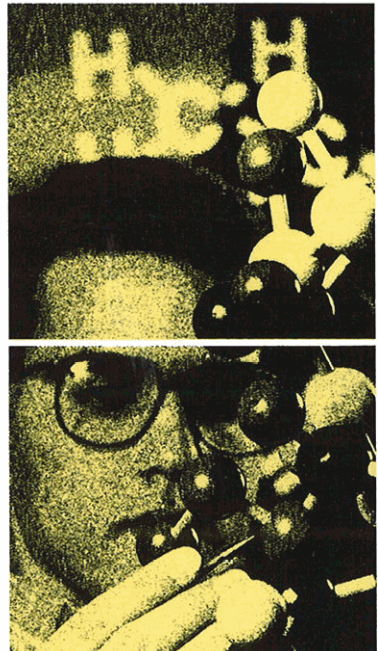


CHEMOKETA



COMMUNITY
COLLEGE
CATALOG
1991-1992





**CHEMEKETA
COMMUNITY
COLLEGE
CATALOG
1991-1992**

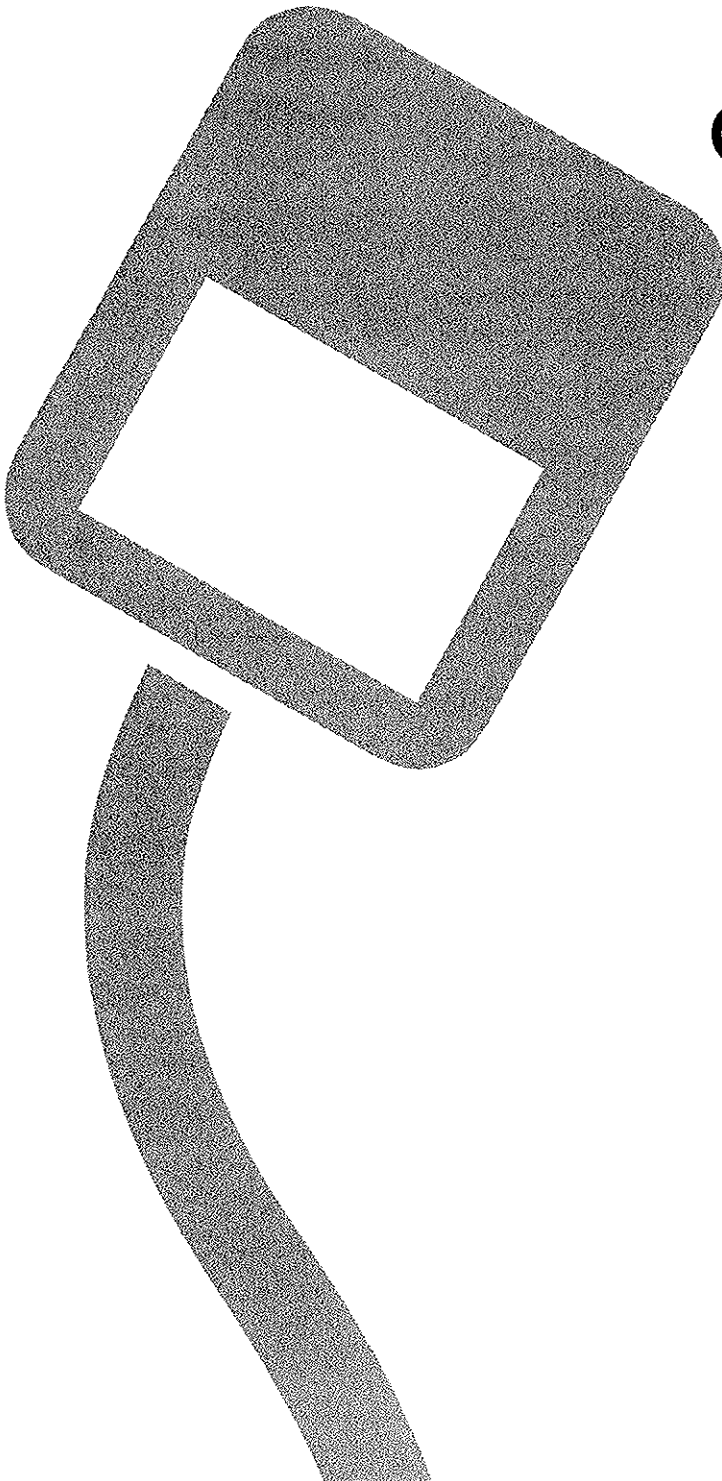


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CHEMEKETA COMMUNITY COLLEGE

4000 Lancaster Drive NE, P.O. Box 14007, Salem, Oregon 97309
Chemeketa Community College is an equal opportunity, affirmative action institution.

APPLICATION FOR ADMISSION

To apply for admission, fill out this form and return or mail it to the Admissions Office, building 22, room 110, Salem campus (address at left). Contact the Admissions Office, (503) 399-5006, for information on limited enrollment programs, admission requirements for specific programs or for the status of your application.

PLEASE PRINT

--	--	--	--	--	--	--	--	--	--

Social Security Number

Name _____
Last First Initial (Previous Name)

Mailing Address _____ City _____
Number Street

State _____ Zip _____ County _____ Phone (Day) _____
(Eve) _____

Permanent Address _____ City _____
Number Street

State _____ Zip _____ County _____ Phone _____

How long at mailing address? _____ How long at permanent address? _____

Date of birth _____ Age _____ Sex Female U.S. Citizen No
Month Day Year Male Yes

Do you have a high school diploma or GED certificate (circle one) Yes No

Schools attended	Name & Location	Grade completed	Last year attended
<input type="checkbox"/> High School <input type="checkbox"/> GED			
Colleges and/or Occupational Schools			

I am applying for: (Please check only one — Financial Aid Students must check item D or E.)

- A Non-credit classes only
 B Evening classes only
 C Six credit hours (or less) or audits only
 D College transfer curriculum _____
 (enter code and/or title from other side)
 E Occupational curriculum _____
 (enter code and/or title from other side)

- What term do you plan to start at CCC?
 Fall (Sept.)
 Winter (Jan.)
 Spring (March)
 Summer (June)

To assist the college in complying with federal requirements and to provide needed services, you are urged to supply the following information voluntarily. This information is confidential.

Ethnic background
(circle number which applies)

- White, Non-Hispanic
- Black, Non-Hispanic
- Hispanic
- American Indian or Alaska native
- Asian or Pacific Islander
- No response

Are you handicapped?
(circle numbers which apply)

- No
- Confidential
- Hearing impaired
- Deaf
- Speech impaired
- Visually impaired
- Blind
- Physically handicapped
- Learning Disability
- Other _____

In case of emergency notify:

Name _____ Address _____ Phone _____

I certify that all statements on this application are complete and true. I also understand that if I am admitted and do not enroll for the term to which I am admitted I will need to reapply for admission.

Please note: No submitted materials will be returned and/or duplicated.

Signature _____ Date _____

PROGRAM CHOICES

Select one of the following programs of study:

OCCUPATIONAL PROGRAMS

- Accounting (025)
- Automotive Technician (129)
- Auto Parts Sales (668)
- Banking and Finance (545)
- * Building Inspection (635)
- Civil-Structural Engineering (110)
- Computer-Aided Design/Computer-Aided Manufacturing (151)
- Computer Electronics Technology (123-29E)
- Computer Programming (032)
- Computer Programming - Microcomputer Support Specialist (038)
- Computer Support (036)
- Criminal Justice (044)
- * Dental Assisting (081-29C)
- Drafting Technology - CAD (142)
- Early Childhood Education (060)
- Electronic Engineering (120-29E)
- * Emergency Medical Technology (607-29L)
- Fire Prevention/Insurance Risk Inspection (571)
- * Fire Suppression (052-29D)
- Forest Technology (056)
- * Health Information Technician/Medical Transcriptionist (095-29P)
- * Health Services Coordinator (094-29B)
- High School Completion (063)
- Hospitality Systems Management (624)
- * Human Services - Alcohol/Drugs (092)
- * Human Services - Gerontology (093)
- * Human Services - Social Services (091)
- Industrial Electronics (126)
- Industrial Technology (160)
- Instructional Assistant - Bilingual/Bicultural (163)
- Instructional Assistant - Classroom Asst/Kind-Primary (164)
- Instructional Assistant - Classroom Asst/Intermed. Elem. (165)
- Instructional Assistant - Classroom Asst/Middle-Sr. High (166)
- Instructional Assistant - Dev. Disabilities/Deaf-Blind (167)
- Instructional Assistant - Dev. Disabilities/Mental-Phys. (168)
- Instructional Assistant - Vocational/Technical (169)
- Management (026)
- Manufacturing Operations (148)
- Manufacturing Technology (147)
- Mechanical Design (143)
- * Medical Office Assistant (083-29M)
- * Nursing (084)
 - Pre-Nursing (29H)
- Office Administration & Technology - Engineering Option (520)
- Office Administration & Technology - Executive Option (528)
- Office Administration & Technology - Information Processing (532)
- Office Administration & Technology - Legal Option (514)
- Office Administration & Technology - Medical Option (529)
- Office Administration & Technology - Office Accounting (525)
- Office Administration & Technology - One Year Option (523)
- Office Administration & Technology - Short Term Option (502)
- Real Estate (040)
- Survey Technology (638)
- * Unit Clerk (615)
- * Visual Communications (145-29J)
- Welding (137)
- Welding Fabrication (136)

One star (*) indicates programs which may have special admission requirements or enrollment limits. PLEASE CONTACT THE ADMISSIONS OFFICE.

LOWER DIVISION COURSES OF STUDY WHICH MAY BE TRANSFERRED TO OREGON'S FOUR-YEAR COLLEGES AND UNIVERSITIES:

- LDC-BUSINESS (210)**
 - Accounting
 - ** Business Administration
- LDC-COMPUTER SCIENCES (320)**
 - ** Computer Science
- LDC-EDUCATION (220)**
 - ** Elementary
 - ** Secondary
- LDC-ENGINEERING (330)**
 - ** Engineering
- LDC-FORESTRY (340)**
 - ** Forestry
- LDC-GENERAL STUDIES (280)**
 - ** Exploratory
 - General Studies
 - Undecided Majors
- LDC-HEALTH (275)**
 - Community Health
 - ** Health Education
 - ** Nursing
- LDC-HOME ECONOMICS (240)**
 - Child Development
 - ** Home Economics
- LDC-HUMANITIES (230)**
 - Architecture
 - ** Art
 - ** English
 - ** Foreign Languages
 - ** Journalism
 - Literature
 - ** Music
 - ** Philosophy
 - ** Speech
 - ** Theater
- LDC-MATHEMATICS (310)**
 - ** Mathematics
- LDC-PHYSICAL EDUCATION / HUMAN MOVEMENT STUDIES (270)**
 - ** Physical Education
- LDC-SCIENCE (300)**
 - ** Agriculture
 - ** Biology
 - ** Chemistry
 - ** Chiropractic
 - ** Dental Hygiene
 - Entomology
 - ** Geology
 - Horticulture
 - ** Oceanography
 - Physical Science
 - ** Physics
 - ** Pre-Professional Study
(Medicine, Dentistry, and Veterinary Medicine)
 - ** Zoology
- LDC-SOCIAL SCIENCES (260)**
 - ** Anthropology
 - ** Economics
 - Ethnic Studies
 - ** Geography
 - ** History
 - Law Enforcement-Corrections
 - ** Political Science
 - Pre-Law
 - ** Psychology
 - ** Sociology

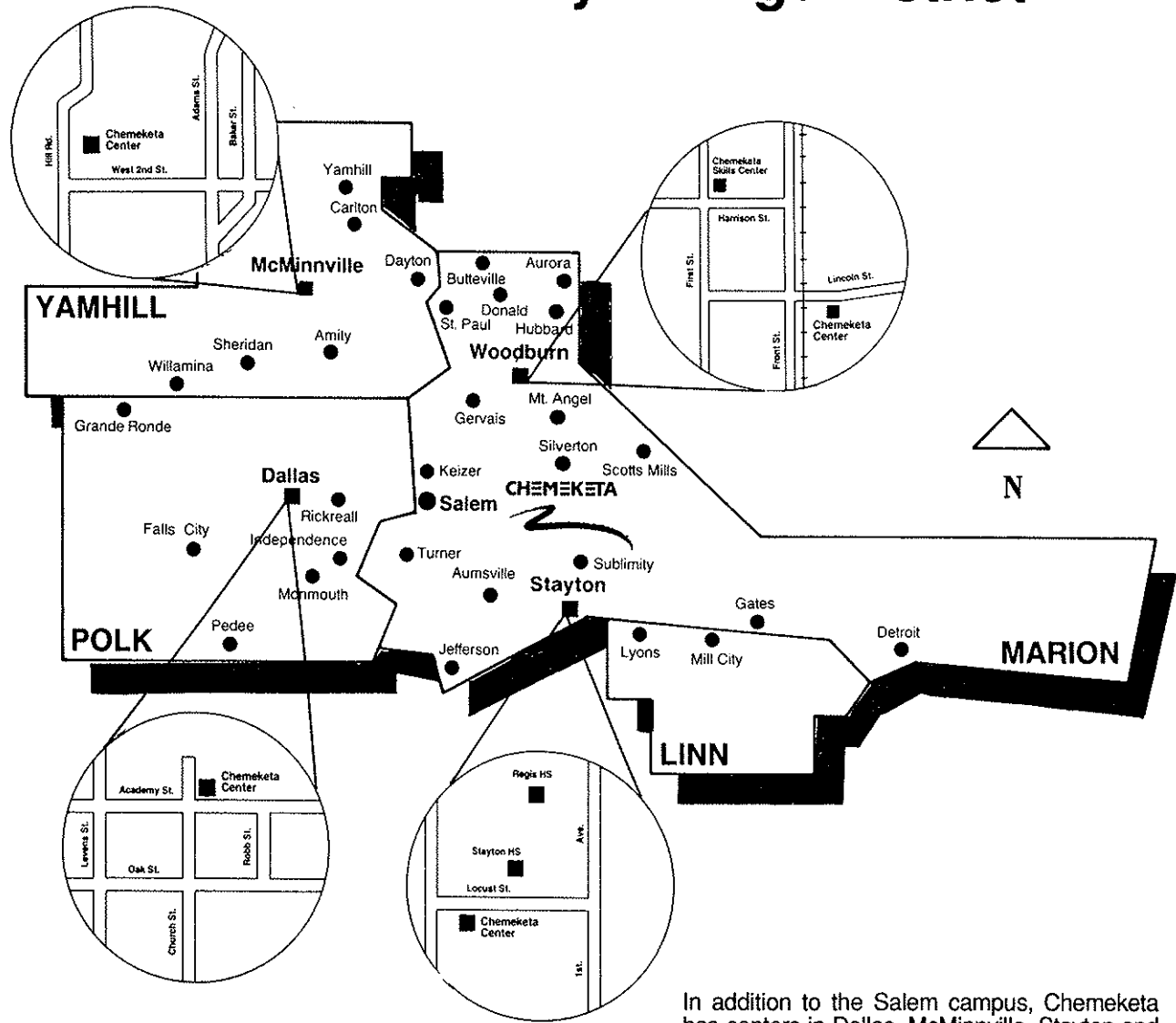
Two stars (**) indicate which courses of study are included in the college catalog.






ABOUT CHEMEKETA



Chemeketa Community College District



LEGEND

-  Salem Campus
-  Communities with Chemeketa Centers
-  Other communities where Chemeketa classes are held

In addition to the Salem campus, Chemeketa has centers in Dallas, McMinnville, Stayton and Woodburn and offers classes in many other communities in the district.

For a map of the Salem campus, see page 146.

Introducing Chemeketa

Welcome to Chemeketa Community College

Chemeketa is your community college. Our goal is to serve all of you who live within our college district in every way that we can.

You can finish your first two years at Chemeketa, take the occupational training you need to qualify for a job, or finish your high school education. You can explore career ideas, retrain or add to your job skills, or get professional help on how to run a business. You can pursue a special interest or broaden your education.

