operations to reduce friction and wasted motion, which are major contributors to energy inefficiency. Recommended prerequisite: GT 101.

CREDITS: 3 LECTURE: 2 LAB: 3

GT 104

ELECTRICAL SYSTEMS TROUBLESHOOTING I

This course covers information on basic DC and AC electrical theory, definitions, basic component identification and analysis of series, parallel and combination circuits. Emphasis is placed on practical application, troubleshooting and problem solving. Students learn to troubleshoot common electrical problems in industry, such as low voltage, high voltage, open circuits, high resistance shorts to ground and current/voltage unbalance. Emphasis is on prevention of electrical energy waste. Recommended prerequisite: GT 101.

CREDITS: 2 LECTURE: 1 OTHER: 2

GT 105

WORKPLACE MATH/APPLIED MATH

This is an introductory algebra and geometry class in technical/professional mathematics. Topics that are covered include measurement and conversions, signed numbers, algebraic equations and formulas, ratio and proportion, perimeters, areas, volumes, reading and interpreting graphs, and measures of central tendency. Recommended prerequisite: MTH 20 or placement test score to place above MTH 20, and GT 101.

CREDITS: 4 LECTURE: 4

GT 106

INTRODUCTION TO GREEN TECHNOLOGIES

Students will be introduced to economic and environmental considerations for selecting appropriate green technologies and techniques to compare technology options. Technologies in the areas of energy production, transportation, electrical systems, building systems, and agriculture will be examined. Emphasis will be on identifying and selecting appropriate and cost-effective tools and technology solutions across multiple industries and sustainable decision making. Recommended prerequisite: GT 101.

CREDITS: 2 LECTURE: 2

GT 107

ELECTRICAL SYSTEMS TROUBLESHOOTING II

This course covers the theory and application of magnetism, electromagnetism, the generation of electromotive force, AC and DC motor principles, transformer theory, types and applications. Students are introduced to electrical control circuits and the operation of a transistor. Students build on basic techniques and learn systematic troubleshooting methods and procedures

to solve process problems. Analyzing motor control schematics and using advanced digital multi-meters are stressed. Emphasis is on prevention and correction of energy-wasting problems. Recommended prerequisites: GT 101 and GT 104.
CREDITS: 3 LECTURE: 2 LAB: 3

GT 108**BUILDING SYSTEMS**

Students learn basic principles of building science to assess building energy efficiency and monitor health and safety conditions, with an emphasis on a system analysis approach to inspection. Interconnected system analysis includes the building's envelope, foundation, walls, roof, doors, and windows. Students learn how to use diagnostic equipment to analyze the effectiveness of the building systems to maximize energy performance, comfort, efficiency, safety and durability. Students will learn about using HVAC ducting and digital controls (DDC) system as an aid in troubleshooting and promoting energy efficiency and indoor air quality. Recommended prerequisite: GT 101.
CREDITS: 2 LECTURE: 1 OTHER: 2

GT 109**HVACR SYSTEMS OPERATION**

Students will learn the concepts of the basic operations of various heating and cooling systems for commercial and residential applications. This course focuses on maintenance and service procedure for initial tuning of HVACR systems for energy efficiency. Practical application of skills include: taking pressures, identifying refrigerants, recovering and recycling refrigerant, evacuating and charging refrigeration systems. Also included are all applicable safety precautions and EPA-governed, environmental regulations. Energy efficiency will be emphasized. Recommended prerequisite: GT 101.
CREDITS: 3 LECTURE: 2 LAB: 3

GT 110**WORKPLACE COMMUNICATION**

Students will practice small group communication by participation in group discussions, readings and written exercises. Attention to organization and conduct of problem-solving groups and learning. Emphasis is on learning how to enhance group communication, to deal effectively with conflict and to apply problem-solving techniques; and developing attitudes and skills applicable to leadership and successful participation in the workplace. Recommended prerequisite: GT 101.
CREDITS: 2 LECTURE: 2

GT 111**PREVENTATIVE MAINTENANCE/ENERGY CONSERVATION**

This course examines the development and implementation of a preventative maintenance program using proven actions and procedures and common computer software. Students will learn how to design, construct and maintain industrial transfer systems. The emphasis of this course is the application of preventive maintenance strategies to green technology and efficiency. Recommended prerequisite: GT 101.
CREDITS: 2 LECTURE: 2

GT 112**CONTROL SYSTEMS**

Students will learn fundamentals of programmable logic control (PLC) operation and troubleshooting. Variable-speed, drive operation and programming are covered as are process control principles for temperature and flow. Emphasis is on understanding of control operations for efficiency. This course will utilize online training and a hands-on seminar to offer hands-on learning opportunities. Recommended prerequisite: GT 101.
CREDITS: 3 LECTURE: 2 LAB: 3

GT 113**FLUID POWER**

This course provides an introduction to hydraulic schematics, troubleshooting common hydraulic problems and maintaining hydraulic systems used in a variety of production applications. It also provides an introduction to operating a pneumatic system, including maintenance and troubleshooting procedures. Students learn to read, interpret and construct fluid-systems schematic diagrams containing pneumatic and hydraulic component systems. Emphasis will be on operation of fluid power systems for energy savings and pollution control. Recommended prerequisite: GT 101.
CREDITS: 2 LECTURE: 1 OTHER: 2

GT 114**LOCAL APPLICATIONS/ALTERNATIVE ENERGY**

This course is an introduction to the basic concepts and terminology of alternative energy sources. Subjects that will be explored in this course are biodiesel, wind, solar cells, fuel cells, ocean waves, geothermal, hydrogen, connection to the grid (homeowners), electric vehicles, as well as other emerging types of energy production. Research into old technologies as well as new will be explored, and students will research the applications of alternative energy in their local/regional communities and economies, including opportunities for employment. Recommended prerequisite: GT 101.
CREDITS: 3 LECTURE: 3

GT 115**HUMAN RELATIONS/CUSTOMER SERVICE**

This course is designed to enable students to look at many factors that influence human behavior. The intent of this course is to help students increase their ability to handle interpersonal conflicts effectively at work and in personal lives. Recommended prerequisite: GT 101.
CREDITS: 3 LECTURE: 3

PHARMACY TECHNICIAN

PHM 100

INTRODUCTION TO PHARMACY TECHNICIAN

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 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. This is a three-credit course and students should expect to spend 9 to 12 hours per week completing the required coursework. Prerequisite: department approval.

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. Prerequisite: entrance to the Pharmacy Technician program or instructor approval.

CREDITS: 3 LECTURE: 3

PHM 140

PHARMACY TECHNICIAN PRACTICE II

This online course is a continuation of PHM100 (Introduction to Pharmacy Technician) and 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. 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 9 to 12 hours per week completing the required coursework. In addition to the online section, this course requires a one-credit (20 hour), lecture-lab session. Two 10-hour labs will be scheduled. The lab sessions will be conducted on Friday evenings from 5:00 to 8:00 and Saturday from 9:00 AM to 5:00 PM. The labs will be held on the COCC campus and students are responsible for all travel expenses. Recommended prerequisites: department approval, PHM 100.

CREDITS: 4 LECTURE: 3 OTHER: 2

PHM 181

PHARMACY TECHNICIAN SEMINAR

Online seminar 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 of 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 of 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 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 prerequisite: Reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.
 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 prerequisite: Reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.
 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 prerequisite: MTH 95 or math placement test scores that place a student in MTH 105; reading and writing placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 95.
 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 corequisite: 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 corequisite: 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 prerequisite: 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 prerequisites: 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 prerequisites: MTH 253 and PH 212. Recommended corequisite: 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 US 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 prerequisite: 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 pre- or corequisite: 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 prerequisite: 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 prerequisite: 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 prerequisite: 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 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 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 prerequisite: 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 prerequisite: placement scores that allow enrollment into college-level reading.

CREDITS: 4 LECTURE: 4

PSY 207**APPLIED PSYCHOLOGY**

Introduces the basic foundation of psychology to transfer-degree-seeking students and certified 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 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 prerequisites: 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 prerequisites: 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 life span 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 is considered a human relations component. 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.

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 prerequisites: 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 prerequisites: placement scores that allow enrollment into college-level reading.

CREDITS: 4 LECTURE: 4

PSY 222**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: 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 prerequisites: WR 121 and PSY 201 or PSY 202.

CREDITS: 3 LECTURE: 3

PSY 228**POSITIVE PSYCHOLOGY**

This course explores the components necessary to help people flourish in their environment by addressing the biopsychosocial aspects that contribute to positive behaviors and human strengths. Material will provide an overview of the theories of happiness, importance of self-care and positive social cognitions, utilizing strengths in personal and professional venues, and means of achieving healthy relationships personally and with one's community. Recommended prerequisite: WR 65.

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 prerequisite: 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, social class and gender in film. Special attention is given to how particular representations reflect the broader historical context surrounding when the films were produced and culturally based audience sentiments. Anthropological and sociological analyses of the films will be provided to give a multidisciplinary 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 prerequisite: 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 prerequisite: SOC 201.

CREDITS: 4 LECTURE: 4

SOC 208

SPORT AND SOCIETY

While sociology is used to help make sense of sport, sport is also used to develop the ability to think sociologically about society. Subjects include sport and: values, socialization, deviance, social problems and social inequities. Recommended prerequisite: 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 prerequisites: 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 prerequisites: 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 prerequisite: 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 prerequisites: 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 prerequisite: 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 prerequisite: SOC 201.
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 prerequisite: 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 impact of cultural differences in communication styles and social values and their impact on work, family, legal and economic systems. May be offered with a MIC designation.
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 resolution and 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 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 prerequisite: 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 prerequisite: 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

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; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

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 toward 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; demonstrates that most firefighter injuries and deaths are preventable.

CREDITS: 3 LECTURE: 3

SFS 105

FIRE BEHAVIOR & COMBUSTION I

This course explores the theories and fundamentals of how and why fires start, spread and how they are controlled. Department approval required. Recommended concurrent enrollment or completion of GS 105, Chemistry and recommended that students be starting their second year. Corequisite: GS 105

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 fire-fighting strategies accordingly. Buildings under construction and those subjected to external forces will also be studied. Field trips take students into the community to study various construction techniques. Recommended prerequisites: 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 are carefully analyzed. Recommended corequisites: 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 prerequisites: SFS 101, SFS 102.

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 prerequisites: 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. Recommended prerequisite: CIS 120 or pass computer competency test.

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**

Fire Behavior & Combustion II builds on the foundational knowledge and skills developed in SFS 105, Fire Behavior & Combustion I and Firefighter I academy. Critical learning outcomes include understanding the relationship between fire behavior indicators and fire development, the conditions that result in extreme fire behavior, and application of control measures to improve firefighter safety and fire control effectiveness. Department approval required. Due to safety and OSHA requirements, students must be affiliated with a fire department and be current and have passed SCBA Fit testing. Recommended prerequisites: SFS 105, Fire Behavior and Combustions I; Firefighter I Academy; and GS 105, Chemistry. 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. SFS 210 is a technical elective. Recommended prerequisites: SFS 101, SFS 102. Department approval required.

CREDITS: 3 LECTURE: 3

SFS 211**TACTICS AND STRATEGIES 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 a student's 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 prerequisites: 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 the first year of the program 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. Note: EMT Basic certification and second-year status is required. Structural Fire Science coordinator approval required. Recommended corequisites: WR 121, 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. Required: MTH 60 or higher. Recommended: GS 104, Physics; GS 105, Chemistry; SFS 105, Fire Behavior and Combustion I; and access to engines or affiliation are highly recommended for students' success in the class. Instructor 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. SFS 233 is a technical elective. Recommended prerequisites: SFS 101, SFS 102. Department approval required.

CREDITS: 3 LECTURE: 3

SFS 288**SPECIAL STUDIES:STRUCTURAL FIRE SCIENCE**

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 notetaking, 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 six-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

THEATER ARTS

TA 141

ACTING I

Acquaints students with fundamental principles of acting. In-class performance in both comic and serious modes 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 prerequisite: 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 prerequisite: 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

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

Trains students who wish to become qualified in the first-level supervision position of Advanced Firefighter/Squad Boss (FFT1). This is intended for an individual who: has the ability or desire to become a first level supervisor; is a potential Squad Boss; may be in the position of being a first responder to initial attack fires and responsible for five or fewer personnel. Recommended prerequisite: 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 prerequisites: 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 type 3 information officers (IOF3). 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

Students will learn how to obtain and use information to determine the probable cause of a wildland fire. Includes obtaining pertinent information when traveling to a fire, locating and securing the probable ignition location, identifying witnesses, documenting any findings, evidence collecting, identifying laws, regulations, and related court procedures associated with administrative, civil and criminal litigation processes.

CREDITS: 3 LECTURE: 3

WF 211

S-211 PORTABLE PUMPS

Provides practical knowledge and application skills of portable pump operations. Recommended prerequisite: WF 100, WF 101.

CREDITS: 2 LECTURE: 2

WF 212

S-212 WILDFIRE POWER SAWS

Provides training in the use of power saws and techniques. Covers the duties and responsibilities of the power saw operator; parts and maintenance of the chain saw; application; safety and evaluation. Recommended prerequisites: WF 131, WF 134.

CREDITS: 3 LECTURE: 2 LAB: 3

WF 215

S-215 FIRE OPERATIONS IN THE URBAN INTERFACE

Covers size-up, initial strategy and action plan, structure triage, tactics, action plan assessment, public relations and follow-up, and safety. Recommended prerequisites: 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 non-complex 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. Concurrent enrollment in 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 prerequisites: 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 INCIDENT COMMAND SYSTEMS

This course directs the student toward 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

Meets training requirements to work in the operations section of the Incident Command system. Instructs firefighters how to recognize the numerous factors relating to fuels, topography and weather which affect fire behavior. Recommended prerequisites: WF 131, WF 260, WF 134.

CREDITS: 3 LECTURE: 3

WF 291

I-300 INTERMEDIATE INCIDENT COMMAND SYSTEMS

This course provides description and detail of the Incident Command System (ICS) organization and operations in supervisory roles on expanding or Type 3 incidents. Topics include: ICS fundamentals review, incident/event assessment and agency guidance in establishing incident objectives, unified command, incident resource management, planning process, demobilization, transfer of command, and close-out. 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 INCIDENT COMMAND 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

Designed to develop knowledge and skills required for effective fire behavior prediction. Introduces fire behavior calculations by manual methods, using nomograms. Student will gain an understanding of the determinants of fire behavior through studying input (wind, slope, fuels and fuel moisture). Students also learn how to interpret fire behavior output. Local and regional environmental differences are stressed.