You can fit as much of this as you want into your life. You may go to school full time to finish a one- or two-year program. You may go part time to take a class or workshop or two. You may attend classes and special events on the Salem Campus or at one of our centers in Dallas, McMinnville, Stayton, or Woodburn. We also offer classes in schools and other locations in communities throughout the college district. You can even stay home and take a class by television.

Whatever your goals and interests, we are willing (and usually able) to meet your needs. We want to help you add to the quality of your life.

What kinds of education does Chemeketa offer?

Basically, Chemeketa has four areas of learning:

■ Vocational-technical education trains students who want to qualify for work in specific fields.

We offer more than 40 occupational training programs. In some of these, you may earn a Certificate of Completion in one year. In most programs, you may earn an Associate of Applied Science degree. It usually takes two years to meet the requirements; it may take longer if you attend part time.

In addition to vocational classes, our occupational programs



include general education courses. The aim of these courses is to help you become more competent in writing and mathematics and gain knowledge of social sciences, humanities, sciences, and communications.

■ College transfer courses are for students who wish to continue their education at a four-year college or university. If you successfully complete Chemeketa's two-year college transfer program, you may also earn an Associate of Arts degree. See Page 26 for requirements.

Some of our vocational and technical programs also include courses which may be trans-

ferred for college credit. For more specific information, consult with a Chemeketa counselor or advisor, or with the four-year institution you wish to attend. Generally, transfer courses are numbered 100 or above.

■ Lifelong learning is important at Chemeketa. We encourage you to continue to learn throughout your life. We offer many credit and non-credit classes, workshops, and short courses. Chemeketa classes can help you to improve your technical, vocational, avocational, and academic knowledge and skills; to retrain for new positions; and to continue your personal development.

Academic Calendar

	Fall 1991	Winter 1992	Spring 1992	Summer 1992	Fall 1992 (tentative)
Registration	Sept. 16-18	Jan. 3	March 30	June 19	Sept. 21-23
Evening classes begin	Sept. 23	Jan. 6	March 30	June 22	Sept. 28
Day classes begin	Sept. 23	Jan. 6	March 31	June 22	Sept. 28
Last day to withdraw and receive a refund	Oct. 4	Jan. 17	April 13	July 3	Oct. 9
Last day to register or add classes	Oct. 11	Jan. 24	April 20	July 10	Oct. 16
Audit requests due	Oct. 18	Jan. 31	April 27	July 17	Oct. 23
Applications for next term's graduation due	Oct. 18	Jan. 31	April 27	July 17	Oct. 23
Holidays	Nov. 11 Nov. 28, 29		May 25	July 4	Nov. 11 Nov. 26, 27
Last day to withdraw from classes without responsibility for grades	Nov. 25	Feb. 28	May 22	July 24	Nov. 30
Review and final examination	Dec. 9-12	Mar. 16-19	June 8-11		Dec. 14-17
End of term	Dec. 13	Mar. 20	June 12	Aug. 14	Dec. 18
Graduation General Educational Development and High School Completion One- and two-year programs			June 10 June 12		

Dates are subject to change. Please check each term's Schedule of Classes for current information.

■ **Developmental skill building classes** are offered for people who want to learn basic reading, writing, mathematics, and study skills, or finish high school, or learn English as a second language.

Chemeketa schedules classes during the day, evenings, and weekends.

Chemeketa's faculty

Chemeketa has over 235 full-time faculty members. In general, faculty who teach college transfer courses have at least a master's degree; some have doctorates. Faculty in occupational programs generally have a rich background which combines education with practical, on-the-job experience. In addition, we hire an average of 700 part-time teachers each year. Most of them teach evening classes on subjects directly related to their full-time jobs in the community.

How are we supported?

As a public institution, most of Chemeketa's financial support comes from local property taxes, state school support funds, tuition, and fees.

What is our history?

Chemeketa's roots began in 1955 when the local school district established Salem Technical Vocational School. The community college district was formed in September, 1969.

Our credentials

The Northwest Association of Schools and Colleges granted full accreditation to Chemeketa in December, 1972. In addition, the Oregon Department of Education has approved all of our occupational programs and college transfer courses. Professional associations have also accredited those occupational programs which require approval.

For more information on accreditation and approvals, contact the office of the Vice President of Academic Services in Building 5 on the Salem Campus, phone 399-5144.

Where is Chemeketa?

The Chemeketa Community College district covers over 2,600 square miles in Oregon's mid-Willamette Valley. It includes Marion, Polk, most of



Yamhill, and part of Linn counties.

We consider the entire college district as our campus. Our 160-acre main campus is located at 4000 Lancaster Drive, N.E., Salem. We have centers in Dallas, McMinnville, Stayton, and Woodburn. We also schedule credit and non-credit classes, workshops, seminars, and special programs in about 25 communities throughout the college district. These classes meet during the day, evening, and on weekends in schools, businesses, churches, and homes.

Our Training and Economic Development Center is located in Liberty Square, 365 Ferry Street, S.E., in downtown Salem.

What kind of facilities does Chemeketa have?

Chemeketa's Salem Campus has seven major buildings and a number of smaller buildings. Building 2 houses the Advising and Counseling Center, Tutoring Services Center, the Planetarium and the Learning Resource Center. The Learning Resource Center includes the library, media services, telecommunications programs, and a television studio.

The Learning Resource Center, with its computerized card catalog, has a collection of approximately 50,000 books; over 1,000 periodicals; a large selection of maps and pamphlets; 1,400 audio cassettes; 2,000 video cassettes; and many other films, slides, and records.

Within the learning resource center students also have access to copy machines, typewriters, and computers.

Our science and health building has modern, well-equipped laboratories for science and health-related programs. In the physical education building are workout and weight rooms, racquetball courts, and a gymnasium. Other buildings provide modern classrooms, welding and machine shops, and computer laboratories. There is a fire-training building that also serves as a fire station.

For more information about facilities on the Salem Campus, contact the Scheduler's Office in Building 22 or call 399-5008.

Chemeketa's centers in Dallas, McMinnville, Stayton, and Woodburn have classrooms, up-to-date laboratories, and offices.

Who are Chemeketa's students?

You will not find a "typical" student at Chemeketa. Our students are all ages, from recent high school graduates to retired grandparents. They have many different goals. Some persons come to Chemeketa to train or retrain for new careers or to update their occupational skills; others return to school to increase their knowledge, learn new skills, or to get to know more about themselves and their relationships with other people.

Some of our students attend full time; others, part time. Many combine work and school.

Each year about 39,000 persons enroll in Chemeketa classes and workshops. Each term, about 3,500 students are enrolled full time.

Admission and registration

Who may enroll at Chemeketa?
(Admissions Office, 399-5006; FAX, 399-3918)

Chemeketa has an "open door" policy. In general, you may enroll in Chemeketa classes if you are 18 years of age or older and can benefit from the instruction. If you are 16 or 17 years of age and have not graduated from high school, you may enroll if your high school issues you a release form allowing you to be admitted to Chemeketa.

Under special conditions, students under age 16 may enroll in certain classes during summer term only. The Admissions Office can provide details for this process.

The table on Page 5 lists the enrollment steps. Updated in-

About this catalog

Chemeketa publishes this catalog to give you, our students and public, current information about the college.

We make every effort to be sure that this information is accurate at the time of publication. However, sometimes the college finds it necessary to make some changes before the next catalog is printed. These changes may affect the costs, college policies and procedures, the calendar, and some curricula and courses.

Therefore, we do not consider the catalog as a hard and fast contract between you and the college; rather, we are trying to give as much relevant information as possible to all of you who may use our services.

formation is published each term in the *Schedule of Classes*.

You will find an Application for Admission Form on Page iii in the front of this catalog. Before you apply for admission, contact the Advising and Counseling Center in Building 2 on the Salem Campus, at 399-5120. Talk with a counselor about your academic and occupational plans and the requirements for the program which interests you. You may also meet with a counselor at Chemeketa's centers in Dallas, McMinnville, Stayton, and Woodburn.

Placement tests (399-5120)

If you are a new student, Chemeketa requires you to take a free placement test in order to be accepted for admission. Test results more than two years old are not valid. The purpose of the test is to determine your skill levels in reading, English, writing, and mathematics so that you may choose courses that suit your abilities. Under certain conditions, you may be granted a test waiver.

Information about tests and test waivers may be obtained from the Advising and Counseling Center in Building 2 on the Salem Campus or from Chemeketa centers in Dallas, McMinnville, Stayton, and Woodburn.

Orientation (399-5120)

After you have applied for admission, you will be invited to an orientation meeting before the term begins. The orientation, which is optional, will introduce you to Chemeketa and some of our instructors. You will receive information about registration and ways you may participate in campus and college life at Chemeketa.

Tours of campus (399-3995)

Tours of campus are available through the Chemeketa Internship Program (ChIPs) in the Student Life Office, Building 3, Room 101. You may stop by or call to schedule a student-guided tour.

Registration (399-5001)

For registration dates and other information, see **How to Enroll at Chemeketa** on Page 5 and the **Academic Calendar** on Page 2. Each term the *Schedule of Classes* gives the step-by-step procedure for registering for classes.

You will receive college credit only if you officially register for the class during the term in which it is offered.

You may not register if you owe the college any money from previous terms.

Class loads (399-5001)

If you enroll in 12 or more credit hours, you are considered full time for academic purposes. The average class load is 15 credit hours per term. If you wish to enroll for more than 18 credit hours, you must obtain special permission from the Registrar. You will be charged additional tuition for each credit hour over 18 hours. The rates are listed under **Tuition** on Page 6.

Class changes (399-5001)

You may make changes in your class schedule before the deadline listed in the **Academic Calendar** on Page 2. To make changes, complete an Add-Drop Form. Forms are available in the Registrar's Office, staff offices, and the Advising and Counseling Center. The changes should be approved by your academic advisor. Turn in the Add-Drop Form at the Registrar's Office in Building 22.

Enrollment limitations

Even though Chemeketa has an open door policy, we cannot guarantee that you will be admitted to a particular program. The college may restrict enrollment in a class or program because we have limited staff, space, or equipment. Enrollment is also limited for some programs because of special admission requirements.

We urge you to apply early for all programs, especially for the following occupational programs which limit enrollment and have special admission requirements:

Building Inspection

How to Enroll at Chemeketa

Student Classification	1. Academic and career decision making	2. Placement testing	3. Application for admission	4. Registration for classes
Enrolling for MOST Salem Campus classes sponsored by Chemeketa	Contact Advising and Counseling Center, Building 2, Salem Campus (optional).	Contact Advising and Counseling Center, Building 2, Salem Campus.	<ul style="list-style-type: none"> ■ File application with Admissions Office, Building 22, Salem Campus. or ■ Use form found in quarterly <i>Schedule of Classes</i> if enrolling for non-credit classes or six or less credit hours of classes. 	<p>New/Returning Students—Register on Salem Campus following directions sent to all applicants by admissions office.</p> <p>Continuing Students—Register on Salem Campus following directions published in the quarterly <i>Schedule of Classes</i>.</p>
Enrolling for classes held outside of Salem	Contact Advising and Counseling Center, Building 2, Salem Campus or call nearest Chemeketa center in Dallas, McMinnville, Stayton, or Woodburn (optional).	Contact nearest Chemeketa center.	Application for admission recommended, but not required.	<ul style="list-style-type: none"> ■ Follow procedure above for enrolling on Salem Campus. or ■ Register at a Chemeketa center. or ■ Register at first class session.
Enrolling for Salem evening, weekend, or non-credit classes	Contact Advising and Counseling Center, Building 2, Salem Campus (optional).	Contact Advising and Counseling Center, Building 2, Salem Campus (optional).	<ul style="list-style-type: none"> ■ Application for admission recommended, but not required. or ■ Use form found in quarterly <i>Schedule of Classes</i> if enrolling for non-credit classes or six or less credit hours of classes. 	<ul style="list-style-type: none"> ■ Follow procedure above for enrolling on Salem Campus. or ■ Register by phone for those classes identified as phone-in registration classes in the quarterly <i>Schedule of Classes</i>. or ■ Register at the first class session.
Interested in GED or English as a Second Language (non-credit)	Contact Advising and Counseling Center, Building 2, Salem Campus, or a Chemeketa center in Dallas, McMinnville, Stayton, or Woodburn, or the Downtown Learning Center in Salem (optional).	<p>GED: Contact Developmental Education Office, Building 2, Salem Campus.</p> <p>ESL: Contact ESL Office, Building 18, Salem Campus.</p>	Application for admission not required. Students 16 and 17 years old must have a High School Release Form.	Consult quarterly <i>Schedule of Classes</i> . Open entry during term.
Interested in earning a high school diploma	Contact the High School Completion Office, Building 50, Salem Campus, or call nearest Chemeketa center in Dallas, McMinnville, Stayton or Woodburn (optional).	Contact Advising and Counseling Center, Building 2, Salem Campus.	<ul style="list-style-type: none"> ■ File high school transcript with High School Completion Office, Building 50, Salem Campus. ■ File application for admission with Admissions Office, Building 22, Salem Campus. ■ Students 16 and 17 years old must have a high school release. 	Follow directions sent by Admissions Office ten days before registration.

These programs may have special admission requirements or enrollment limits. Please contact the Admissions Office, 399-5006.

Building Inspection
 Dental Assisting
 Emergency Medical Technology
 Fire Suppression

Health Care Support Services
 Human Services
 Nursing (RN, LPN, nursing assistant, re-entry courses)
 Visual Communications

Student's Check List

Before you register:

1. If you are a new student, have you:

- taken mathematics, reading, and English placement tests? Contact the Advising and Counseling Center, Salem Campus, Building 2, 399-5120.
- applied for admission to the college? Contact the Admissions Office, Salem Campus, Building 22, 399-5006. An application form is on page iii.
- checked to find out if there are special requirements for the program you want to enter? Contact the Admissions Office, Salem Campus, Building 22, 399-5006.

2. Do you know the costs of:

- tuition and fees?
- special tools, equipment, uniforms, etc. required by your program?

These costs are listed in this catalog in the description of your occupational program.

3. Have you arranged for:

- transportation?
- child care?

4. Have you asked about financial aid? Contact the Financial Aid Office, Salem campus, Building 22, 399-5018, or a Chemeketa center in Dallas, McMinnville, Stayton, or Woodburn.

5. Have you checked on your eligibility for Veterans Administration educational benefits? Contact the Registrar's Office, Salem Campus, Building 22, 399-5004.

6. Have you read the term *Schedule of Classes* for registration information and class listings? A copy of the schedule should be delivered to you by mail before each term begins. If not, contact the Advising and Counseling Center, Salem Campus, Building 2, 399-5120, or the Chemeketa center in your community.

Dental Assisting
Emergency Medical
Technology
Fire Suppression
Health Care Support Services
(Health Information
Technician-Medical
Transcriptionist, Health
Services Coordinator,
Medical Office Assistant,
Unit Clerk)
Human Services
Nursing (Registered Nurse,
Licensed Practical Nurse,
Nursing Assistant,
and re-entry
courses)

Visual Communications

You may still be admitted to the college even though you are not accepted in one of these programs. You may apply to enroll in a related pre-vocational program or some other program.

Transfer credits from other colleges, CLEP, Advanced Placement, and the military (399-5006)

You may transfer credits from other colleges you have attended by requesting each of them to send an official copy of your transcript to our Admissions Office.

If you have taken the College Level Examination Program (CLEP), or the Advanced Placement Test, request that your scores be forwarded to the Admissions Office. Then contact the Admissions Office and request, in writing, an evaluation of your transcripts and scores. For more CLEP and Advanced Placement information, see Page 14.

Chemeketa also accepts some credits from the military and the Community College of the Air Force. Submit an official copy of your CCAF transcript or a certified copy of your DD214 to the Admissions Office and request an evaluation of your credits.

Your accepted transfer credits and scores will become part of your permanent record at Chemeketa. Your transfer grades are not indicated; only the course grades you earn at Chemeketa are used to compute your grade point average.

International students (399-5006; FAX, 399-3918)

If you are a citizen of another country, you will be asked to meet certain federal immigration and college requirements before being admitted to Chemeketa. You are expected to maintain certain levels of academic achievement acceptable to the United States Immigration Service and to the college. Chemeketa's Admissions Office has special application materials for international students.