CREDITS: 2 LECTURE: 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. Students read, analyze and evaluate texts of varying lengths that show each stage of the process. Short narratives and expository essays will be composed.

Recommended prerequisites: 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 prerequisites: 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 075

BASIC WRITING I

Emphasizes advanced paragraph structure and development and simple essay structures, including some work on addressing specific audiences for specific purposes. Provides extensive practice in developing and organizing fully developed paragraphs and short essays. Recommended prerequisites: reading placement test scores that place the student in WR 121 and writing placement test scores that place the student in WR 65 or WR 75; or a grade of "C" or higher in WR 60.

CREDITS: 3 LECTURE: 3

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. Recommended prerequisite: reading placement test scores that place a student in WR 121; or a grade of "C" or higher in WR 65 or WR 75.

CREDITS: 3 LECTURE: 3

WR 099

SELECTED TOPICS: WRITING

CREDITS: 1 TO 4

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 75 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 121 is a recommended prerequisite for this course.

CREDITS: 4 LECTURE: 4

WR 123
ENGLISH COMPOSITION

Stresses skills necessary to produce college research papers. Students learn to focus a topic; to practice critical reading; to evaluate sources and incorporate them into their writing; and to formally organize, format and document their final revisions. Recommended prerequisites: WR 122 and LIB 127 or WR 170.

CREDITS: 3 LECTURE: 3

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 prerequisite: 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; oral presentations; and collaborative writing. Writing assignments include memos, letters, informal reports, process reports and research reports. WR 121 is a recommended prerequisite for this course.

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 prerequisite: 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 prerequisite: 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 prerequisite: 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 prerequisite: 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

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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.

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B.A. in Organizational Communication, California State University, Stanislaus, 1984; M.S. in Rhetoric and Communication, University of Oregon, 1986; Ph.D. in Educational Policy and Management, University of Oregon, 1994. At COCC since 2010.

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B.S. in Accounting, 1977, Brigham Young University; M.S. in Organizational Development, 2008, Central Washington University. At COCC since 2009.

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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.

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B.A. in Psychology, 1982, University of Washington; M.A. in Social Ecology, 1990, University of California, Irvine; Ph.D. in Social Ecology, 1995, University of California, Irvine. At COCC since 1992.

ALICIA MOORE

Dean of Student 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

Instructional Dean

B.A., Spanish Language and Literature, 1992, Whitman College. M.A., Spanish Language and Literature, 1995, Washington State University.

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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 PRESIDENTS 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.

DEANS 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.

STEPHANIE V. ANDRE**Assistant Professor I of Composition**

B.A. in English, 2001, University of Notre Dame; M.A. in English, 2006, Rutgers University. At COCC since 2011.

THOMAS J. BARRY**Associate Professor of Sociology**

B.A. in Communication Studies, 1989, University of Kansas; M.A. in Speech Communication, 1992, California State University; M.S.W., 1995, University of Kansas; Ph.D. in Sociology, 2006, Kansas State University. At COCC since 2004.

ARTHUR N. BENEFIEL**Professor of Forest Technology**

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.

STEVEN BIDLAKE**Associate Professor of English**

B.A. in English, 1975, Western Washington University; M.A. in English, 1977, University of Oregon; Ph.D. in English, 1987, University of Washington. At COCC since 1992.

RONALD W. BOLDENOW**Associate Professor I 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 of Speech**

A.A. In Liberal Arts, Communication, 2003, Raritan Valley Community College; B.A. In Communication, 2005, Rutgers University; M.C.I.S., 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.

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 since 1980.

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 I of Biology**

B.A. In Biology, 1995, Johns Hopkins University; Masters in Public Health, 2001, Yale University. At COCC since 2011.

MONTE CHENEY**Assistant Professor II 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 since 2010.

JEFFREY D. COONEY**Associate Professor of Biology**

B.S. in Natural Science, 1981, Western Oregon State College; D.V.M. in Veterinary Medicine, 1987, Oregon State University. At COCC since 1995.

LEWIS M. COUSINEAU**Associate Professor of Computer and Information Systems**

B.S. in Industrial and Management Engineering, 1985, Montana State University; M.B.A., 1992, Seattle University. At COCC since 1998.

JENNIFER CRUICKSHANK**Full-Time Temporary Instructor, 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**

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**

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.

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.

DAVID DRALLE**Assistant Professor I of Mathematics**

B.S. in Electrical Engineering, 2007, University of Illinois; M.S. in Applied Mathematics, 2011, Columbia University. At COCC since 2011.

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**Assistant Professor II 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.

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.

JOSHUA EVANS**Assistant Professor I of Spanish (Humanities)**

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**Associate College Librarian, Collections and Acquisitions, Professor**

B.A. in English, 1983, Carleton College; M.L.S. in Library Science, 1988, University of Washington. At COCC since 1992.

MICHAEL P. FISHER**Professor of Forest Resources 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.

THERESA FREIHOEFER**Assistant Professor II of Business**

B.A. in Business Economics, 1983, UCLA; M.B.A., 1987, Pepperdine University. At COCC since 2007.

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.

KEVIN D. GROVE**Assistant Professor II of Physical Science/Physics**

B.S. in Civil Engineering, 1997, Montana State University; M.S. in Chemical Engineering, 1999, Montana State University. At COCC since 2005.

ANNEMARIE HAMLIN**Assistant Professor I of English**

B.A. in English and Fresh, 1988, Pacific Union College; M.A. in English, 1991, Claremont Graduate School; Ph.D. in English, Claremont Graduate School, 1998. At COCC since 2010.

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.

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 I, Program Coordinator of Human Development**

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**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**Associate 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.

TINA HOVEKAMP**Associate College Librarian, Information and Access Services, Associate Professor**

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.

AMY VAN DUSEN HOWELL**Assistant Professor II of Education/Early Childhood Education**

B.A. in Psychology, 1997, Willamette University; Ph.D. in Educational Psychological Studies, 2007, University of Colorado. At COCC since 2004.

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 since 1991.

MING-CHANG HUANG**Assistant Professor I of Computer Information & Systems**

B.S. in Industrial Engineering, 1987, National Tsing-Hua University; M.S. in Industrial Engineering, 1992, University of Wisconsin; M.S. in Computer Science, 1994, University of Wisconsin; Ph.D. in Electrical Engineering and Computer Science, 2004, University of Wisconsin. At COCC since 2011.

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 since 1988.

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**Associate 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.

KELVIN T. KEMPFER**Associate Professor of Computer and Information Systems**

A.A.S. in Electronic Engineering Technology, 1979, Southern Illinois University. At COCC since 1988.

JAMES W. KNOX**Assistant Professor II of Music**

B.S. in Music, 2000, Portland State University; M.M. in Choral Conducting, 2003, Portland State University. At COCC since 2003.

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 since 1988.

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.

DAWN LANE**Assistant Professor I, Program Director CNA of Nursing**

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.

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**Assistant Professor II 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 I 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.

DEBORAH MALONE**Assistant Professor I of Medical Assisting Program Director**

B.S. in Nursing, 1981, University of Washington; M.S. in Women's Health Care Nurse Practitioner, 1988, Oregon Health & Science University. At COCC since 2009.

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**

A.S. in Automotive Technology, 1977, Southwestern College. At COCC since 1990.

KATHLEEN M. MCCABE**Associate Professor of Criminal Justice**

B.A. in Criminal Justice, 1980, Michigan State University; M.A. in Guidance and Counseling, 1987, Oakland University. At COCC since 2004.