Deadlines for international students to mail or turn in application forms to the Admissions Office, Building 22, Room 110, are fall term, September 1; winter term, December 1; spring term, March 1; and summer term, June 1.

If you are an international student, you may contact the Student Life Office, Building 3, Room 101, for help in how to enroll.

Readmission (399-5006)

If you are a former Chemeketa student who was not enrolled in the college the previous term (or, for fall enrollment, was not registered the previous spring or summer), and you wish to return to the college, follow the enrollment steps for new students given in the **How to Enroll at Chemeketa** table on Page 5.

Money Matters

Tuition (399-6580)

Tuition and fees are due in full when you register unless you make special arrangements ahead of time with the Business Office. (See information under **Deferred tuition payments** on Page 7.)

Credit courses

If you are a full-time student, you are required to enroll in 12 credit hours for full academic standing.

If you enroll for 19 hours or more, you will be charged a fee per credit hour for each hour over 18 hours.

Tuition rates for 1991-92 are:

Oregon students

Full time.....\$312 per term

Part time \$26 per
.....credit hour

Out-of-state students

Full time \$1212 per term
Part time \$101 per
.....credit hour

International Students

Full time \$1260 per term
Part time \$105 per
.....credit hour

Non-credit courses

The cost of most non-credit courses is \$2 per class hour with a \$5 minimum charge, or as stated in the term *Schedule of Classes*.

Tuition rates for non-credit courses apply even if you are considered a full-time student.

There is no charge for adult basic education, general educational development (GED), and non-credit English as a second language classes. There is a \$35 fee to take the GED test.

Certain courses, particularly some training classes, may require separate registration and tuition.

For some classes, there are additional charges to cover the costs of required materials.

Oregon residency

You are considered an Oregon student if you have established a permanent residence within the state at least three months before you register for the first time. The college may ask you to provide information proving you meet the residence requirement.

You are considered an out-of-state student if your permanent address is outside of Oregon. If you are an international student who is required to have an I-20 immigration document, you are considered an out-of-state student as long as you are required to have that document.

Auditing courses (399-5001)

If you enroll in credit courses but do not wish to receive grades or credits, you may register as an auditor. However, you must pay full tuition and fees. Pick up and turn in an Audit Request Form at the Registrar's Office before the end of the fourth week of the term.

Deferred tuition payments

If you are enrolling in six or more credit hours, you may pay your tuition in installments, with the approval of the Business Office. When you register, you pay one-third of your tuition for credit classes plus all of your non-credit-course tuition, lab fees, and all other charges. You enter a contract with the Business Office to pay the remaining amount due. There is a \$10 non-refundable contract processing fee for this deferred tuition service. Make arrangements with the Business Office before you register.

Tuition refund policy

If the college cancels a class, we will refund your tuition.

If you decide to withdraw from Chemeketa during the first two weeks of a term, you may receive a tuition refund. See detailed information under **Withdrawal from College**, Page 13.

If Chemeketa cancels a course because the enrollment is below a minimum number of students, we give you a full refund. You will not receive a refund if you are suspended from the college.

Other costs and fees (399-6580)

The cost of books and supplies for full-time students is about \$170 per term. However, in some of our programs you will also have to provide your own tools, equipment, and uniforms. These costs are included in the descriptions of occupational programs on pages 37 to 92.

Fees vary by the course. They are included in the course descriptions in this catalog.

You may rent a hall locker for \$3.50 a term. Our physical education locker and towel fee is \$11 if you are not enrolled in a PE class.

Contact the Admissions Office in Building 22 on the Salem Campus for more information on fees and program costs.

Student health and accident insurance (399-6580)

The college does not carry health and accident insurance for students. As a half-time student, you may purchase health and accident insurance for yourself and your dependents

at the Business Office in Building 22 during the first two weeks of each term.

If you enroll in Chemeketa fall, winter, or spring terms, you may purchase coverage to include summer term.

Chemeketa encourages you to buy insurance coverage if you are enrolled in classes involving risk and/or much physical activity. In some classes and activities where good safety practices are required, students will be asked to sign a risk waiver form.

Veterans' services (399-5004)

If you are a veteran, contact the veterans' clerk in the Registrar's Office for information on Veterans Administration policies, procedures, and approved programs of instruction.

Chemeketa processes a veteran's application for certification as well as the necessary supporting documents (DD214, etc.) according to VA regulations. We forward certification information to the VA regional office in Portland. Usually this completes the application process for VA educational benefits. In addition, you must apply for admission through the Admissions Office.

If you have attended other colleges, arrange to have transcripts of your credits sent to the Admissions Office and request an evaluation.

Policy of satisfactory progress: In accordance with a Veterans Administration directive, if you receive veterans' educational benefits and are enrolled half-time (six credit hours) to full-time (at least 12 credit hours), you must comply with the following regulations:

- Receive no more than 44 deficiency course units over a two-year period.
- Accumulate a minimum grade point average (GPA) of 2.0 in your program. GPA is based on A=4, B=3, C=2, D=1, F=0.
- Make any changes which affect your certification status by the end of the fourth week of a term. After that, you are responsible for completing all certified credit hours in which you are enrolled.

Student Rights and Responsibilities

Chemeketa's Board of Education has approved a document outlining the rights and responsibilities of students. See the *Trail Guide*, a publication available from the Student Life Office.

Any term your GPA falls below 2.0 or you do not satisfactorily complete the required hours listed above, the Veterans' Clerk will advise you that you are on probation. If you do not maintain the GPA and/or credit hour requirements for two consecutive terms, the clerk will re-

cord a notice of unsatisfactory progress and forward it to the VA regional office in Portland.

Once you are placed on unsatisfactory progress, you must enroll in, and complete, one term before the Veterans' Clerk will submit your records to the VA for recertification. During this term, you must maintain the same credit-hour level as you did when you were certified. You must earn a minimum 2.0 GPA for the term.

Financial aid (399-5018)

At Chemeketa, we believe that you, as a student, along with your family, are responsible for paying for your education. However, if you do not have enough

money to attend Chemeketa, please contact our Financial Aid Office in Building 22, Room 118, on the Salem Campus. We are ready to help you apply for grants, loans, and part-time jobs.

Are you eligible?

To qualify for financial aid, you must:

- Be at least 18 years of age or have a high school diploma or a General Educational Development (GED) high school equivalency certificate or have the ability to benefit from a college education.
- Be a United States citizen or able to provide I-94 or other documents showing you are an eligible non-citizen.
- Be registered with Selective Service if you are a man born after December 31, 1960. (If you are now on active duty in the United States Armed Forces—not the reserves—you do not have to be registered.)
- Show a need for financial help.
- Enroll in a degree program or a certificate program at Chemeketa.
- Enroll in six or more credit hours at Chemeketa with these restrictions:
 - 1) If you wish to receive aid as a full-time student, you must register for 12 or more credit hours. These may include only one three-credit-hour course by television or mail.
 - 2) If you register for six to 11 credit hours, you may not include any courses by television or by mail.
 - 3) You may not include audited and non-credit courses in these totals.
 - 4) You may not count a repeated course. An exception may be made if an instructor recommends, in writing, that you repeat a course in which you earned lower than a C grade.
 - 5) You may count up to 45 credit hours of developmental courses which were recommended by your advisor.
 - 6) You may not count credits you earned by passing challenge examinations.



• Score at or above 39 in the reading section of the college's placement test. If you score below 39:

- 1) You are not eligible for financial aid.
- 2) Contact the Advising and Counseling Center; you may be eligible to retake the placement test.

What kinds of financial aid are available?

There are three kinds of financial aid available for students enrolled at Chemeketa:

- Grants and scholarships which you do not repay.
- Loans which you must repay.
- Part-time jobs.

For detailed information, read the chart on Pages 10 and 11.

How to apply

Follow these steps to apply for financial aid:

- Pick up (or ask us to mail you) a Financial Aid Form at the Financial Aid Office on the Salem Campus or at a center in Dallas, McMinnville, Stayton, or Woodburn.
- Fill out and mail your Financial Aid Form to College Scholarship Service (CSS), following directions on the form. Ask CSS to send a copy to Chemeketa. Be sure to include a check or money order to cover the fee indicated on the form.
- Take Chemeketa's placement test. Contact the Advising and Counseling Center on the Salem Campus or a Chemeketa center in Dallas, McMinnville, Stayton, or Woodburn for an appointment.
- Apply for admission to Chemeketa.
- Ask other colleges you have attended to mail financial aid transcripts to Chemeketa.

After we have processed your Financial Aid Form, we will send you the forms you need to complete your file.

When to apply

We suggest strongly that you apply for financial aid at least three months before you plan to enroll at Chemeketa. Applications are processed in the order we receive them. Since many students start fall term, it may take longer to process your ap-

plication during the summer. If possible, file your Financial Aid Form by April 1 if you plan to begin fall term.

It takes at least eight to 10 weeks from the time you file your Financial Aid Form before money can be available for you. If you apply near the beginning of a term, you will need to be prepared to begin paying for tuition, fees, and books with your own money while your financial aid file is being processed.

Final application dates for each term are posted in the Financial Aid Office. If you apply after these dates, you will be eligible only for a Pell Grant and a Stafford Student Loan for the following term.

We accept financial aid applications throughout the academic year which begins with fall term. If you do not apply before you start school and later find you need help, you may apply at any time. Some financial aid programs have limited funds available. If you apply after these funds have been used up, the types and amounts of financial aid you can receive will be limited.

You must apply again for financial aid each school year.

Availability of funds

Pell Grant and Stafford Loan funds are available throughout the year for qualified students who complete the required processes and enroll for the required credit hours.

The Oregon State Need Grant is awarded to qualifying full-time students on an application-date basis determined by the state. Students eligible for the Perkins Student Loan, Supplemental Educational Opportunity Grant, and College Work-Study are awarded these funds on the basis of the date of completion of the student's file. Since these funds are limited, the earliest dates are given the highest priority. Not all eligible students will receive these funds.

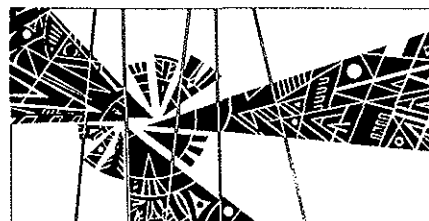
The amount of the student's award will be determined each year by the Pell Grant and State Need Grant programs and by Chemeketa for the campus-based programs, based on the school's funding for the year.

Most funds are disbursed at the beginning of each term. College Work-Study funds are paid on

the last business day of the month.

How to stay eligible

To continue to receive financial aid, Chemeketa requires you to register for, complete, and maintain a 2.0 grade point average (GPA) for the following number of credit hours:



The meaning of Chemeketa

The name Chemeketa is an Indian word meaning "place of peace." Long before white settlers came to this area, Willamette Valley Indians would gather at a place they called Chemeketa, today known as Salem. There they conducted their councils, renewed friendships, and shared old ideas and cultivated new ones. It is hoped that many who come to Chemeketa today will do just that.

The meaning of Chemeketa is illustrated on the sculptured wall panels (pictured above) which appear on Building 3 on our Salem campus. Designed by graphic artist Arvid Orbeck, the panels symbolize the territorial divisions of the Indian tribes and the movement of the tribes toward the established meeting place.

As the tribes move through the territorial divisions, the carved designs become less aggressive and less linear. Softer curves start to enter into the forms, showing more peaceful attitudes. The final points of the arrow shapes become completely calm upon reaching the center, where the individual chiefs, each indicated with his own form of dress, decoration, and behavior, sit down in a formal circle for peaceful work.

Kinds of financial aid available at Chemeketa

Except as listed below, all financial aid programs have the following requirements:

- You must enroll for at least six credit hours each term.
- You must be a United States citizen or an eligible non-citizen.
- You must not be in default or owe a refund to any Title IV financial aid program.
- If you are a male over 18 years of age and born after December 31, 1960, you must be registered with the United States Selective Service, unless you are currently on active duty with the armed forces (membership in the reserves does not count).
- You must use the money you receive to help meet the costs of attending Chemeketa.
- You must maintain satisfactory academic progress.
- You must file a Financial Aid Form to apply.
- You must be in a degree or certificate program.

Program and source of funding	Eligibility requirements	Available amounts	Special information
Grants and scholarships Pell Grant (funded by the federal government)	<ul style="list-style-type: none"> ■ You must not have a bachelor's degree. 	<ul style="list-style-type: none"> ■ Amounts are based on federal funding. ■ The estimated highest award at Chemeketa for 1991-92 will be \$2,010. 	<ul style="list-style-type: none"> ■ If you are applying only for a Pell grant, submit an Application for Federal Student Aid form to the Federal Student Aid processor. ■ Pell Grant will send you a Student Aid Report (SAR) indicating your eligibility. Take all three copies of SAR to the Financial Aid Office. ■ Eligibility may be transferred to any post-secondary school participating in federal programs.
Supplemental Educational Opportunity Grant (SEOG) (funded by the federal government)	<ul style="list-style-type: none"> ■ You must prove an exceptional financial need. ■ You must not have a bachelor's degree. 	<ul style="list-style-type: none"> ■ Amounts range from \$200 to \$2,000 a year. ■ The estimated highest award at Chemeketa for 1991-92 will be \$1,200. 	<ul style="list-style-type: none"> ■ The Financial Aid Office will determine and then notify you of your eligibility.
Oregon State Need Grant (funded by the state of Oregon and the federal government)	<ul style="list-style-type: none"> ■ You must enroll full-time (12 credit hours or more). ■ You must be an Oregon resident. ■ You must also apply for a Pell Grant. ■ You must not have a bachelor's degree. ■ You must attend a college in Oregon. 	<ul style="list-style-type: none"> ■ Amounts are based on state funding. ■ The estimated highest award at Chemeketa for 1991-92 will be \$720. 	<ul style="list-style-type: none"> ■ Request and pay for a copy of your FAF to be sent to the Oregon State Scholarship Commission. ■ Your grant may be transferred to other Oregon colleges and universities. ■ Your grant may be awarded for up to 12 quarters (terms) or for eight semesters. ■ You must not be enrolled in a program leading to a degree in theology, divinity, or religious education.
Oregon State Cash Award (funded by the state of Oregon)	<ul style="list-style-type: none"> ■ You must have a cumulative high school GPA of 3.50 or higher. ■ You must score 500 or higher on SAT mathematics and verbal tests. ■ You must meet all requirements listed under the Oregon State Need Grant (above). 	<ul style="list-style-type: none"> ■ Amounts are based on state funding. ■ The estimated highest award at Chemeketa for 1991-92 will be \$780. 	<ul style="list-style-type: none"> ■ Initial awards are made only to high school seniors. ■ Other information is the same as listed for the Oregon State Need Grant program.
Talent Grants (funded by Chemeketa Community College)	<ul style="list-style-type: none"> ■ You must show outstanding ability and achievement in selected fields. ■ You must enroll full-time (12 credit hours or more). 	<ul style="list-style-type: none"> ■ Amounts vary up to the cost of tuition. 	<ul style="list-style-type: none"> ■ No Financial Aid Form (FAF) is required. ■ Contact an instructor or coach directly associated with your skills or ask at the Financial Aid Office.

Loans

Carl Perkins National Direct Student Loan (NDSL) (funded by the federal government)

- You must not have a bachelor's degree.

- You may borrow up to \$4,500 for the first two years.
- You may borrow up to \$9,000 until you earn a bachelor's degree.
- The highest award at Chemeketa for 1991-92 will be \$1,500.

- You must complete a separate Perkins Loan application form.
- You do not have to pay any interest or principal while in school.
- You must begin payment six to nine months after you drop your enrollment to less than six credit hours.
- The current interest rate is five percent.
- You must repay Chemeketa.
- You must view an orientation video before funds are disbursed.
- Interest is paid by the federal government while you are enrolled in an approved program.
- You must attend an entrance and an exit interview
- Contact the Financial Aid Office for information on repayment and deferments.

Stafford Student Loan (formerly GSL) (funded by commercial lenders with state or other agency guarantee and interest subsidy from the federal government)

- Some lenders will not loan money to students who are not enrolled full-time

- You may borrow up to \$2,625 for a three-term period.
- You may borrow up to \$17,250 until you earn a bachelor's degree.