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B.S. in Wildlife Management, 1988, Humboldt State University; M.S. in Wildlife Science, 1994, Oregon State University. At COCC since 1994.

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B.S. in Mathematics, 1964, Alderson-Broaddus College; M.B.A., 1996, Aspen University. At COCC since 2007.

JAMES D. MOODIE**Associate 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. Nursing, 1983, Augustana College; M.N. and F.N.P., 2001, Washington State University. At COCC since 2003.

OWEN MURPHY**Assistant Professor I 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**Assistant Professor II 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 I of Psychology**

B.S. in Psychology, 1993, University of Washington; Ph.D. in Developmental Psychology, 2002, University of Washington. At COCC since 2011.

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 since 1985.

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 since 1993.

SANDOR D. (SEAN) PALAGYI**Associate Professor of Computer Aided Drafting and Design**

Coursework in Drafting Technology and GIS., 1997, Central Oregon Community College; B.S. in Political Science, 1988, University of Oregon. At COCC since 1998.

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**Assistant Professor II 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.

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**Assistant Professor II 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 I, 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 I 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.

VICKY J. RYAN**Assistant Professor II Emergency Medical Services**

A.A.S., EMS, Paramedic, 2003, Central Oregon Community College. At COCC since 2007.

STEVE SCHLAUCH**Assistant Professor I, Automotive Technology**

B.S. in Vocational/Technical Education, 1980, Montana State University; M.S. in Vocational/Technical Education, 1985, Montana State University. At COCC since 2011.

DENNIS SIMENSON**Full-Time Temporary Instructor, Manufacturing Technology**

A.A.S. in Manufacturing Processes Technology, 1991, Central Oregon Community College. At COCC since 1996.

KIRI A. SIMNING**Associate 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**Full-Time Temporary Instructor, Wildland Fire Science**

A.A., 1998, Central Oregon Community College; B.S. in General Science, 2000, University of Oregon. At COCC since 1999.

KATHY SMITH**Associate 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 I of General Business**

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.

JOYCE THOMPSON**Assistant Professor I, Health Information Technology**

B.S. in Health Information Management, 1996, East Central University; M.S. in Human Resources, 2005, East Central University. At COCC since 2011.

DANA TOPLIFF**Assistant Professor II of Nursing**

A.D.N. in Nursing, 1983, Contra Costa College; B.S.N. in Nursing, 1992, California State University; M.P.A. in Nursing, 2001, California State University. At COCC since 2006.

MARGARET TRIPLET**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**Assistant Professor II of Human Development and Program Director**

B.S. in Psychology, 1995, Washington State University; M.A. in Counseling Psychology, 1997, John F. Kennedy University. At COCC since 2004.

RICKY VIRK**Associate 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.

ANDRIA J. WODELL**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.

NANCY A. ZAVACKI**Associate Professor of Nursing**

A.D.N., 1977, Southern Oregon State College; B.S. in Nursing, 1987, Southern Oregon State College; M.S. in Nursing, University of Texas, 1988. At COCC since 1999.

ZELDA ZIEGLER**Assistant Professor II of Chemistry**

B.S. in Chemistry, 1981, Idaho State University; Ph.D. in Analytical Chemistry, 1989, Purdue University. At COCC since 2002.

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- 1989 Millie MacKenzie, Professor of Office Administration
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- 1991 Michael A. Sequeira, Associate Professor of Mathematics and Computer Science
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- 1993 Darla J. Quesnell, Professor of Psychology
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- 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
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- 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

RETURNING ADJUNCT FACULTY**BEVERLY ADLER**

Adjunct Instructor, Faculty Librarian

ANNE ANKROM

Adjunct Instructor of Nursing

MIKE ARTUS

Adjunct Instructor of Art

NATASHA BACCA

Adjunct Instructor of Art

VAUGHAN BRIGGS

Adjunct Instructor of Business

BRIDGETT BUCCINI

Adjunct Instructor of Nursing

CARL CAVALLO

Adjunct Instructor of Automotive

AMBER CLARK

Adjunct Instructor of License Massage Therapy

JACQUELYN COE

Adjunct Instructor of Mathematics

JEFF CORNETTAdjunct Instructor of Human Anatomy and Physiology/
Medical Ethics**ALAN EISENBERG**

Adjunct Instructor of Social Science

KAREN ELLIS

Adjunct Instructor of Art

CAROLYN ESKYAdjunct Instructor of Human Development, Study
Strategies**PATRICIA HAMMER**

Adjunct Instructor of Math

JIM HAWES

Adjunct Instructor of Writing

DEBBIE HAYNES

Adjunct Instructor of Health and Human Performance

BECKY HEINRICK

Adjunct Instructor of Health and Human Performance

JULIA HUNI

Adjunct Instructor of Computer Information Systems

JOE HUSSION

Adjunct Instructor of Pharmacy Technician

GARY KELLEY

Adjunct Instructor of Computer Information Systems

MATTHEW LANKINS

Adjunct Instructor of Criminal Justice

DOROTHY LEMAN

Adjunct Instructor of Writing

JOHN LICCARDO

Adjunct Instructor of Health and Human Performance

LESLIE LIM

Adjunct Instructor of Writing

JUSTIN MACKEY

Adjunct Instructor of Nursing

MELISSA MAHAR

Adjunct Instructor of Biology

PETER MEYER

Adjunct Instructor of Art

ANDREA MORGAN

Adjunct Instructor of Early Childhood Education

ALAN NUNES

Adjunct Instructor of License Massage Therapy

LYNNE OLDHAM

Adjunct Instructor of Dietary Management

JILL PLATTNER

Adjunct Instructor of Math

LEANN ROWLEY

Adjunct Instructor of Writing

KEN RUETTIGERS

Adjunct Instructor of Sociology

JULIE SCHMIDT

Adjunct Instructor of Math

KELLYN SMYTHE

Adjunct Instructor of Mathematics

JAMES STEDMAN

Adjunct Instructor of Writing

JENNY STOLLENWERK

Adjunct Instructor of Nursing

STEPHANIE SUNDBORG

Adjunct Instructor of Psychology

PATRICIA SUNSET

Adjunct Instructor of Math

RALPH TADDAY

Adjunct Instructor of Physical Science

GREGG TERHAAR

Adjunct Instructor of Health and Human Performance

MICHAEL THILLE

Adjunct Instructor of Biology and LMT

MICHEL WALLER

Adjunct Instructor of Anthropology

DONNA WARNER

Adjunct Instructor of Nursing

DAVID WELK

Adjunct Instructor of Geography

**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

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.

JANET HUDDLESTON

B.A. in Education, 1973, Central Washington University. At COCC from 1987-1989 and since 1990.

KAREN LEEP

B.A. in Secondary Education, 1975, Western Oregon State College. At COCC since 1995.

ANITA MACINNIS

B.A. in Social Psychology, 1966, University of Michigan. At COCC since 1998.

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.

AMY STINARD

B.S. in Business/Marketing, 1996, Ball State University. At COCC since 1997.

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.

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.

TIMOTHY H. HILL**Associate Professor of Business**

B.S. in Business, 1968, Brigham Young University; M.S. in Business Education, 1977, Brigham Young University; Ph.D. in Higher Education Administration, 1985, Washington State University. At COCC from 1985 to 2002.

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.

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.

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.

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.