- Pick up the separate GSL application forms (to be completed by the borrower, college, and lender) at the Financial Aid Office.
- Take the completed loan application to a lending agency such as a bank or a savings and loan association.
- Required fees will be deducted from check.
- You must begin payment six months after you drop your enrollment to less than six credit hours.
- You may defer payment if you continue half-time or full-time study. Contact the Financial Aid Office for other possible deferments.
- You must attend an entrance and an exit interview.
- The current simple interest rate is eight percent; it may increase to 10 percent.
- The interest is paid by the federal government while you are enrolled in an approved program.

"PLUS" program (funded by commercial lenders with state or other agency guarantee)

- Some lenders will not loan money to students who are not enrolled full-time.

- Parents may borrow up to \$4,000 a year for dependent undergraduate or graduate students.

- You must apply for a Stafford Loan first, if you qualify.
- Only mothers, fathers, adoptive parents, or legal guardians may borrow for dependents.
- Pick up the application forms (to be completed by the borrower, college, and lender) at the Financial Aid Office.
- Pay the required fees.
- Variable interest rate may not exceed 12 percent.
- Lenders loan their own funds.
- You must begin payment 60 days after the date your lender disburses funds to you.

Supplemental Loans to Students (funded by commercial lenders with state guarantee)

- You must meet all the eligibility requirements listed for the Oregon "PLUS" program.

- Independent undergraduates and graduate students may borrow up to \$4,000 a year.

- Only independent students may apply.
- Other information is the same as listed for the Oregon "PLUS" program.

Work

College Work Study Program (CWS) (funded by the federal government)

- You must not have a bachelor's degree.

- Amounts vary according to your financial need.
- Funds usually are no more than \$600 a term or \$1,800 a year.
- Jobs pay minimum wage or higher.

- Jobs are available both on and off campus.
- You must view a college work-study orientation video before job placement.
- Contact the Financial Aid Office for a placement appointment.

Chemeketa part-time employment (funded by Chemeketa Community College)

- You must enroll in six credit hours or more.

- Pay varies according to the job.
- Jobs pay minimum wage or higher.

- No Financial Aid Form (FAF) is required.
- Apply at Chemeketa's Financial Aid Office.

Part-time jobs (funded by private businesses)

- You must be willing to work.
- You must meet the qualifications of the employer.

- Pay varies according to the job.
- The average wage for 90-91 was \$5 an hour.

- No Financial Aid Form (FAF) is required.
- Apply at Chemeketa's Placement Service.

Questions? Call for information

Campus Information Center, 399-5155

Chemeketa's Information Center is located in the Advising and Counseling Center on the first floor of Building 2 on the Salem Campus. Staff will answer your questions about room locations, activities, workshops, meetings, academic advisor assignments, and instructional staff office locations. The Information Center also distributes class schedules and catalogs.

Chemeketa Centers

If you live outside the Salem area, call one of our local centers for information:

Chemeketa Dallas Center

182 SW Academy Street, 623-5567
or 399-5206

Chemeketa McMinnville Center

500 N Hill Road, 472-9482 or 399-5219

Chemeketa Stayton Center

756 W Locust Street, 769-7738 or 399-5215

Chemeketa Woodburn Center

120 E Lincoln Street, 981-8820 or 399-5207

- Full-time students: 12 credit hours.
- Three-quarter-time students: nine to 11 credit hours.
- Half-time students: six to eight credit hours.

Academic progress

If you do not meet the minimum credit-hour and 2.0 GPA requirements each term, the Financial Aid Office reviews your progress and may either stop your aid or place you on probation and allow you one more term to meet the requirements. If, at the end of two terms, you still do not meet the requirements, your aid stops. However, you may receive it again if you:

- Continue at Chemeketa for one term, paying your own tuition **and**
- Complete a required number of credit hours with a 2.0 GPA.

Your aid stops if you withdraw from Chemeketa. If you do not earn at least three credits with a passing grade in any term, your aid stops.

At least once a year, the Financial Aid Office checks to make sure you have completed the minimum number of credit hours. If you have not, your financial aid may be withheld until you complete a required number of credit hours.

How long are you eligible?

In general, you may receive financial aid at Chemeketa for 108 credit hours.

Cooperative program with WOSC

Chemeketa and Western Oregon State College (WOSC) at Monmouth have an agreement regarding financial aid for students who are attending both colleges at the same time. Both colleges will accept credits from the other institution as part of the 12 credit hours required for you to be considered a full-time student. Call the college's Financial Aid Office for information on your eligibility.

Refunds

Chemeketa has a tuition refund and repayment policy for students receiving financial aid. We ask you to read and sign a copy of this policy at the time you sign your financial aid offer. A copy of the policy will be provided for your reference. Refunds are credited to the student financial aid programs in the following sequence: 1) Perkins Student Loan, 2) Stafford Loan, 3) Supplemental Educational Opportunity Grant, 4) Pell Grant, and 5) Oregon State Need Grant.

Appeals

You may appeal any action taken by the Financial Aid Office within two weeks of the time



you were notified of a change in your status.

Help is here

The Financial Aid Office will give you information on applying for aid, your rights and responsibilities in receiving aid, loan repayment schedules, general conditions of employment, and methods used to determine or re-establish your eligibility. The office will also help you with your concerns about funds and budgeting.

Academic Information

Student records and transcripts (399-5001)

Student academic records are maintained in the Registrar's Office for 10 years. Records may include application for admission, registration documents, transcripts, schedule changes, grade changes, waiver forms, evaluation of progress toward graduation, and current enrollment status.

You may obtain an official transcript from the Registrar's Office by submitting a written request with the appropriate fee. If you have financial obligations to the college we may deny issuing your transcript until the Business Office clears your obligation.

Student records policy (399-5001)

Chemeketa's policy is to protect your personal and academic records with the greatest privacy and security possible. This policy is based on concern for the integrity of the college and the welfare of the student. Except for enrollment information, we will not release your records without your signature. You may go to the Registrar's Office to inspect Chemeketa's student records policy and procedure, which are in compliance with the Federal Education Rights and Privacy Act.

Grading system

Final grades are issued at the end of each term. Letter grades are assigned points according to the following system:

A Excellent..... 4

B Above average	3
C Average.....	2
D Below average.....	1
F Failed	0
R Course repeated.....	0
N No grade assigned.....	0
I Incomplete.....	0
X Audit.....	0
Z Course in progress	0

Your grade point average is computed by dividing the total credit hours (except R, N, I, X, and Z) into the total points earned.

An instructor may give you an "Incomplete" when, in his or her judgment, you have not finished a minor portion of the required class work although you have attended the class regularly.

You may remove an "Incomplete" from your record by completing some makeup work. Your instructor will provide you with a form, Notice of Incomplete Status in a Course, which states what you must do and sets a date for you to complete the assignments. The deadline may be any time up to one year from the end of the term in which you received the "Incomplete" grade. When you have met the requirements, your instructor will change the "Incomplete" to a new grade and inform the Registrar. The Registrar's Office will officially notify you of the change.

Repeating a course (399-5001)

We suggest you confer with your academic advisor before you repeat a course. If you do repeat a course and receive a higher grade, and want your old grade changed in your record, ask the Registrar's Office to change your grade to an R (Repeated). Please note that even if you repeat a course more than once, only your original grade can be changed to an R. The registrar does not include an R in computing your grade-point average and does not count courses with an R grade in determining the total number of credit hours you have earned.

If you are receiving veterans' educational benefits, you should be aware that this could create an overpayment for the term for which you requested an R. Contact the Veterans' Clerk in Building 22 before making such a request.

Course prerequisites

Prerequisites are specified in the course descriptions. These are conditions you must meet before enrolling in a course. It is your responsibility as a student to fulfill the prerequisite.

Some prerequisites indicate that you must complete certain preparatory courses or must have the consent of the course instructor. To gain consent, meet with the instructor. Consent is based upon the instructor's assessment of your readiness to enroll in the course.

Auditing courses (399-5001)

If you enroll in credit courses but do not wish to receive grades or credits, you may register as an auditor. See **Auditing courses** under Money Matters, Page 7.

Definitions

Class - See course.

Course - A course is a subject or an instructional subdivision of a subject, usually offered during a single term.

Credit Hour - The number of credit hours granted for each course varies. In general, a student earns one credit for a lecture class that meets one hour per week per term, or three credits for a lecture class that meets three hours per week.

Courses with labs and some other courses may vary from this pattern.

The *Course Description* section of this catalog lists the value of each course in credit hours.

Curriculum - An organized program of study arranged to provide integrated cultural or professional education leading to a certificate or degree.

Elective - An optional rather than required course.

Sequence - Closely related courses extending through three terms.

Term - Approximately one quarter of the academic year. Fall, winter, and spring terms range in length from 11 to 12 weeks. Summer term runs for eight weeks.

Withdrawal from college (399-5001)

If you decide to withdraw from Chemeketa, obtain a Student Schedule Change (add-drop) Form from the Registrar's Office, the Advising and Counseling Center, or one of Chemeketa's centers in Dallas, McMinnville, Stayton, or Woodburn. Submit the completed form to the Registrar's Office or one of our centers as soon as possible. The last day to withdraw from classes without responsibility for grades is listed in the **Academic Calendar** on Page 2. If you leave Chemeketa without filing a Student Schedule Change Form, you are responsible for the final grades you receive; they will appear on your transcript of Chemeketa credits.

If you return the completed form to the Registrar's Office within the first two weeks of the term, you will receive a refund of the tuition and fees you paid. (Some exceptions apply for night and late-starting classes.) Amounts owed to any departments of the college will be deducted from your refund. There may also be a nominal deduction from the refund for processing the withdrawal. No refunds less than \$5 are made. The college cannot refund the cost of student insurance.

If you paid tuition with funds issued through Chemeketa's Financial Aid Office, your refund will be credited to your financial aid account. Any debts you owe the college will be deducted from those credits.

Advanced Placement courses (399-5006)

If you enrolled in an Advanced Placement course in high school and earned an acceptable score on the Advanced Placement Test, you may receive credit from Chemeketa for the course. Inquire at the Admissions Office about what courses and scores are accepted at Chemeketa.

College Level Examination Program (CLEP) (399-5006)

You may earn credit for some college courses through the College Level Examination Program (CLEP). Inquire at the Admissions Office to determine

which examinations and scores Chemeketa accepts.

Credit by examination (399-5120)

Another way to earn credits for some courses is to prove your college level ability by successfully passing challenge examinations. These examinations are prepared by the college department directly responsible for the instruction of the courses. There is a fee of five dollars per credit hour for each exam. The availability of challenge exams may be limited during summer term.

Credits for successfully-completed exams are recorded for the term in which the challenge is completed.

Contact the Advising and Counseling Center for more information about earning college credits by challenge examinations.

Credit for prior learning (399-5120)

In certain occupational programs, Chemeketa will award you up to 24 credit hours for knowledge and skills you have learned outside the classroom. These may be skills you acquired through working, on-the-job training, volunteer service, noncredit courses or workshops, individual study, home-making, and travel.

To learn how to gain such credits, enroll in CPL120 **Prior Learning Resume**, a three-credit-hour course.

Independent study (399-5120)

You may receive credit for an independent study of topics not included in the college's curriculum. If you are ready to learn on your own and are interested in studying a topic, contact your academic advisor or an instructor who teaches that subject. With that person, you can explore the possibility of an independent study project.

When you have agreed upon a subject, you and your appropriate faculty advisor can develop a learning contract for your proposed project.

This contract may include:

- A study of a topic which is not covered in an existing course.
- An in-depth study of a topic introduced in a course.

- Field studies.

- A study combined with tutoring sessions, regular meetings with your instructors, or seminars.

- Service activities.

After your faculty advisor and the program director approve the contract, you may register for independent study credit. When you complete your project, your grade will appear on your transcript. Your copy of the contract becomes the documentation of the content of the course.

For more information, contact your academic advisor or the Advising and Counseling Center.

Telecourses (399-5191)

You may earn college credit hours by enrolling in courses offered by television and by mail.

Courses by television allow you to earn college credits at home. Assignments are based on televised courses. You may view the broadcasts on your own set, or watch videotapes of these classes at the Salem Public Library or at Chemeketa centers in Dallas, McMinnville, Stayton, or Woodburn. Chemeketa charges a fee of \$10 per telecourse in addition to tuition.

Chemeketa television (CTV) broadcasts live telecasts of Salem Campus classes to local Chemeketa centers. Two-way communication allows students at the centers to participate in the classes.

Courses by mail allow you to mail your completed assignments to the instructor, who checks them and mails comments back to you.

Listings, registration procedure, and information about telecourses are published each term in the *Schedule of Classes*.

Student Development Services

Student-instructor conferences

You may confer with your instructors regarding class assignments and methods of

study. Office hours are posted in each faculty office area.

Tutoring services (399-5190)

For free tutoring, drop in at the Tutoring Center in Building 2 on the Salem Campus. If you have special needs or problems, contact the tutoring services program coordinator in Building 2.

Volunteers offer basic-skills tutoring on a one-to-one basis in Salem and throughout the Chemeketa district. Contact the volunteer tutoring services coordinator in Building 17.

Learning assistance and skills development classes (399-5093)

Learning assistance services and skill-building classes are available to help you improve the academic skills you'll need to succeed in college. We offer individual and lecture classes in reading, mathematics, spelling, vocabulary development, study skills, problem solving, thinking skills, and college success skills. For more information on these classes, contact the Learning Lab in Building 2, Room 112 on the Salem Campus.

English as a second language and bilingual assistance (399-2534)

If English is not your native language and you want to increase your English language skills, contact the ESL Office in Building 18 on the Salem Campus. Staff members will help you learn to speak, read, and write English. They also can help you in choosing a career, and with your personal development.

Helpful services for you on the Salem Campus include:

Advising and Counseling Center—Building 2, 399-5120, for admission and career-planning assistance.

English as a Second Language program—Building 18, 399-2534.

Volunteer tutoring program—Building 17, 399-2557.

Counseling, tutoring, and English as a Second Language classes are also available at Chemeketa's centers in Dallas, McMinnville, Stayton, and Woodburn.



Adult Basic Education, General Educational Development (GED), High School Completion

For students who have not completed high school, Chemeketa offers Adult Basic Education, General Educational Development (GED), and High School Completion classes. See Page 28.

Services for students with disabilities (399-5192)

The tutoring center coordinator in Building 2 on the Salem Campus has information about services and facilities for students with disabilities.

Chemeketa's major buildings on the Salem Campus and at the McMinnville Center are designed to provide access for physically handicapped students. Parking spaces are reserved for handicapped persons.

Seeing-eye and hearing-aid dogs may accompany their owners to Chemeketa, but no other animals are allowed.

The Technology Access for Life Needs (TALN) Project provides information, referral, and training regarding the use of technology by persons of all disabilities. These services include the use of adaptive computer systems, assistive communication devices, and other adapted technology that will improve the performance of students with disabilities. For more information on the TALN Project call 399-6975.

If you have disabilities, including learning disabilities, you are encouraged to use campus support services. The tutoring center services coordinator is available to help you assess your needs and to plan to accommodations that will make classes accessible to you. If you need assistance, call the tutoring center services coordinator, 399-5192.

Services for deaf and hearing-impaired students (399-5049 TTY)

(399-5022 Voice)

Chemeketa offers special help if you are deaf or hearing-impaired. This includes counseling, interpreting, note-taking paper, tutoring, and special equipment (TTY, FM system).

If you are deaf, you may enroll in special classes in language development and basic reading. Chemeketa also offers three levels of American Sign Language classes.

Student Services

Bookstore (399-5131)

You may purchase books and supplies at the college Bookstore in Building 20 on the Salem Campus and at the McMinnville Center. Textbooks also are available at the beginning of each term at our centers in Dallas, Stayton, and Wood-

burn. The cost of books is included in the description of each program. Normally costs range from \$375 to \$600 a year or about \$150 to \$200 a term.

Refunds—You may receive full refunds for books the first two weeks of each term for which they were purchased. All books must be returned in their original condition and accompanied by a sales receipt.

Used book buy back—Each term during finals week, the Salem Campus Bookstore pays cash (up to 50 percent of the purchase price) for used textbooks that are needed for the next term. At any time, the Bookstore buys used books at prices established by used book wholesalers.

Student identification cards (399-5116)

A student photo identification card is recommended for all students. This card is necessary for access to computer labs; check-out and use of materials and equipment from the library, media services, and the gym; and selling used books back to the college Bookstore. The card also admits you to all college sporting events at no cost and entitles you to discounts for various activities.

You may obtain your student ID card at no cost during registration. Additionally, ID cards may be obtained in the Student Life Office in Building 3, Room 101, Mondays through Fridays, from 8 to 9 a.m. Lost or stolen cards may be replaced for \$2.

First aid (399-5023)

For first aid services on the Salem Campus, call 399-5023. There are also emergency red phones located throughout campus which will connect you directly with the college's security office. As the college has no physician, you must rely upon your personal physician, dentist, or clinic to meet other medical needs.

Parking on Salem Campus (399-5023)

If you are a Chemeketa student or staff member who owns and/or drives a motor vehicle on the Salem Campus during the day, the college requires you to

have a parking permit. Pick up your permit during registration or at the Student Life Office in Building 3, the Business Office in Building 22, or the Information and Security Booth outside the main entrance to Building 2. Visitors may pick up parking permits at the Information and Security Booth.

Along with your permit you will receive a copy of Chemeketa's traffic code. The college expects you to know and follow the rules for operating a motor vehicle on campus. These rules apply to any car you own, regardless of who is driving it.

The college suggests that you lock your car at all times and park in well-lit areas when on campus at night.

Staff in the security booth have specific information on parking and traffic regulations as well as suggestions for your safety while on campus.

Where to eat

The Breezeway, Building 2, 399-5180—sandwiches, soups, salads, pastries, and grilled items.

Avenue 34, Building 34, 399-2543—breakfast, deli lunch, fast foods, hot meals, fresh desserts.

There are also a number of snack and beverage vending machines located in many buildings on campus.

Student living accommodations (399-5116)

Chemeketa does not provide living accommodations. However, the Student Life Office in Building 3 on the Salem Campus maintains a bulletin board listing available housing including apartments for rent, rooms for rent in homes, homes for rent, and roommates wanted. You may post a notice and also check this bulletin board for housing. The office also publishes the *Apartment Guide* which lists apartments in the Salem area. Also, read the classified section of local newspapers for housing vacancies.

Child care (399-5107 or 399-5174)

Chemeketa offers limited child care on the Salem Campus.

The Child Development Center, a training center for students enrolled in the Early Childhood Education program, offers full- or part-time care for approximately 35 children ages two-and-a-half to six years old. The college reviews the cost each year. Applications are accepted at any time, but we advise you to apply early.

The **Parent Cooperative Center**, run by parents and staff, accepts about 19 children ages 15 months to five years old for full- or part-time care. Member parents pay reduced rates. Parents register their children each term.

The Financial Aid Office, Building 22, Room 118, has a list of day-care centers in the Salem area, or you may call Salem's Child Care Information Service, 585-2491. Local child care providers advertise their services on the bulletin board located outside the Student Life Office in Building 3.

Lost and found (399-5116)

Lost and found items are kept in the Student Life Office, Building 3, Room 101. If you have lost or found an item, please check with this office.

Bus Passes (399-5116)

You may purchase Cherriot bus passes and obtain bus schedules at the Student Life Office in Building 3, Room 101.

Ride Sharing

If you would like to share a ride with another student, check the ride-share bulletin board on the first floor of Building 3. You can put up your own "ride-wanted" or "rider-wanted" notice by picking up a ride-share card from the student Life Office, Building 3, Room 101, and posting it on the bulletin board across from the Student Life Office.

Alcohol and Drug Support Groups (399-5116)

Support groups for substance dependency are coordinated through the Student Life Office and staffed by volunteers. Times and locations of meetings vary each term. For more information contact the Student Life Office in Building 3, Room 101.

Career and Employment Advising and Services

Advising and Counseling Center (399-5120)

If you are interested in educational, vocational, or personal counseling, contact our Advising and Counseling Center on the first floor of Building 2 on the Salem Campus, or make an appointment to see a counselor at a Chemeketa center in Dallas, McMinnville, Stayton, or Woodburn.

Counseling services are available to both current and prospective students.

The Advising and Counseling Center offers the following services:

Individual assistance

Counselors offer individual help for program and course planning, career decision making, and personal problems. For assistance, drop in from 8 a.m. to 7:30 p.m., Mondays and Tuesdays or from 8 a.m. to 4:30 p.m., Wednesdays through Fri-

days. (Summer hours are 8 a.m. to 4:30 p.m., Mondays through Fridays.) Diagnostic testing and assessment are available by appointment.

Career planning workshops

Career planning workshops are conducted by counseling staff for persons trying to decide upon a career. In these workshops you may:

- gain a better understanding of your interests, values, and skills.
- relate those characteristics to a wide variety of careers.
- find accurate information about occupations and the labor market.
- develop a personal plan of action.

Each workshop consists of a series of two to four sessions held over a period of two consecutive weeks. A schedule of workshops is published in each term's *Schedule of Classes*.

Career Resource Center

The Advising and Counseling Center maintains a comprehensive career resource center. You may use materials there to assist you in deciding upon a career. The center has information on career and job requirements, schooling and training opportunities, and the employ-

ment outlook. The center also has a library of current catalogs of Northwest colleges.

Career Information System

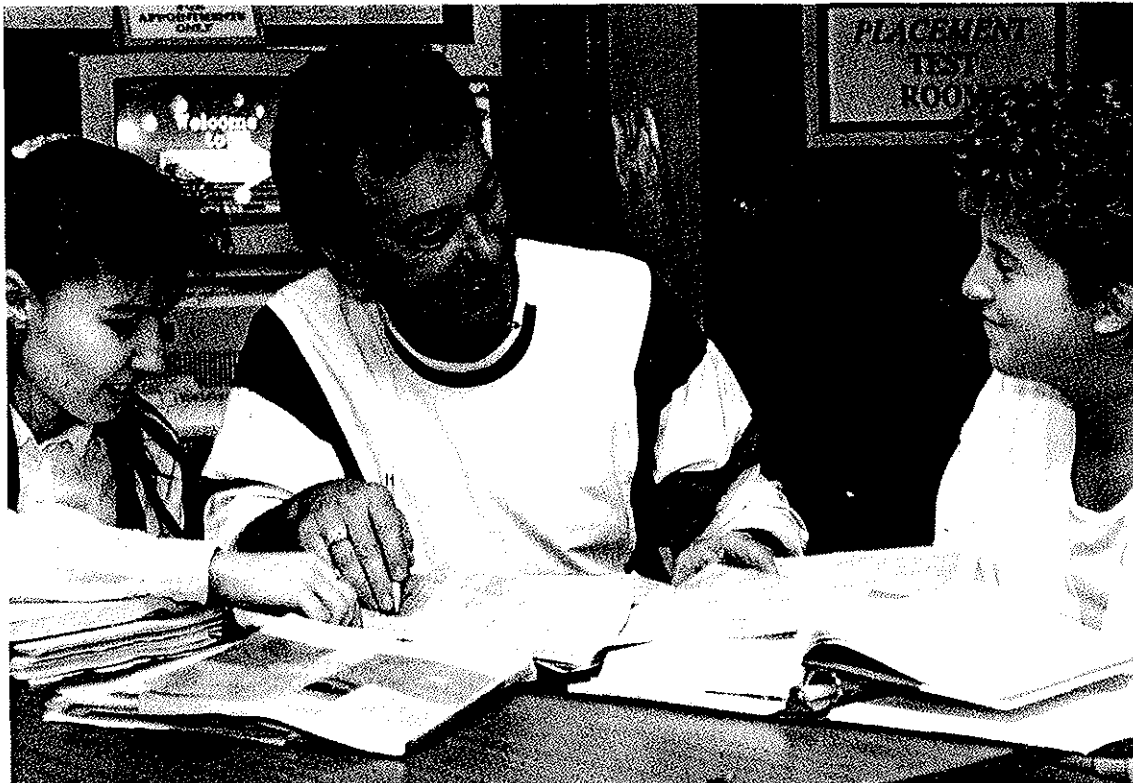
A computer-based Career Information System (CIS) is available for current and prospective students to use in career decision making. In using CIS, you respond to questions from the computer concerning your interests, abilities, and preferences. The computer analyzes your responses and prints a list of occupations which may suit you.

In addition, you may:

- obtain descriptions of occupations.
- learn how to prepare and train for specific careers, and find out which schools offer such training.
- gather information about the availability of jobs.
- obtain salary information for occupations in Oregon. Appointments are necessary. For more information or to arrange an appointment, contact the Advising and Counseling Center.

Micro-SKILLS program

Micro-SKILLS is a computerized program which allows you to compare your skills with



those required in certain occupations.

DISCOVER

Another computer-based career information resource is DISCOVER. It complements CIS and provides a more in-depth assessment of your interests, abilities, and values. This system can search through 400 job titles, give information about occupations, and suggest appropriate educational and training institutions.

Academic advising

Chemeketa offers academic advising for all students. If you

Affirmative action and non-harassment policy

It is the policy of Chemeketa Community College not to discriminate on the basis of sex, handicap, race, color, national origin, marital status, creed, family, religion, age, or any other basis in admission and access to, or treatment in, employment, educational programs or activity as required by Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973; Title VI of the Civil Rights Act of 1964; the Age Discrimination Act and their implementing regulations.

College policy also prohibits harassment on the basis of any of the factors listed above. The policy points out specifically that sexual harassment of any student will not be tolerated. Sexual harassment includes any sexual advances, request for sexual favor, and other verbal or physical conduct of a sexual or hostile nature when submission to such conduct is made either explicitly or implicitly a term or condition of an individual's class enrollment or grade.

Questions or complaints may be directed to Judy Gohring, Affirmative Action Officer, P.O. Box 14007, Salem, Oregon 97309. (503) 399-5009.

are enrolling in a program of study, you are assigned a faculty advisor in your program at registration time. If you are a part-time student or a full-time "exploratory" student who has not chosen a specific program of study, a member of the counseling staff will serve as your advisor. The Information Center in Building 2 on the Salem Campus keeps a current roster of advisor assignments.

If you attend only evening classes, we encourage you to visit the Advising and Counseling Center periodically for academic advising. You may also consult with a counselor at one of our centers in Dallas, McMinnville, Stayton, or Woodburn.

Job placement services (399-5026)

Chemeketa's Placement Service in Building 17 on the Salem Campus offers the following free services for students looking for part-time jobs while going to school or for employment after they graduate:

Individual job search assistance

For individual assistance, make an appointment with the Placement Service. If you are nearing graduation, we encourage you to visit the Placement Service before you will graduate. The Placement Service helps students and graduates with resumes, interviews, and employer contacts.

Job referral service

Part-time and full-time job opportunities are posted on bulletin boards in the Placement Service. Referrals are issued to qualified students and graduates who are registered with the Placement Service.

Placement files

Students and graduates may set up placement files which may help them in finding jobs. These files may include your resume, class and grade summaries, and recommendations from your instructors and/or employers. When completed, your file can be duplicated and sent to specific employers at your request. Contact the Placement Service for information on how to start a file.

On-campus recruiting

The Placement Service works with employers who wish to come to the Salem Campus to recruit and interview graduating students. These visits are announced through special recruitment mailings, job postings at the Placement Service, announcements in class, or advertisements in the *Courier 4*, the student newspaper.

Job search information resources

The Placement Service, the Advising and Counseling Center, and the Chemeketa Library have lists of employers' names, addresses, and phone numbers; company products; "how to" books; and other information.

Videotapes on job search techniques are available in the Media Services area and at the Advising and Counseling Center, which are in Building 2 on the Salem Campus. They are also available at Chemeketa centers in Dallas, McMinnville, Stayton, and Woodburn and the Salem Public Library.

Job search seminars

These free seminars may make your job search easier and more productive. They are open to students and persons in the community. The series of five classes, meeting one hour a day, is offered three to four times a term. For more information, call 399-5026 or go to the placement office, Building 17 on the Salem Campus.

Classes are:

- Skills: What You Have to Offer
- Resumes: How to Present Yourself on Paper
- Interviewing: How to Impress an Employer
- The Search: Where to Look and How to Apply
- Interviewing: Practice This Skill and Get Feedback

Job Search Techniques class

This one-credit-hour course includes information on how to prepare yourself to look for a job and how to find and apply for a job. The class covers preparing and writing resumes, learning the requirements of a job, and determining what an employer looks for in a new em-

ployee. The class is listed under Job Search in each term's *Schedule of Classes*.

Cooperative Work Experience (399-5026)

As a full-time or part-time Chemeketa student, you may gain on-the-job training in your career field through our Cooperative Work Experience (CWE) program. This program allows you to combine your classroom studies with related job experiences.

In this program, you work with a CWE coordinator to find a qualified position, or your current job may qualify if it relates to your studies. The college must approve your training site and the learning objectives you and your supervisor develop.

CWE training can help you establish references for future employment and gain a first hand look at a particular kind of work while you are earning college credit. You may enroll for a variable number of credits depending on the number of hours you work per week. You will participate in weekly seminars or meet with a faculty member on a regular basis to discuss your progress on the job.

Most of Chemeketa's occupational programs include CWE either as an elective or as a graduation requirement. Transfer students may also participate in CWE for elective credit. The CWE office is in Building 17 on the Salem Campus.

Services to the Community

Golden Age Cards (399-5135)

If you are 62 years of age or older, you may apply for a free Golden Age Card. The card allows you reduced tuition for classes and free or reduced admission to college-sponsored films, dramas, and athletic events. For some classes, you may be charged lab fees in addition to tuition.

Inquire about a card when you register. You may also obtain a card by calling the Salem Campus, 399-5135, or by contacting a Chemeketa center in Dallas,

McMinnville, Stayton, or Woodburn. If you ask, we will mail your card to you.

Training and Economic Development Center (399-5181)

Chemeketa's Training and Economic Development Center is a resource for business firms and organizations and for anyone who is starting a business. The center is located in Liberty Square, 365 Ferry Street, S.E., in downtown Salem.

The center assists our region's economic development by providing business assistance counseling as well as management and employee development workshops. You can choose from our regularly scheduled workshops or arrange for customized, on- or off-site training for your employees. Resources at the center include videotapes, books, and periodicals on small business management topics.

Through Chemeketa's Small Business Management program, the center offers consultation and classes. The one-year, highly individualized instructional program is for business owners and operators. It also includes a series of one-evening courses on business topics; these are open to the public.

The following services are available through the TED Center:

Supervisory Skills Training—These workshops are designed to provide supervisors with the skills they need to solve on-the-job problems and improve employee performance.

American Management Association Extension Institute—Courses developed to meet the needs of working professionals who want to learn up-to-date business and management skills.

Oregon Marketplace—This program helps local businesses by finding local suppliers of goods and services.

Macintosh lab—The lab contains 20 Macintosh SE computers plus additional equipment and software for group training. The lab is available for classes at the TED Center, on our Salem Campus, and at our cen-

ters in Dallas, McMinnville, and Woodburn.

Industrial Skills Training (581-8237)

This 10-week program prepares you for jobs in the manufactured housing industry and other construction trades with training in the use of hand and power woodworking tools as well as job-search skills. You may start any Monday openings exist.

Planetarium (399-5161)

Chemeketa's Planetarium is in Building 2 on the Salem Campus. It features a Spitz model 512 sky instrument which projects 2500 stars, five planets, the sun and moon, and sky coordinates on a 35-foot metal dome. This instrument can project the sky for any date—past, present, or future—as seen from any location on earth, and can simulate all motions of the earth.

Chemeketa usually presents two sky shows each fall, winter, and spring term. Showings are scheduled each weekend during a term. There is an admission fee with a special rate for families. Call 399-5161 to arrange group showings for schools, clubs, and organizations.

Campus Gallery (399-2533)

Chemeketa's art gallery is in Building 3, Room 123 on the Salem Campus. It presents juried exhibits of professional artists from around the country. Several shows a year, featuring a wide variety of media, are open for viewing by students, staff, and the public.

Chemeketa Cooperative Regional Library Service (399-5119)

The college library is part of the Chemeketa Cooperative Regional Library Service (CCRLS), along with 17 public libraries in the college district.