CHARLES L. WACKER**Professor of Office Administration**

B.S. in Business Education, 1955, Oregon State University; M.Ed. in Business Education, 1959, Oregon State University. At COCC from 1958 to 1986.

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

PAUL AMAR**Resident Director**

B.S. in Natural Resources RRT, 2003, University of Idaho. At COCC since 2010.

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.

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.

SHARON BELLUSCI**Student Services Technology Coordinator**

B.S. in Computer Science/Mathematics, 1987, University of Puget Sound. At COCC since 2010.

JAMES BENNETT**Security Coordinator**

A.A. in Business Administration, 1991, College of San Mateo. At COCC since 2010.

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 since 1993.

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 IT 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.

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 since 1998.

PATRICIA CAGNEY**Academic Advisor of Allied Health**

B.S.N. in Nursing, 1978, University of Arizona; M.D., 1987, University of Southern California. At COCC since 2006.

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.

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.

JUSTINE CONNOR**Native American Program Coordinator**

B.S. in Business Management, 1998, California State University; M.A. in Visual Arts, University of Northern Colorado, 2008. At COCC since 2009.

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.

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.

JESSICA DE LA O DIAZ**Oregon Leadership Institute Program Coordinator**

A.A. in Psychology, 1979, San Diego Community College; B.A. in Psychology, 1982, San Diego State University; M.A. in Education, 1991, University of California; Ph.D. in Education, 1998, University of California. At COCC since 2010.

DIANA DICKMAN**Academic Advisor, Allied Health**

A.A., Central Oregon Community College, 2005; B.S. in Psychology, University of Oregon, 2008. At COCC since 2009.

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 1995-present.

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.

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.

SHAWNA ELSBERRY**Director of Student Retention**

B.S. in Psychology, 1992, Eastern Oregon University. At COCC since 2004.

VICKI ERTLE**Director of Family Resource Center**

B.A. in Political Science, 1968, University of California, Berkeley. At COCC since 1995.

JEFFREY FLOYD**Senior Network Administrator**

Attended Central Washington University. At COCC since 2010.

EUGENE FRITZ**Director of Culinary Arts, Head Chef**

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.

SARAH FULLER**Math/Science Tutoring Coordinator**

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.

ANDREA GIBSON**Development Officer, COCC Foundation**

B.S. in Human Development and Family Science, 2001, Oregon
State University; M.A. in Teaching, Elementary Education, 2003,
Oregon State University. At COCC since 2003.

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.

THURMAN HOLDER**Academic Advisor, General**

A.A. in Psychology, 1972, Long Beach Community College; B.S. in
Psychology, 1975, Northern Arizona University; M.A. in Psychology,
1976, Northern Arizona University. At COCC since 2009.

CYNTHIA HOMAN**Web Developer/System Programmer**

B.A. in Political Science, 1990, Washington University. At COCC
since 2010.

CYNTHIA JEFFREYS**Systems Integrator**

A.A.S. in Business Administration Management Information Systems,
1992, Central Oregon Community College. At COCC since 1999.

NANCY E. JUMPER**Program Manager, Continuing Education**

B.S. in Communications, 1982, Southern Oregon State College.
At COCC since 1997.

BARBARA KLETT**Instructional Technology Coordinator**

B.S. in Education, 1981, Oregon State University; M.A. in Education
Technology, 1998, San Diego State University. At COCC since 1998.

RACHEL KNOX**Community Learning Program Manager**

B.A. in English/British Literature, Oakland University, 1989. At
COCC since 2003.

SUZANNE KRISTENSEN**Campus Coordinator, 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.

LESLIE LIM**Writing Center Coordinator**

B.A. in English, 2002, California State University; M.A. in English,
2007, California State University. At COCC since 2011

JUSTINE R. LUCIA**Assistant Bookstore Director**

B.S. in Communication Arts, 1994, University of Wisconsin. At
COCC since 2007.

SUSAN McCAMPBELL**Assistant Director of Student Financial Aid**

A.A. in Liberal Arts, 1986, University of Alaska, Anchorage,
Matanuska-Susitna College; B.A., Psychology, 1989, University of
Alaska, Anchorage. At COCC since 1998.

ROBERT McDILDA**Safety and Security Supervisor**

DPSST unarmed officer certification. At COCC since 2004.

DARREN McCREA**IT Bond Technology Project Manager**

B.A. in English, 2005, California State University. At COCC since
2011.

AIMEE METCALF**Director of Admissions/Registrar**

B.A. in Political Science, 1993, Pacific University. At COCC since
1999.

JULIE MOSIER**Purchasing, Procurement and Facilities Scheduling
Coordinator**

A.A. in Liberal Arts/Liberal Studies, 2006, Central Oregon
Community College. At COCC since 1998.

KEVIN MULTOP**Director of Student Financial Aid**

B.S. in Humanities, 1993, Western Baptist College; Masters of Christian Studies in Theology, 2001, Regent College, Vancouver, BC. At COCC since 2001.

PAUL NISWONGER**Linus Systems/Oracle Database Administrator**

A.A.S. in Computer Information Systems, 1993, Umpqua Community College. At COCC since 2010.

LORI ORTIZ**Payroll Specialist**

B.S. in Journalism, 1982, California Polytechnic State University; A.S. in Accounting, 1988, Central Oregon Community College. At COCC since 1991.

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.

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**Institutional Researcher**

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.

CHRISTOPHER REDGRAVE**Director of Manufacturing Program**

B.S. in Industrial Engineering and Management, 1986, North Dakota State University. At COCC since 2010.

JEFFREY L. RICHARDS**Coordinator of User Services**

A.A. in Theology, 1989, Ambassador College. At COCC since 2000.

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. SCHULTZ**Office and Operations Manager, Community Learning**

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.

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 since 1983.

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.

COURTNEY SNEAD**Campus Coordinator, 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.

GAIL SORENSEN**Assistant Director of Human Resources**

B.A. in Political Science, 1987, University of California at Davis; Paralegal Certification, 1988, University of San Diego; SPHR Certification, 2006. At COCC since 2005.

PAUL STENNETT**Program Manager and Computers, Continuing Education**

B.A. in Psychology, 1980, Campbell University. At COCC since 2006.

JESSIE SUYEMATSU**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

BREANA SYLWESTER**Financial Aid Advisor**

A.A. in Business, 1999, Central Oregon Community College; B.S. in Psychology, 2005, University of Oregon. At COCC since 2008.

TARAN UNDERDAL**Student Activities Coordinator**

B.S. in General Agriculture, 2005, Oregon State University. At COCC since 2006.

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.

MARY WAGNER**Project Manager, College Relations**

A.A. in Psychology, 1989, Central Oregon Community College. Completed Electronic Publishing Program, 1996, University of Oregon. At COCC since 1992.

ANNE WALKER**Disability Services Coordinator**

B.A. in Education, 1999, Eastern Washington University; M.S. in Physical Education, 2000, Eastern Washington University. At COCC since 2000.

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.

BETH WICKHAM**Director of Continuing Education and Business Development Center****AA/EEO Officer**

B.S. in Community Service and Public Affairs, 1978, University of Oregon; M.S. in Public Administration, 1980, University of Oregon. At COCC since 1990.

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 Copy Center**

B.A. in Business Administration, 1992, Briar Cliff College. At COCC since 1997.

CODY YEAGER**Director for Corrections Education, Deer Ridge Correctional Institution**

B.A. in German, 1979, Clarion University; M.A. in English, 1983, Slippery Rock University; M.A. in German, 1986, University of Arkansas; M.A. in Comparative Literature, 1989, University of Oregon. At COCC since 1998.

GENE R. ZINKGRAF**Director of Construction**

B.A. in Business, 1980, Western State College. At COCC since 1987.

ADMINISTRATORS EMERITUS**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.

CONFIDENTIAL/SUPERVISORY STAFF

John Hoffman, Maintenance Supervisor-Buildings, Campus Services
 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

Brian Allison, Information Technology
 Brett Ammann, Campus Services
 Linda Andrus, Business Administration
 Michelle Baker, Admissions and Records
 Brad Barnett, Campus Services
 Otis Bass, Library
 Kristina Blake, Campus Services
 Terri Botts, Office of Dean of Students
 Kristie Bowen, Admissions and Records
 Daura Bowman, Print/Mail Services
 Nancy Butler, Admissions and Records
 Michael Boyd, Campus Services
 Renee Brazeau-Asher, Math/Computer Science
 Albert Brooks, Jr., Campus Services
 Roxanne Burger-Wilson, Bookstore
 Jodi Cashman, Financial Aid
 Kent Cass, Campus Services
 Katharine Condon, Continuing Education
 Kathie Conley, Fiscal Services
 Michael Cowger, Campus Services

Jack Curtis, Campus Services
 Wade DeBraul, Information Technology Services
 Susan Dosier, COCC Foundation
 Julia Dumas, Bookstore
 Steven Draper, Campus Services
 Kristi Dunlap, Redmond Campus
 Katie Edwards, Enrollment Services
 David Ekstrom, Campus Services
 Kristine Elkin, College Relations
 Carol Elwood, Campus Services
 Dana Engel, Human Resources
 Jonathan Esterman, Enrollment Services
 Nathan Estrada, Campus Services
 Jared Fain, Maintenance
 Jo Fief, College Relations
 Janis Fisher, Fiscal Services
 Brian Flener, Campus Services
 Jason Frost, Admissions & Records
 Theo Giannioses, Career and Technical Education (CTE) and
 Natural Resources
 Patricia Givens, Library
 Joshua Glover, Maintenance
 Stephanie Goetsch, Information Technology Services
 Matthew Greenleaf, Student Services
 Mary Gregory, Science
 Christa Gunnell, Human Resources
 Mary Beth Hamilton, Library
 Jan Colette Hansen, Admissions/Records
 Todd Hansen, Campus Services
 Konnie Handschuch, Instructional Deans' office
 Kenneth Harmon, Information Technology Services
 Lynne Hart, Library
 Karl Heeren, Campus Services
 Eugen Helmbrecht, Information Technology
 Lydia Hernandez, Health and Human Performance
 Malissa Hice, Financial Aid
 Elizabeth Hoffman, Bookstore
 Shelley Huckins, Fiscal Services
 Steven Huddleston, Print/Mail Services
 Kevin Hughes, Campus Services
 Carol Hussion, Fiscal Services
 James Jensen, Campus Services
 Steven Julian, Campus Services
 Donald Kahle, Campus Services
 Mary Ann Kane, College Relations
 Ross Kihs, Student Life
 Natalie Kimmell, Continuing Education
 Dianne Kristiansen, Humanities
 Charles Lawrence, MATC
 Deborah Lehto, Financial Aid
 Tina Leslie, Tutoring and Testing
 Samantha Loza, Campus Services
 Stella Mackey, Admissions
 Brian Marshall, Physical Science
 Marcia McCullough, Information Technology Services
 Lynn McKoy, Financial Aid
 Floyd Mergel, MATC
 Raquel Meyers, Nursing
 Kate Miles, Fine Arts
 Kendra Miller, Bookstore, Redmond Campus

Christina Mills, Enrollment Services
 Patricia Nelson, Campus Construction
 Johanna Olson, Health & Human Performance
 Cheryl Pitkin, Disability Services
 Kevin Quick, Campus Services
 Marc Ray, Student Life
 Tom Reed, Campus Services
 Clifford Reid, Campus Services
 Dianne Reingold, Enrollment Services
 Steve Ribeca, Information Technology Services
 J.C. Root, Information Technology Services
 Jamie Ross, Admissions and Records
 Pamela Seiber, Campus Services
 Jan Siegrist, Health Information Technology Lab Assistant
 Elaine Simay-Barton, Science
 Linda Skladal, Library
 Emily Smith, Science
 Layla Solar, Admissions and Records
 Craig Starnes, Campus Services
 Cristi Steiert, Continuing Education
 Bonnie Steiner, Campus Services
 Leilani (Lani) Sykes, Redmond Campus
 Gail Tague, Bookstore
 Ramiro Terrazas, Maintenance
 Bruce Thompson, Information Technology Services
 Michelle Torsen, Academic Computing Support
 Julie Townsend, Community Learning/Community Education
 John Traylor, Campus Services
 Heather Van Diest-Kolb, CAP Center
 James Van Houten, Campus Services
 Cynthia Viles, Adult Basic Skills
 Debbie Volker, Allied Health
 Erica Waldbillig, Office of the CFO
 Diana Weeks, Deer Ridge Correctional Institution
 Joan Westerfield, Family Resource Center
 Sallie Wetherbee, Social Science
 Pam Wheelchel, Library
 Christopher Whitman, Campus Services
 Linda Williams, College Relations
 Patrick Wilson, Campus Services
 Sarah Wilson, Campus Services
 Ruth Wolfe, ABS Administrative Assistant, Redmond Campus
 Susan Wood, Continuing Education
 Beth Wright, CAP Center
 Eric Wright, Campus Services

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 Deana 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