This cooperative, tax-supported effort provides library service to district residents who have no access to a local library. Member libraries share their resources and honor library cards issued by all member libraries and the CCRLS bookmobile.

CCRLS also provides central reference services and book delivery between libraries.

An automated, online catalog listing over 300,000 titles found in CCRLS libraries is available in each library. Patrons can search by author, title, or subject to find materials in any member libraries. Dial-in access is also available for those who have modems.

Student Life

Student activities (399-5116)

At Chemeketa, we believe that activities outside the classroom are important, for they involve students more fully in their education. Our student activities program is designed to respond to your recreational and social interests and needs.

Students assume most of the responsibilities for Salem Campus activities, with guidance and advisement from the Student Life Office staff. Students develop and administer most programs, including clubs and campus social and recreational programs.

Activities vary throughout the year, depending upon student interests. These activities and opportunities are planned for you. For more information, contact officers of the Associated Students of Chemeketa Community College (ASCCC) or the Student Life Office in Building 3 on the Salem Campus.

Associated Students (399-5117)

Associated Students of Chemeketa Community College (ASCCC) is the official organization for students. Membership is open to all registered Chemeketa students.

There are two representative bodies of ASCCC: the Student Senate and the Executive Council. The Student Senate consists of 11 appointed student representatives. The Executive Council consists of five elected and appointed officers: president, vice president, programming director, budget director, and public relations director.

ASCCC activities

ASCCC sponsors films, dances, concerts, excursions, lectures, and other entertaining, educational, recreational, and cultural activities. These are planned for a variety of age and interest groups, and are held both on the Salem Campus and in the community.

ASCCC coordinates numerous service projects for students and the Chemeketa community. These projects include the Red Cross blood drive, recycling efforts, blood and cholesterol screening, food drives, and a student-to-student book exchange.

Student clubs and organizations

ASCCC recognizes a number of organizations which provide a variety of activities for students. Among them are:

- American Society of Certified Engineering Technicians (ASCET)
- Christian Fellowship Club
- Data Processing Management Association (DPMA)
- Dart Club
- Deaf Club
- Democrats Club
- Fire Protection Club
- Forestry Club
- Gay, Lesbian, and Bisexual Alliance
- German Club
- Health Occupation Students of America (HOSA)
- Hiking Club
- Human Services Club
- Instrument Society of America (ISA)
- International Conference of Building Officials (ICBO)
- International Students Club
- Journalism Club
- Juntos Club
- Native American Club
- Parents Club
- Performing Arts Club
- Phi Beta Lambda
- Phi Theta Kappa
- Ski Club
- Society of Manufacturing Engineers (SME)
- Student Nurses Organization (SNO)
- Unique Students Organization

For more information about clubs and organizations on the Salem Campus, contact ASCCC or the Student Life Office in Building 3.

New ideas welcomed

If you are interested in organizing a new club or organization, contact the Student Life Office in Building 3 for information on obtaining a charter.

Ideas for activities and excursions are also welcomed. Students' interests are considered when activities are planned.

Courier-4 (student newspaper) (399-5134)

Courier-4, Chemeketa's student newspaper, is published weekly during fall, winter, and spring terms. Written and prepared by journalism students using electronic desktop publishing equipment, the newspaper has won several awards from the Oregon Newspaper Publishers Association.

If you are interested in joining the *Courier-4* staff as a reporter or photographer, apply for a staff position. Contact the newspaper advisor.

Literary publication (399-5184)

A select humanities faculty group solicits student literary contributions throughout the year. Works are reviewed and selected entries are published as a literary supplement to the *Courier-4*.

Community Colleges of Oregon Student Association and Commissions

ASCCC has a representative on the board of the Community Colleges of Oregon Student Association and Commissions (CCOSAC), a state-wide student-run organization representing over 260,000 community college students in Oregon.

CCOSAC has various paid and unpaid positions for students who lobby the state government about community college concerns. If you are interested in such work, contact the student body president.

Intercollegiate athletics (399-5081)

Chemeketa offers students a limited yet high-quality athletic program. The program follows the standards and requirements of the Northwest Athletic Association of Community Colleges (NWAACC). Chemeketa



is a member of Region IV of that association. Our teams compete with other community colleges throughout Oregon and Washington.

If you participate in interscholastic sports, the college requires, and pays for, special insurance coverage for you and for your physical examination. Team travel, meals, and uniforms are also provided. Contact the physical education department office in Building 7 for more information.

Chemeketa fields teams in men's baseball, men's and women's basketball, men's and women's track, and women's volleyball.

Education for the Community

Chemeketa reaches far beyond the boundaries of the campus in northeast Salem, for we consider the entire district to be our campus.

Off-campus classes

We hold classes not only on the Salem Campus but also at a number of off-campus Salem locations; at our college centers at Dallas, McMinnville, Stayton, and Woodburn; and at other convenient sites in the district and communities.

Committed to lifelong learning, the college schedules a wide variety of credit and non-credit classes, workshops, seminars, and special programs which meet during the day, evening, and on weekends. These include college transfer courses; occupational and job skill-upgrading classes; and personal enrichment classes in languages, art, first aid, health, and other areas. In response to your requests, we are willing to develop and schedule other classes.

Chemeketa's centers also provide Adult Basic Education, General Educational Development (GED) test preparation, and High School Completion programs. Each center has a mathematics lab for individualized, self-paced instruction and an office occupation program which includes training on computers and word processors.

Outreach center services

In addition to classes, Chemeketa's centers in Dallas, McMinnville, Stayton, and Woodburn provide these services:

- Academic advising, program planning, and course selection guidance.
- Career counseling.
- Information on financial aid and veterans' benefits.
- Placement and vocational interest testing.

College for Older Adults (399-5135)

Chemeketa plans classes, workshops, and other activities which may especially interest older adults. We hold these classes at a number of Salem locations, including the Salem Senior Center, and in various communities throughout the college district. Topics range from personal growth and history to nature studies, writing, and arts and crafts. Tuition is reduced for holders of Golden Age Cards. For more information on Golden Age Cards see Page 19.

Agriculture classes (399-5135)

Chemeketa offers non-credit classes to meet continuing edu-

Chemeketa Centers

Extended Learning (formerly known as Community Education) information may be obtained in Building 50 on the Salem Campus or by calling 399-5135. If you live outside the Salem area, call one of our local centers for information:

Chemeketa Dallas Center,

182 SW Academy Street, 623-5567 or 399-5206

Chemeketa McMinnville Center,

500 N Hill Road, 472-9482 or 399-5219

Chemeketa Stayton Center,

756 W Locust Street, 769-7738 or 399-5215

Chemeketa Woodburn Center,

120 E Lincoln Street, 981-8820 or 399-5207

ational and self-improvement needs of persons involved in agriculture.

A variety of classes are offered in each of the following:

- Landscape and nursery
- Christmas tree production
- Pesticide application license examination preparation
- Sheep production
- Horse care and horsemanship

The program strives to be relevant and responsive to the agricultural community by adjusting course offerings regularly. Suggestions are welcome.

Farm Business Management

(399-5089 or 472-9482)

Chemeketa's three-year Farm Business Management program assists farm operators with the financial aspects of farm management. For more information see Page 62.

Family programs

(399-3915)

Chemeketa offers a variety of courses and workshops related to the needs of families and family members. Topics range from family life, parenting, and human relations to financial planning, clothing, health and nutrition, and home management. Classes and workshops meet both on and off-campus in Salem and also are scheduled by our centers in Dallas, McMinnville, Stayton, and Woodburn.

Life Skills for Independence

(399-5236)

The Life Skills for Independence program is conducted by Services for the New Workforce to help single parents and home-makers move from economic dependency to financial self-sufficiency. The program

begins with an intensive two-week seminar on confidence building, career planning, and job search techniques to help you develop your plan for acquiring occupational skills and finding employment. Follow-up sessions continue for eight weeks. Some financial assistance is available for child care, transportation, tuition, and supplies.

Life Skills Resource Center

(399-5236)

The Life Skills Resource Center is located in Building 19. It provides support and encouragement for the concerns of individuals and directs them to campus and community services. People are welcome to drop in, talk, and browse through books and materials.

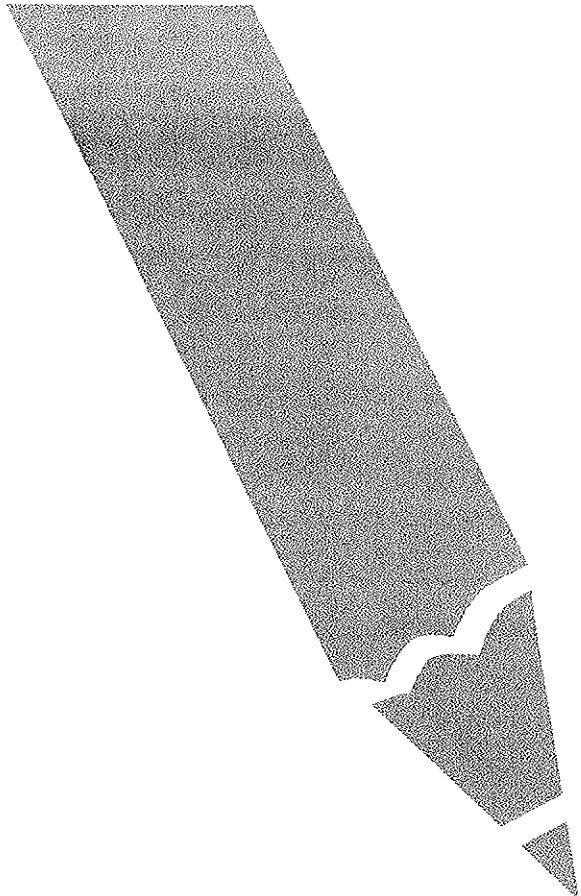
Work and Family seminars

(399-3915)

Chemeketa offers a series of seminars which focus on work and family issues. These seminars are intended to help employees be productive on the job while maintaining a caring family relationship.



DEGREES DIPLOMAS CERTIFICATES & TRANSFER INFORMATION



Program guide

Here's a quick reference listing of the programs of study and courses available at Chemeketa. If you don't find the program or course you are looking for, check the index in the back of this catalog. For more information call the Counseling Center, 399-5120.

C = Certificate of Completion
 A = Associate of Applied Science Degree
 T = Transfer Program and/or Associate of Arts Degree
 O = Other (classes for personal or professional skill development)

Program Name	C	A	T	O
Accounting		✓		
Adult High School Diploma/GED				✓
Agriculture			✓	
Anthropology			✓	
Art			✓	
Automotive Technology				
Automotive Technician		✓		
Automotive Parts Sales	✓			
Banking and Finance	✓	✓		
Biology			✓	
Botany			✓	
Building Inspection Technology	✓	✓		
Business Administration			✓	
Chemistry			✓	
Chiropractic			✓	
Civil-Structural Engineering Technology				
Survey Technology	✓			
Civil-Structural Engineering Technology		✓		
Computer Programming		✓		
Microcomputer Support Specialist		✓		
Computer Science			✓	
Computer Support	✓			
Criminal Justice		✓		
Dental Assisting	✓			
Dental Hygiene			✓	
Drafting Technology-CAD				
Drafting		✓		
CAD-CAM		✓		
Mechanical Design		✓		
Early Childhood Education				
One-Year	✓			
Two-Year		✓		
Economics			✓	
Education (Elementary and Secondary)		✓		
Electronics Technology				
Computer Electronics Technology		✓		
Electronic Engineering Technology		✓		
Industrial Electronics Technology		✓		
Emergency Medical Technology		✓		
English as a Second Language				✓
Engineering			✓	
English			✓	
Entomology			✓	
Farm Business Management				✓
Fire Protection Technology				
Fire Suppression		✓		
Fire Protection-Insurance Risk Inspection		✓		
Foreign Languages			✓	
Forest Resources Technology		✓		
Forestry			✓	
General Science			✓	
General Studies			✓	
Geography			✓	
Geology			✓	
Health			✓	
Health Education			✓	

Program Name	C	A	T	O
Health Care Support Services				
Health Info. Tech.-Medical Transcriptionist	✓			
Health Services Coordinator		✓		
Medical Office Assistant	✓			
Unit Clerk	✓			
History				✓
Home Economics				✓
Hospitality Systems Management		✓		
Human Services				
Alcohol and Drugs		✓		
Gerontology		✓		
Social Services		✓		
Industrial Technology and Apprenticeship			✓	
Instructional Assistant				
One-Year	✓			
Bilingual-Bicultural Assistant		✓		
Classroom Assistant		✓		
Developmental Disabilities Assistant		✓		
Vocational-Technical Assistant		✓		
Journalism				✓
Management			✓	
Manufacturing Engineering Technologies				
Manufacturing Operations	✓			
Manufacturing Technologies		✓		
Mathematics				✓
Nursing				
Nursing Assistant	✓			
Licensed Practical Nurse	✓			
Registered Nurse			✓	
Nursing				✓
Office Administration and Technology				
Bookkeeping	✓			
Engineering		✓		
Executive		✓		
General Clerical	✓			
Information Processing	✓	✓		
Legal		✓		
Medical		✓		
Office Accounting		✓		
Short-Term Training	✓			
Philosophy				✓
Physical Education/Human Movement Studies				✓
Physics				✓
Political Science				✓
Pre-Law				✓
Pre-Professional Study (medicine, dentistry, veterinary)				✓
Psychology				✓
Real Estate		✓		
Small Business Management				✓
Sociology				✓
Speech				✓
Visual Communications Technology		✓		
Welding				
Welding Technology	✓			
Welding Fabrication		✓		
Zoology				✓

Degrees, Diplomas, Certificates, and Transfer Information

As you begin classes at Chemeketa Community College, you may already have an educational goal in mind. If not, you have several options from which to choose.

Chemeketa's academic programs allow you to earn either an Associate of Arts or an Associate of Applied Science degree or a Certificate of Completion. Or you may wish to complete the first two years of college at Chemeketa and then transfer credits to a four-year college or university.

Degrees

Graduates of Chemeketa's two-year programs are awarded Associate of Arts or Associate of Applied Science degrees. Both are nationally-recognized degrees.

Associate of Arts degree

The Associate of Arts degree program encompasses the core curriculum of a liberal arts education. This core includes coursework in each of the areas of communications, humanities, social sciences, mathematics, sciences, computer science, and physical education or health. In addition students are encouraged to explore a broad range of subjects through elective course work.

You may wish to pursue an Associate of Arts degree while earning college transfer credits. It is easy to earn an A.A. degree while at the same time preparing to transfer to a four-year school or university. If you enroll full time, it usually takes two years to meet the A.A. degree requirements.

See the Program Guide on Page 24 for a complete list of our transfer programs. Information and curriculum outlines of these programs begin on Page 37.

Students who earn an Oregon Associate of Arts Transfer de-

gree from Chemeketa will have fulfilled the lower division general education requirements at any of the schools in the Oregon State System of Higher Education.

To qualify for an Associate of Arts degree, you must meet the requirements listed on Page 26.

Associate of Applied Science degree

Chemeketa, with its emphasis on occupational education, offers training in more than 40 vocations.

In most of these programs, you may earn an Associate of Applied Science degree. If you enroll full time, it usually takes two years to meet the A.A.S. degree requirements.

See the Program Guide on Page 24 for a complete list of A.A.S. degree programs. Information and curriculum outlines of these programs begin on Page 37 along with college transfer curricula.

To qualify for an Associate of Applied Science degree, you must meet the requirements listed on Page 27.

Graduation

As a student, you, with the guidance of your advisor, are responsible for fulfilling the requirements for graduation.

As a candidate for graduation, fill out an Application for a Degree or Certificate. Return the form to the Registrar's Office by the fourth week of the academic term before the term in which you will complete the program requirements. Dates when applications for graduation are due are listed in the term calendar published each term in the *Schedule of Classes*.

Degrees and certificates become official when graduation information is recorded on your transcript.

If you plan to complete the requirements for your degree during summer term, you may re-

quest to participate in graduation exercises held the preceding June. To do this, contact the Student Life Office.

If your studies are interrupted by two years or more, you may find upon your return to Chemeketa that some of the requirements for graduation have been changed. You may have to complete the new requirements in order to earn your certificate or degree.