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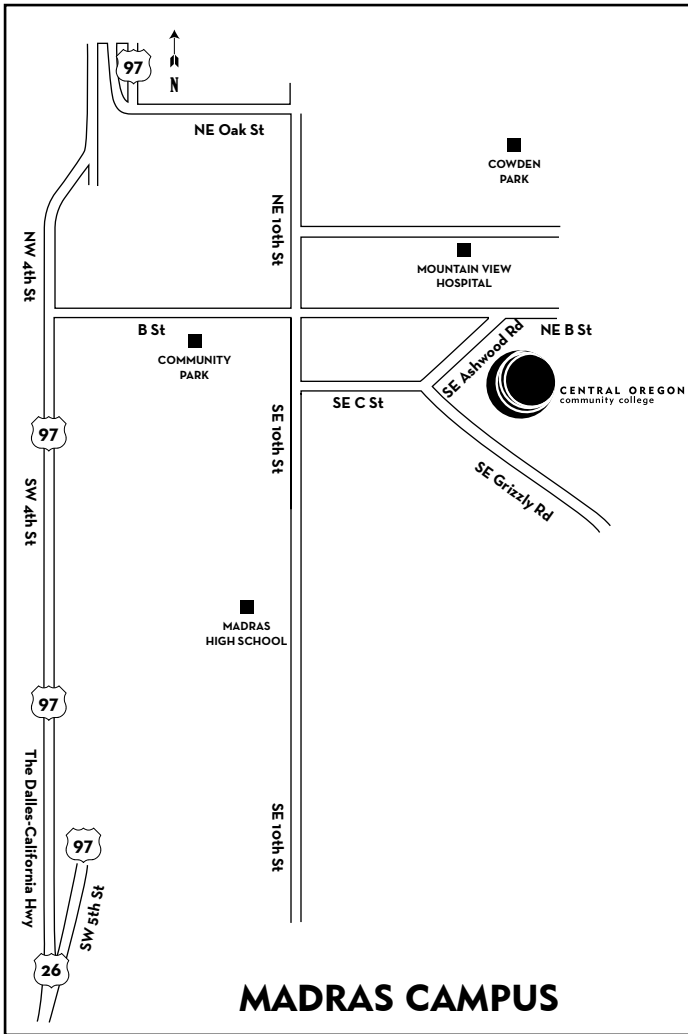
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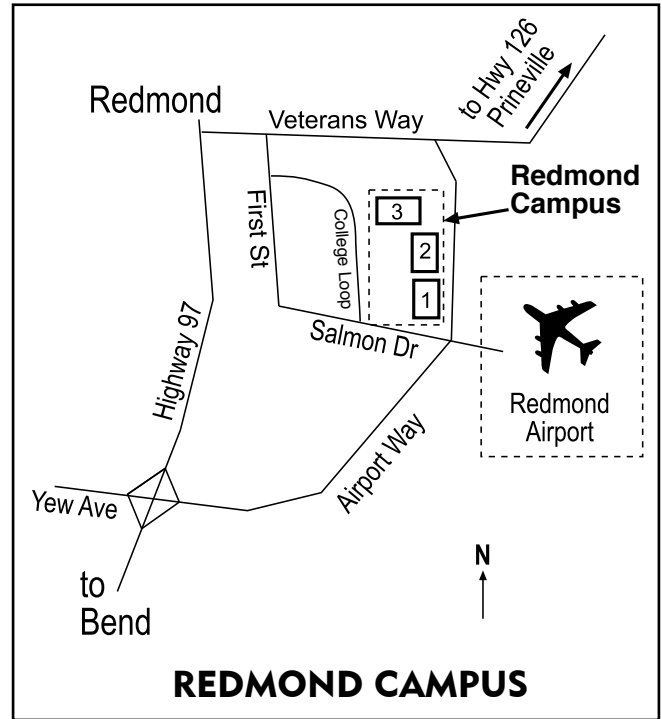
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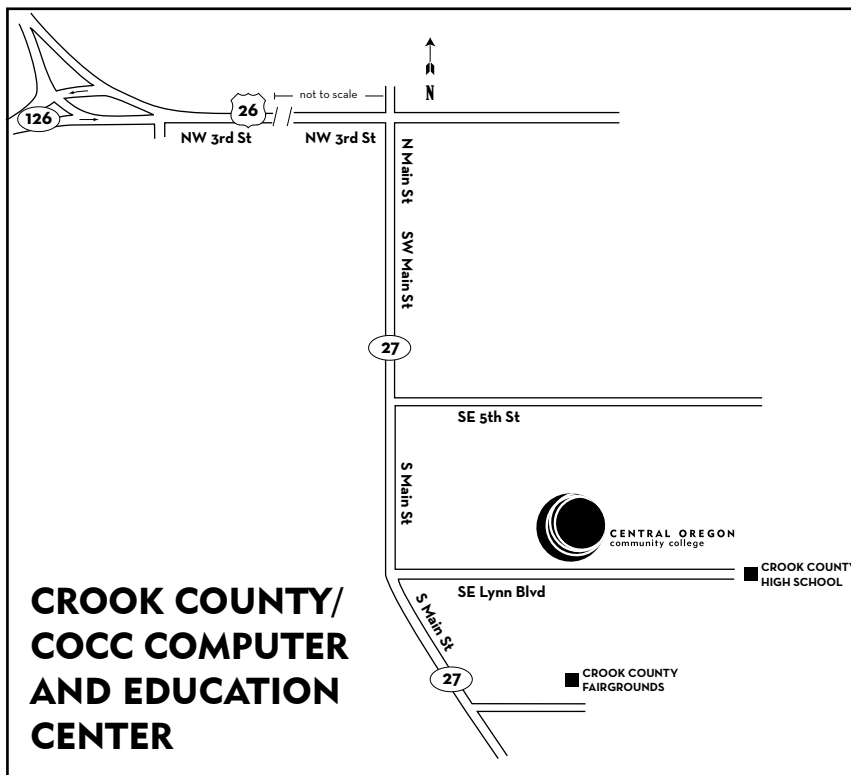
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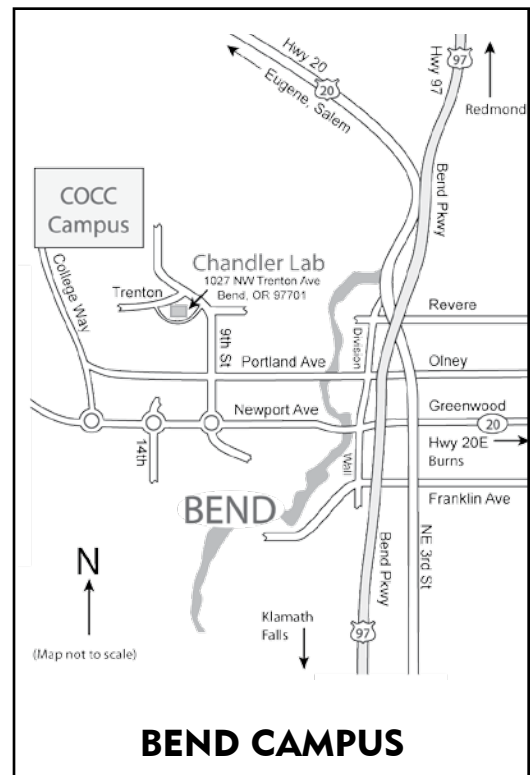
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REDMOND CAMPUS



**CROOK COUNTY/
COCC COMPUTER
AND EDUCATION
CENTER**



BEND CAMPUS

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 31, 60, 85, BA 104 or MTH 100+ level _____ 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 49 and 50. 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

Choose one (1) course from the Arts and Letters discipline studies list, page 49.

_____ CL _____ cr

Physical/Biological Lab science

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

_____ w/lab _____ cr

Social Science

Choose one (1) course from the Social Science discipline studies list, page 50.

_____ CL _____ 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)

COMPUTER AND INFORMATION SYSTEMS

Certificates

For information about the Geographic Information Systems (GIS) program, see pages 132-134.



photo by Eugen Helmbrecht

COMPUTER AND INFORMATION SYSTEMS

Certificate of Completion

46-47 credits

CERTIFICATE REQUIREMENTS

Human Relations course, see list, page 50	3
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	3-4
or BA 104 Business Math	
WR 121 English Composition	4

COMPUTER AIDED DRAFTING (CAD)

Certificate of Completion

45-47 credits

CERTIFICATE REQUIREMENTS

Human Relations course, see list, page 50	3
CIS 120 Computer Concepts	4
CIS 125A1 AutoCAD I	4
CIS 125A2 AutoCAD II	4
CIS 135S1 SolidWorks I	4
CIS 135A1 AutoDESK Revit I	3
CIS 135A2 AutoDESK Revit II	3
CIS 135M1 AutoDESK Inventor I	3
CIS 135M2 AutoDESK Inventor II	3
CIS 135C1 AutoCAD Civil 3D	3
CIS 140 A+ Essentials	4
MTH 85 Technical Math I	3-4
or BA 104 Business Math	
WR 121 English Composition	4

COMPUTER AND INFORMATION SYSTEMS (CIS)

Associate of Applied Science (AAS) Degree

94-98 credits

For information about the Geographic Information Systems (GIS) program, see pages 132-134.

DEGREE AS AWARDED ON TRANSCRIPT

Associate of Applied Science Degree, 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 27-28 credits of CIS electives. Students 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. Students can also earn a general AAS in CIS by choosing any 27-28 elective credits (in addition to the core) with a CIS prefix that are not part of the core courses list. 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 abilities 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 web sites 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 jump drive, basic office supplies - notebooks), \$150

Strongly recommended, but not required:

A home or laptop computer capable of running the Windows operating system Vista or Windows 7, Office 2007, \$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 75 and/or WR95 (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 Co-operative Work Experience) may have to pass Criminal History Checks (CHC) as a condition of their acceptance into a worksite. Students who do not pass the CHC may not be eligible to complete requirements at affiliated practicum sites or be hired for some professional positions. Students who believe their history may interfere with their ability to complete the program of study should contact the program director.

MINIMUM GPA OR GRADE REQUIREMENTS

Students must complete all CIS courses with a grade of "C" or better and graduates must have an overall 2.0 GPA or higher.

REGISTRATION INFORMATION

Core CIS 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 so planning ahead is important. Students may take non-program support courses any term to build skills related to prerequisites.

(continued on next page)

COMPUTER AND INFORMATION SYSTEMS (CIS)

Associate of Applied Science (AAS) Degree *(continued)*

94-98 credits

For information about the Geographic Information Systems (GIS) program, see pages 132-134.

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	Business Communications	3-4
or WR 227	Technical Writing	
or SP 111	Fundamentals of Public Speaking	

Computation

MTH 85	Technical Math I or (higher)	3-4
or BA 104	Business Math, 3-4 credits	

Human Relations

Human Relations course, see list, page 50	3-4
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Other

Health

HHP 252A	Fitness/First Aid	3
----------	-------------------	---

Electives

8

Choose any course from the Discipline Studies list (except CIS prefix classes) and/or from the additional options list below.

Select from:

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	(3)
BA 212	Financial Accounting II	(3)
BA 213	Managerial Accounting	(3)
BA 217	Accounting Fundamentals	(3)
BA 218	Personal Finance	(3)
BA 220	Math for Business Decisions	(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 Application	(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

Degree requirements

Program requirements

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)	3-4
CIS 280	Co-op Work Experience CIS	3

(continued on next page)

COMPUTER AND INFORMATION SYSTEMS (CIS)

Associate of Applied Science (AAS) Degree *(continued)*

94-98 credits

For information about the Geographic Information Systems (GIS) program, see pages 132-134.

Other required courses (CIS electives)

(27-28 credits with CIS prefix or choose one of the following CIS options)

For a general CIS AAS degree (no option) select 27-28 credits with a CIS prefix from the list in the course descriptions, pages 221-226, or choose one of the following CIS options for your degree.

Networking option (28 credits)

CIS 151C	Cisco Internetworking	4
CIS 152C	Cisco Router Configuration	4
CIS 154C	Cisco VLAN / WAN Technologies	4
CIS 279V	Windows Vista or CIS 279W7 Windows 7	4
CIS 279SA	Windows Server 2008 Administration	4
CIS 279NI	Windows Server 2008 Network Infra.	4
CIS 279AD	Windows Server 2008 Active Directory	4

Desktop Support option (28 credits)

CIS 125E	Excel	4
CIS 125A	Access	4
CIS 195	Web Development I	4
CIS 125G	Photoshop	4
CIS 295	Web Development II	4
CIS 279V	Windows Vista or CIS 279W7 Windows 7	4
CIS 235	IT in Business	4

Web Development/Database option (28 credits)

CIS 125G	Photoshop or CIS 125I Adobe Illustrator or	
CIS 125FL	Introduction to Flash	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 275	Introduction to Database Management and Design	4
CIS 276	Advanced SQL	4

CAD option (27 credits)

CIS 125A1	AutoCAD I	4
CIS 125A2	AutoCAD II	4
CIS 135S1	SolidWorks I	4
CIS 135A1	AutoDESK Revit I	3
CIS 135A2	AutoDESK Revit II	3
CIS 135C1	AutoCAD Civil 3D	3
CIS 135M1	AutoDESK Inventor I	3
CIS 135M2	AutoDESK Inventor II	3



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EMERGENCY MEDICAL SERVICESAssociate of Applied Science (AAS) Degree *(continued)*

104-108 credits

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

AAS in Emergency Medical Services - Refer to the Selection Process Handbook for the Paramedic class selection.

General education/foundational skills

MTH 60	Algebra I ¹	4
or MTH 85	Technical Mathematics I	
WR 121	English Composition	4
FOR 211	Supervision and Leadership	3
or BA 285	Business Human Relations	

EMS program requirements

Students must complete all EMS courses listed to graduate.

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/Documentation	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 1	8
EMT 291	EMT Paramedic Clinic Part 1	3
EMT 292	EMT Paramedic Part 2	8
EMT 293	EMT Paramedic Part 2 Clinic	3
EMT 294	EMT Paramedic Part 3	8
EMT 295	EMT Paramedic Part 3 Clinic	3
EMT 280	EMT-Paramedic Co-op Work Experience	7
SFS 230	Rescue Practices	3

Other Requirements

The following is a list of general requirement courses that must be completed for graduation:

General education discipline studies courses, pages 49-50 ²	9	
Computer Competency ³	0-4	
HHP 242	Stress Management	3
or HHP 266	Nutrition for Health	
or HHP 295	Health and Fitness	
SP 218	Interpersonal Communication	3
or SP 111	Fundamentals of Public Speaking	

Upon completion of EMT 151 and 152, students must pass the National Registry and Oregon EMT exam before continuing in paramedic courses. Currently certified students do not need to



photo by Benjamin Edwards

retake the courses for the degree but must hold a current EMT Basic Oregon or NREMT certification to enter the paramedic course.

¹ Students planning to transfer should take MTH 105 or 111.

² See the COCC catalog arts and letters and social science discipline studies lists only. Highly recommended are PSY 202, SOC 201 or higher, and CJ 100 or higher. Foreign language classes will be accepted at the 100 level. Courses must each have a different prefix.

³ Pass computer basic skills competency test (see page 38 for details) or take CIS 120, Computer Concepts.

Advising information

It is strongly advised that candidates applying to 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.

Recommended preparation for EMT Basic students includes successful completion of placement test at college-level reading, writing and math.

Second-year paramedic courses are open only to students who have been admitted. See the Selection Process Handbook for admission information.

MANUFACTURING TECHNOLOGYMANUFACTURING TECHNOLOGY *(continued)*

Associate of Applied Science (AAS) Degree

99 credits

Program electives

Students must choose from at least 38 credits from the following program electives:

CIS 135S1	Solidworks 1	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	PLC I	2
MFG 243	Industrial Sensors	2
MFG 244	PLC 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
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



photo by Eugen Helmbrecht

Other required courses

CIS 70	Introduction to Computers: Windows	2
CIS 120	Computer Concepts	4
HHP 252A	Fitness / First Aid	3
BA 285	Business Human Relations	3
or PSY 207	Applied Psychology	
or SP 218	Interpersonal Communication	
MFG 280	CWE Manufacturing	3
SP 219	Small Group Communication	3
SP 252	Team Skills	1

TOTAL: 96