You may be allowed to make substitutions in the curriculum and still meet graduation requirements by following these steps:

- Discuss the substitutions with your program director or academic advisor.
- Gain approval of the program director to make the substitution.
- Submit a Curriculum Deviation Form, signed by your program director, to the Registrar. This form shows that the substitution will benefit you without changing the quality of your program. The Registrar may then grant the substitution.

Chemeketa awards adult high school diplomas through its High School Completion program. The Oregon State Department of Education issues General Educational Development (GED) certificates. Students receive these diplomas and certificates at a graduation ceremony in June. For details on the High School Completion and GED programs, see Page 28.

Classes required to complete the programs outlined in this catalog are offered on the Salem Campus.

Certificate of Completion

You will receive a Certificate of Completion if you meet the re-

Associate of Arts Degree Requirements

(Oregon Associate of Arts Transfer Degree)

Requirements	Credit hrs.	Courses which satisfy requirements
Complete a minimum of 93 credit hours. These must include the following:		
Writing (with grade "C" or better)	9	WR121, WR122, and WR123 or WR227
Math (with grade "C" or better)	4	MTH105 or above
Oral Communication/Rhetoric (with grade "C" or better)	3	SP111, SP112, SP113, SP114, or SP130
Physical Education or Health	3	Any PE180, PE185, or PE190 classes (one credit each); HE250 (three credits); or HPE295 (three credits). No more than 12 credits of PE185 may be applied toward an A.A. degree.
Computer Studies	3	CIS120, CS103, CS131, CS133B, CS161, or other computer information science or computer study courses.
Humanities sequence	9	ART115, 116, 117; ART204, 205, 206; ENG101, 102, 103; ENG104, 105, 106; ENG105, 106, 261; ENG107, 108, 109; ENG201, 202, 203; ENG253, 254, 255; ENG261, 262, 263; FA255, 256, 257; MUS201, 202, 203; PHL201, 202, 203; R201, 202, 203
*Arts and Letters/Humanities courses (A minimum of two or three courses from either the list above or from the courses listed in this row. These courses must be from a different discipline than the sequence selected above. A course taken as oral communication/rhetoric requirement may be used as one of these courses.)	6 to 9	ART101, 119, 154, 155, 156, 197, 221, 225, 231, 232, 233, 244, 245, 246, 254, 260, 261, 271, 272, 273, 281, 284, 285, 286, 291, 292, 293, 299; ENG116, 260; FA251; FR201, 202, 203; GER201, 202, 203; HUM100, 106, 199; J215, 216, 224, 225, 226; JPN201, 202, 203; MS251, 252, 253, 259; MUP100, 101, 105, 174; MUS134, 197, 199; PHL204, 205; R199; SP105, 111, 112, 113, 114, 115A, B, C, 126, 130, 199, 229; SPAN201, 202, 203; TA110, 121, 122, 123, 261, 285ABC; WR241, 242, 243, 248A, B, C, 270
Social Science sequence	9	ANTH101, 102, 103; ANTH207, 208, 209; EC201, 202, 203; GEOG105, 106, 107; HST110, 111, 112; HST157, 158, 159; HST201, 202, 203; HST257, 258, 259; PS201, 202, and 203 or 205; PSY201, 202, 203; SOC204, 205, 206; WS101, 102, 103
*Social Science courses (Two or three courses from either the list above or from the courses listed in this row. These courses must be from a different discipline than the sequence selected above.)	6 to 9	EC115; GEOG201, 202; HST210; PSY100, 101, 102, 114, 119, 199, 206, 211, 219, 237, 239, 245, 246, 298; SOC210, 221, 227, 291, 292, 295A; SSC150; WS199A, B, C
Life Science or Physical Science sequence	12	BI101, 102, 103; BI231, 232, 233; BOT201, 202, 203; CH101, 102, 103; CH104, 105, 106; CH115, 116, 117; CH201, 202, 203, CH204, 205, 206; CH226, 227, 228; G142, 143, 144; G201, 202, 203; GS104, 105, 106; GS111, 112, 113; PH201, 202, 203; PH207, 208, 209; PH211, 212, 213; ZOO201, 202, 203
*Science/Mathematics courses (Two or three additional courses from either the list above or from the courses listed in this row. These courses must be from a different discipline than the sequence selected above. Courses taken as math and computer studies requirements may be used as two of these courses.)	6 to 12	BI103A, 200, 234; CH150; CIS120, 121, 122; CS100, 103, 104, 104Q, 106, 107, 113, 121, 131, 133A, B, C, F, R, U, 140, 140A, C, M, U, 145, 160, 161, 162, 171, 233A, B, C, I, M, R, U, 234C, 234L, 235, 236, 237, 238, 244, 252B, 260, 270, 271, 274, 275, 276, 278; G160A, B, C, D, E; GS120; MTH105, 111, 112, 211, 212, 213, 231, 232, 241, 243, 251, 252, 253, 254, 255, 256; OC133; PH121
Earn a cumulative grade point average (GPA) of 2.0 or above in all work to be applied toward the degree.		
Complete a minimum of 30 credit hours at Chemeketa.		
Up to 12 credit hours in occupational courses may be applied toward the 93 credit hours required for the A.A. degree. All other courses must be numbered 100 or above.		All courses numbered 050 through 099

Notes: * Three classes must be selected from two of the three groups (Arts and Letters/Humanities, Social Science, and Science/Mathematics) listed above. Two courses must be chosen from the remaining group.

Associate of Applied Science Degree Requirements

Requirements	Courses/areas which satisfy requirements
Satisfactorily complete the required courses and credit hours listed for each program in the Programs of Study section of this catalog.	
<p>General Education Requirements You will meet the general education requirements if you follow the curriculum outline listed for your program. In some cases the program specifies exactly which of the courses you should take. The courses listed below meet the college's general education requirement.</p>	
Writing	One class of WR115, WR121, BA214, COM051, or OA084 or any higher numbered writing class.
Math	One class of MTH052 or any higher numbered math course.
Computer Literacy	Approved program-related instruction on computers or three credit hours of computer studies.
Three credit hours from each of three of the four following areas:	
Social Science	Anthropology, Economics, Geography, History, Human Development/Family Studies, Political Science, Psychology, Social Science, Sociology, Women's Studies.
Humanities/Fine Arts	Art, English, Film Art, Foreign Language, American Sign Language, Humanities, Multidisciplinary Studies, Music, Philosophy, Religion, Theater Arts.
Science/Applied Science	Approved program-related instruction may satisfy this requirement, or courses in Biology, Botany, Chemistry, Foods and Nutrition, General Science, Geology, Oceanography, Physical Science, Zoology.
Communications	Communication Skills, English as a Non-native Language, Journalism, Speech, Writing, Reading.
Three additional credits from any of these areas:	
Communications	
Health Education	
Humanities/Fine Arts	
Math	
Physical Education	
Science	
Social Science	
Complete a minimum of 30 credit hours at Chemeketa.	
Earn a cumulative grade point average (GPA) of 2.0 or above for all course credits which apply toward the degree. Only courses numbered 050 or above apply toward the degree.	

- Notes:**
1. We recommend that you see an advisor for guidance before you enroll.
 2. Some of Oregon's four-year institutions accept certain courses in occupational programs as college transfer courses. If you are interested in continuing your education after completing a Chemeketa program, check with the institution you plan to attend.



quirements of certain one-year occupational programs.

See the Program Guide on Page 24 for a complete list of Certificate of Completion programs. Information and curriculum outlines of these programs begin on Page 37 along with college transfer curricula.

You may earn a Certificate of Completion by meeting these requirements:

- Satisfactorily complete the required courses or credit hours listed for each program.
- Earn a cumulative grade point average of 2.0 or above for all course work which applies to the certificate.
- Complete a minimum of 15 credit hours at Chemeketa.
- All courses to be applied toward a certificate must be numbered 050 or higher.

High School Completion, GED, and ABE

Chemeketa has several programs to help you earn the credits you need to receive a high school diploma or its equivalent. The college also offers special classes to help you improve the basic skills which are important when you enroll in college-level courses.

Adult high school diploma program (399-5115)

In Chemeketa's adult high school diploma program, you may earn the credits you need to receive a high school diploma.

To enroll in the adult high school diploma program, take copies of your high school and college transcripts to the High School Completion Office in Building 50 on the Salem Campus or to one of Chemeketa's centers in Dallas, McMinnville, Stayton, or Woodburn. Chemeketa staff members will evaluate your transcripts.

At Chemeketa, you may earn credits toward a high school diploma in three ways:

- Enroll in high school completion classes offered on the Salem Campus and at Chemeketa's centers in Dallas, McMinnville, Stayton, or Woodburn.
- Earn high school credit for most Chemeketa classes.
- Receive credit for some of your life experiences. These may be skills and knowledge you learned on a job, doing volunteer work, managing a home, or serving in a branch of the military service. Chemeketa staff members will evaluate your experiences to award you credit.

Twenty-two credits and 13 competencies are required to complete the high school di-

ploma program. To be in the program, you must be 16 years or older. You must have a release from your high school if under 18 years old.

General Educational Development (GED) (399-5224)

You may earn a high school equivalency certificate by passing General Educational Development (GED) tests. These are five tests covering writing skills (mechanics and essay), social studies, natural science, literature/arts, and mathematics.

We offer free classes throughout the college district to help you prepare for these tests. You may enroll any week during the term and progress at your own pace. We hold classes at our centers in Dallas, McMinnville, Stayton, and Woodburn, as well as on the Salem Campus and at the Downtown Learning Center. Generally, you must be 18 years or older, but if you are 16 or 17 years old, you may enroll if you have a release from your high school.

GED tests are given in Salem, McMinnville, and Woodburn. The testing fee is \$35.

Adult Basic Education (399-5224)

If you do not have a high school diploma or if you need to upgrade your basic skills, you may sign up for free, non-credit classes in basic English, mathematics, and reading. These classes and General Educational Development (GED) classes meet together. Classes are held on the Salem Campus, at the Downtown Learning Center, and at our centers in Dallas, McMinnville, Stayton, and Woodburn.

College Transfer Information

Chemeketa Community College offers courses for students who wish to pursue a four-year degree at a public or private college or university. You can complete all or most of the general education requirements of the four-year institution and begin work on the requirements for a

specific major. (General education requirements are the courses required of all students, regardless of major or type of degree, in order to graduate from a college or university.)

The advantages of beginning college studies at Chemeketa include small classes, lower costs, individual help from instructors, and an opportunity to improve reading, writing, math, and study skills.

Chemeketa's college transfer programs are adapted from curriculum requirements listed in the most recent catalogs of Oregon's public four-year colleges and universities. The Advising and Counseling Center in Building 2 on the Salem Campus and academic advisors have copies of the catalogs. You may also make an appointment with a counselor to review the requirements at Chemeketa's Dallas, McMinnville, Stayton, and Woodburn centers.

It is the responsibility of students to learn the program requirements of the school to

which they plan to transfer. Students should periodically contact the Advising and Counseling Center or their advisor for academic advising and to learn of any possible changes in a program.

See the Program Guide on Page 24 for a list of our college transfer programs. Information and curriculum outlines for these programs begin on Page 37.

If you are interested in a field not listed in this catalog, you may be able to arrange a satisfactory program of study by consulting with one of our counselors and with the institution to which you plan to transfer.

If you plan to transfer credits toward a bachelor's degree, follow these steps:

- Contact the senior college you plan to attend to check entrance requirements and the suggested freshman and sophomore classes required in your chosen field.
- Confer with a Chemeketa counselor or an academic advisor before you register.



College Transfer Hotline

(378-8609)

If you have a problem in transferring to a four-year institution in the Oregon State System of Higher Education, first see your advisor, who will work on the problem. If your problem still is not solved, you may obtain help by calling 378-8609, the College Transfer Program Hotline in the Community College Services office of the Oregon State Department of Education in Salem. Ask for Elaine Yandle.

- Check with the senior college a term or two before completing your work at Chemeketa to make sure you are meeting all requirements.
- Apply for admission and transfer your credits to the senior institution.

Should you wish to transfer to a private college or university, consult with one of our counselors or with the institution you plan to attend for help in determining the education requirements.

The Advising and Counseling Center has advising sheets available for programs at Bassist College, Concordia College (Management and Communications, Health Care Administration, and Social Work), George Fox College (General Education and Human Resource Management), Linfield College (Business, General Education, Management, and Nursing), Oregon Health Sciences University (Nursing), Pacific University (Occupational Therapy, Optometry, and Physical Therapy), University of Portland (Business, Education, Engineering, and Nursing), Western Baptist College (General Education), Western States Chiropractic College, and Willamette University (General Education), as well as for Oregon's public four-year colleges and universities.

While our college transfer courses are similar to those offered by Oregon's four-year institutions, all of these institutions may not accept all Chemeketa credit courses as transfer credits. Check with the institution you plan to attend.

General education requirements for seven public four-year schools in Oregon are listed on the following pages.

Eastern Oregon State College

General Education Requirements
(General Education Distribution Requirements)

Requirements	Credit hours	Chemeketa courses which satisfy requirements
Humanities (Choose courses from at least two different prefixes other than your major.)	Minimum 15 hours	ART 101, 204, 205, 206; CHN 101, 102, 103; ENG 101, 102, 103, 104, 105, 106, 107, 108, 109, 201, 202, 203, 253, 254, 255, 260, 261, 262, 263; FA 255, 256, 257; FR 101, 102, 103, 201, 202, 203; GER 101, 102, 103, 201, 202, 203; HUM 100; JPN 101, 102, 103, 201, 202, 203; MUS 201, 202, 203; NOR 101, 102, 103; PHL 201, 202, 203, 204; RUS 101, 102, 103; SPAN 101, 102, 103, 201, 202, 203; TA 110; VTN 101
Natural Science (Choose courses from at least two different prefixes other than your major.)	Minimum 15 hours	BI 101, 102, 103, 200; BOT 201, 202, 203; CH 101, 102, 103, 104, 105, 106, 115, 116, 117, 150, 201, 202, 203, 204, 205, 206, 226, 227, 228; G 142, 143, 144, 201, 202, 203; GEOG 105; GS 104, 105, 106, 111, 112, 113, 120; OC 133; PH 121, 201, 202, 203, 207, 208, 209, 211, 212, 213; PSY 211; ZOO 201, 202, 203
Social Science (Choose courses from at least two different prefixes other than your major.)	Minimum 15 hours	ANTH 101, 102, 103, 207, 208, 209; EC 115, 201, 202, 203; GEOG 106, 107, 201, 202; HST 110, 111, 112, 157, 158, 159, 201, 202, 203, 210, 257, 258, 259; PS 201, 202, 203, 205; PSY 201, 202, 203, 219; SOC 204, 205, 206, 227; SSC 150
Arts, Languages, and Logic (Choose courses outside of your major.)	Minimum 15 hours	
Artistic Creation (Sub-Area 1)	3 to 12 hours	ART 115, 116, 117, 119, 154, 155, 156, 221, 225, 231, 232, 233, 244, 245, 246, 254, 260, 261, 271, 272, 273, 281, 284, 285, 286, 291, 292, 293; MUP 100, 174; TA 121, 122, 123, 261, 285; WR 241, 242, 243
Languages and Logic (Sub-Area 2)	3 to 12 hours	CHN 101, 102, 103; CS 140; FR 101, 102, 103, 201, 202, 203; GER 101, 102, 103, 201, 202, 203; JPN 101, 102, 103, 201, 202, 203; MTH 211, 212, 213; NOR 101, 102, 103; PHL 204, RUS 101, 102, 103; SPAN 101, 102, 103, 201, 202, 203; VTN 101

- Notes:**
1. A maximum of 108 credit hours earned at a community college may be applied toward a baccalaureate degree.
 2. The Writing Proficiency Exam (WPE) must be attempted prior to admission to a major degree program and must be passed prior to graduation from Eastern. Students are required to complete writing courses through WR121 or, upon entering, demonstrate a Test of Standard Written English (TSWE) score of 45 or better before attempting the WPE given at Eastern.
 3. Students entering Eastern who have earned an Associate of Arts (A.A.) transfer degree from Chemeketa Community College will be considered as having met the lower division General Education Distribution Requirements at Eastern.
 4. General Education Distribution Requirement: In the absence of an A.A. degree from an Oregon community college, students must complete a minimum of 15 credits in each of the following four areas—Humanities; Natural Science; Social Science; and Arts, Languages, and Logic. Within each of the four areas a student must have completed courses from at least two different prefixes other than the prefix or prefixes of the student's major.
 5. For the Bachelor of Science (B.S.) degree: In addition to completing the General Education Distribution Requirements, students are required to demonstrate the application of mathematics at the college level. Means for satisfying this requirement are described in each major at Eastern.
 6. For the Bachelor of Arts (B.A.) degree: In addition to completing the General Education Distribution Requirements, students are required to demonstrate proficiency in a single foreign language (two years or completion of a second-year foreign language course sequence or equivalency).
 7. Courses in which "D" grades have been earned will transfer to Eastern.
 8. This guide is subject to change without notice and should not be regarded as a contract between Eastern and students attending Chemeketa Community College.

Oregon Institute of Technology General Education Requirements

Requirements	Credit hours	Chemeketa courses which satisfy requirements
Communication		
Speech	3	SP111
English Composition	6	WR121 and 122
Nine additional credits from speech/writing courses having WRI122 OR SPE111 as a prerequisite; specified by the major department from the following: WRI123, 214, 227; 230, 231, 322, 323, 327; SPE321.	9	WR123, 227; BA214; SP113; no equivalent courses for WR230, 231, 322, 323, 327
Business Nine credits of business and industrial management.	9	BA200 courses that are appropriate to the projected major at OIT
Humanities Nine credits selected by student or specified by a major department.	9	ART101, 197, 204, 205, 206, 221, 225, 231, 232, 233, 244, 245, 246, 254, 260, 271, 272, 273, 281, 284, 285, 286, 291, 292, 293, 299; ENG101, 102, 103, 104, 105, 106, 107, 108, 109, 201, 202, 203, 253, 254, 255, 260, 261, 262, 263; FA251, 255, 256, 257; FR201, 202, 203; GER201, 202, 203; HUM100; JPN201, 202, 203; SPAN201, 202, 203; MUS101, 102, 103, 201, 202, 203; PHL201, 202, 203, 204, 205; TA110, 121, 122, 123, 285
Social Sciences		
Psychology	3	PSY201, 202, 203, 211, 219, or 237
Economics	3	EC201, 202, or 203
Six additional credits selected by student or specified by major department.	6	ANTH101, 102, 103, 207, 208, 209; CJ101, 110, 131, 200, 206, 220, 206, 220, 226; EC115, 201, 202, 203; GEOG105, 106, 107, 201, 202; HDFS222; HST110, 111, 112, 157, 158, 159, 201, 202, 203, 210, 257, 258, 259; PS201, 202, 203, 205; PSY100, 101, 199, 201, 202, 203, 206, 211, 219, 237, 239, 245, 246; SOC198, 204, 205, 206, 208, 210, 221, 227, 291, 292; SSC150; WS101, 102, 103
Technology Twelve credits selected by student or specified by major department from technical electives offered by a major department. At least one computer course is required.	12	No technical electives offered. Select computer course from CIS120, 121, 122; CS103, 131, 133A, 133B, 133C, 133F, 133U, 140, 160, 161, 162, 233C, 233I, 233M, 233U, 235, 260, 275
Science/Mathematics		
College Algebra	4	MTH111
Twelve additional credits selected by student or specified by major department from biological sciences, mathematics, or physical science.	12	BI101, 102, 103, 103A, 200, 231, 232, 233, 234; BOT201, 202, 203; CH101, 102, 103, 104, 105, 106, 201, 202, 203, 204, 205, 206, 226, 227, 228; G142, 143, 144, 201, 202, 203; GS104, 105, 106; HE268; MTH105, 112, 231, 243, 251, 252, 253, 254, 255, 256; OC133; PH120, 201, 202, 203, 207, 208, 209, 211, 212, 213; ZOO201, 202, 203
Physical Education	3	Any three PE activity courses numbered PE180, 185, 190, 194, 199, or 294
Health Education Two credits of Health Education elective or OIT's ALH223 or NUR301 .	2	HE151, 204, 222, 250, 261, or 262

- Notes:**
1. A maximum of 108 credit hours earned at a community college may be applied toward a baccalaureate degree.
 2. Courses in which "D" grades have been earned will not transfer to OIT.
 3. This guide is subject to change without notice and should not be regarded as a contract between OIT and students attending Chemeketa Community College.
 4. Students entering OIT with an Oregon Associate of Arts (A.A.) transfer degree from Chemeketa Community College will be considered to have met the lower division General Education Requirements at OIT.

Requirements	Credit hours	Chemeketa courses which satisfy requirements
Writing I	3	WR121 (must be completed before transferring)
Writing II	3	BA214; J216; WR122, 123, 227, 241, 242, 243
Writing III/Speech	3	Any courses listed to meet Writing II requirements not taken to meet the Writing II requirements or SP111, 112
Mathematics	4 or 5	MTH105, 111, or higher math (must be completed before transferring)
Fitness	3	HPE295
Writing Intensive Course		(Must be taken at OSU as part of major.)
Physical Science Including lab	4 to 5	CH101, 102, 103, 104, 105, 106, 115, 116, 117, 204, 205, 206; G201, 202, 203; GS104, 105, 106; PH201, 202, 203, 207, 208, 209, 211, 212, 213
Biological Science Including lab	4	BH101, 102, 103, 200, 234; BOT201, 202, 203; ZOO201, 202, 203
One additional Physical Science or Biological Science course	4 to 5	Any courses listed for Physical or Biological Science above.
Western Culture	3	ART101, 204, 205, 206; ENG101, 102, 103, 107, 108, 109, 201, 202, 203, 253, 254, 255; FA 255; GEOG106, 202; HST110, 111, 112, 201, 202, 203; PHL201, 202, 203; R201, 202, 203
Cultural Diversity	3	GEOG202; HST157, 158, 159, 257, 258, 259
Literature and the Arts	3	ART101, 204, 205, 206; ENG101, 102, 103, 104, 105, 106, 107, 108, 109, 201, 202, 203, 253, 254, 255, 260; HUM100; MUS201, 202, 203
Social Processes and Institutions	3	ANTH103, 207, 208, 209; EC201, 202, 203; PS201, 202, PSY201, 202, 203, SOC204, 205, 206
Two additional courses from two of these areas: Western Culture, Cultural Diversity, Literature and the Arts, and Social Processes and Institutions	6	Any courses listed for Western Culture, Cultural Diversity, Literature and the Arts, and Social Processes and Institutions above.
Global Issues	3	(Upper division course; must be taken at OSU.)
Science, Technology and Society	3	(Upper division course; must be taken at OSU.)

- Notes:**
1. A maximum of 108 credit hours earned at a community college may be applied toward a baccalaureate degree.
 2. In general, only courses with letter prefixes and numbers above 100 are accepted at OSU.
 3. Students with vocational/technical credits (courses numbered 50-99) should contact the assistant registrar at OSU for assistance in determining transferability of these courses to an OSU major.
 4. Departments, schools, or colleges at OSU may restrict the courses used by their major students to satisfy each general educational component.
 5. OSU will accept "D" grades. Some departments, schools, or colleges may not accept "D's" in required courses.
 6. Courses from the major department may not be used to fulfill the Baccalaureate Core Curriculum requirements.
 7. This guide is subject to change without notice and should not be regarded as a contract between OSU and students attending Chemeketa Community College.
 8. Students who enter OSU with an Oregon Associate of Arts (A.A.) transfer degree from Chemeketa Community College will be considered to have met OSU's lower division Baccalaureate Core Curriculum requirements.

Portland State University

General Education Requirements

Requirements	Credit hours	Chemeketa courses which satisfy requirements
English Composition WR121, 323	6	WR121 (WR323 must be taken at junior level; no equivalent course available at Chemeketa.)
Health/Physical Education HE298	3	HPE295
Arts and Letters (These credits must be earned in two departments with a minimum of six credits in each of these departments.) This requirement must be met by courses outside the student's major department.	18	ART101, 115, 116, 117, 119, 154, 155, 156, 204, 205, 206, 221, 225, 231, 232, 233, 254, 260, 261, 271, 272, 273, 281, 284, 285, 286, 291, 292, 293; CHN101, 102, 103; ED201, 202, 204 (maximum of six credits as speech elective); ENG101, 102, 103, 104, 105, 106, 107, 108, 109, 201, 202, 203, 253, 254, 255, 260, 261, 262, 263; FA251, 255, 256, 257; FR101, 102, 103, 201, 202, 203; GER101, 102, 103, 201, 202, 203; HUM100; JPN101, 102, 103, 201, 202, 203; MUP100, 174; MUS134, 197, 201, 202, 203 (no course number may be taken for more than six credits); NOR101, 102, 103; PHL201, 202, 203, 204, 205; R201, 202, 203; RUS101, 102, 103; SP105, 111, 112, 113, 114, 126, 130; SPAN101, 102, 103, 201, 202, 203; TA121, 122, 123, 261, 285; WR241, 242, 243, 270
Social Science (These credits must be earned in two departments with a minimum of six credits in each of these departments.) This requirement must be met by courses outside of the student's major department.	18	ANTH101, 102, 103, 207, 208, 209; BA207 (economics elective); CJ206 (sociology elective); EC115, 201, 202, 203; GEOG105, 106, 107, 201, 202; GS120 (geography elective); HE209 (psychology elective); HST110, 111, 112, 157, 158, 159, 201, 202, 203, 210, 257, 258, 259; PS201, 202, 203, 205; PSY100, 201, 202, 203, 206, 211, 219, 237, 239, 245, 246; SOC204, 205, 206, 210, 221, 227, 292; SSC150; WS101, 102, 103
Science (These credits must be earned in two departments with a minimum of six credits in each of these departments.) This requirement must be met by courses outside the student's major.	18	BA232 (math elective); BI101, 102, 103, 103A, 200, 231, 232, 233, 234; BOT201, 202, 203; CH101, 102, 103, 104, 105, 106, 115, 116, 117, 150, 204, 205, 206, 226, 227, 228; CS100, 103, 104, 104Q, 106, 107, 113, 133A, 133B, 133C, 133F, 133R, 133U, 140, 145, 160, 161, 162, 171, 173, 233A, 233B, 233C, 233I, 233M, 233R, 233U, 236, 237, 238, 244, 252B, 270, 271, 274, 275, 276, 278; FN225 (chemistry elective); G142, 143, 160, 201, 202, 203; MTH111, 112, 211, 212, 213, 231, 232, 241, 243, 251, 252, 253, 254, 255, 256; PH201, 202, 203, 207, 208, 209, 211, 212, 213; ZOO201, 202, 203 (biology elective)

- Notes:**
1. A maximum of 108 credit hours earned at a community college may be applied toward a baccalaureate degree.
 2. Courses with letter prefixes and numbers below 100 are generally not accepted by PSU.
 3. PSU accepts credit in certain vocational/technical courses when these are equivalent or parallel to PSU courses.
 4. Students must have achieved a 2.25 cumulative GPA with 36 transferable credit hours to be considered a transfer student.
 5. PSU does not accept courses in which "D" grades have been earned.
 6. Eighteen hours of the Arts and Letters, Social Science, and Science general education requirements must be taken as upper division (300 and 400 numbered courses).
 7. This guide is subject to change without notice and should not be regarded as a contract between PSU and students attending Chemeketa Community College.
 8. Students entering PSU who have earned an Oregon Associate of Arts (A.A.) transfer degree from Chemeketa Community College will be considered to have met PSU's lower division general education requirements.

Southern Oregon State College

General Education Requirements
(Core Curriculum)

Goals	Credit hours	Chemeketa courses which satisfy requirements
1. To be able to express ideas in clear, logical, and grammatically correct written English. To be fluent and confident in writing ability, including formal and technical writing styles, and in the preparation of a research paper.	9	WR121, 122, 123, 227
2. To be able to clearly and effectively communicate in oral English.	3	SP111, 112, 113, 114, 130
3. To be able to appreciate and use mathematics as a language that expresses, defines, and answers questions about the world.	3 to 4	MTH105, 112, 212, 213, 221, 241, 243, 251, 252, 253, 254, 255
4. To understand the role of the natural sciences in the world. (Students must take courses in at least two sciences. At least two courses must include a laboratory component. No more than nine credits from one department may be used to satisfy requirement.)	12	Choose nine to 12 credits from these laboratory courses: BI101, 102, 103; BOT201, 202, 203; CH101, 102, 103, 104, 105, 106, 115, 116, 117, 201, 202, 203, 204, 205, 206; G201, 202, 203; GS104, 105, 106, 113; PH201, 202, 203, 207, 208, 209, 211, 212, 213; ZOO201, 202, 203 Choose up to three credits from the following non-laboratory courses: ANTH101; GEOG105; GS120
5. To appreciate the creative processes, the aesthetic principles, and the historical traditions of one or more of the fine and performing arts. (A maximum of three credits may be from studio courses.)	9	Choose six to nine credits from these non-studio courses: ART101, 204, 205, 206; HUM100; MUS201, 202, 203; WR241, 242, 243 Choose up to three credits from the following studio courses: ART115, 116, 117, 119, 154, 155, 156, 221, 225, 231, 232, 233, 244, 245, 246, 254, 260, 261, 271, 272, 273, 281, 284, 285, 286, 291, 292, 293; MUSP100, 174; MUS134, 197; TA121, 122, 123, 261, 285A, 285B, 285C
6. To recognize the way that perspectives on the human condition and human values are expressed in works of literature and philosophy and/or transmitted in the media. (A maximum of three credits may be from media courses.)	9	Choose six to nine credits from the following literature and philosophy courses: ENG104, 105, 106, 107, 108, 109, 201, 202, 203, 260; PHL203 (No more than three credits from ENG201, 202, 203 may be applied toward this goal.) Choose up to three credits from the following media courses: FA255, 256, 257; J224
7. To be able to understand world history, geography, and culture as forces that shape human experience. (A maximum of three credits may be from U.S. history, U.S. geography, or U.S. culture courses.)	9	Choose six to nine credits from the following world history, geography, and culture courses: ANTH103, 207, 208, 209; GEOG107, 201, 202; HST110, 111, 112 Choose up to three credits from the following U.S. history, U.S. geography, and U.S. culture courses: HST201, 202, 203, 257, 258, 259
8. To understand the function and influence of national or international political, economic, and/or legal systems in human affairs.	6	CJ100; EC115, 201, 202, 203; LA101; PS201, 202, 205; SOC205
9. To understand how humans function in society.	3	CJ101; HE250; PSY100, 101, 201, 202, 203, 206; SOC206, 227

- Notes:**
1. A maximum of 108 credit hours earned at a community college may be applied toward a baccalaureate degree.
 2. Courses in the major, including course work from supportive areas that is required of the major, and courses toward a minor may also be used to meet general education requirements.
 3. In satisfying the total set of requirements of Goals 2 through 9, a student may use at most nine credits from one department.
 4. A single course may not be used to satisfy more than one general education goal.
 5. Only courses with a letter prefix and a number of 100 or higher are considered transferable.
 6. A maximum of 24 credit hours of vocational/technical courses are accepted as free electives.
 7. Courses in which "D" grades have been earned are accepted by SOSC.
 8. Students entering SOSC who have earned an Oregon Associate of Arts (A.A.) transfer degree from Chemeketa Community College will be considered to have met the Core Curriculum requirements at SOSC.
 9. This guide is subject to change without notice and should not be regarded as a contract between SOSC and Chemeketa Community College.

University of Oregon

General Education Requirements

Requirements	Units	Chemeketa courses which satisfy requirements
Written English	6 credit hours	WR121 (must be completed before transferring) and WR122 or WR123 (with grade "C" or better) Health Education
Arts and Letters	6 courses of at least 3 credit hours each, 3 of which must be an approved cluster of 3 related courses (See Note 8 below.)	Choose one of the following clusters: ART 204, 205, 206; ENG 101, 102, 103; ENG 104, 105, 106; ENG 107, 108, 109; ENG 201, 202, 203; ENG 253, 254, 255; FA 255, 256, 257; MUS 201, 202, 203; PHL 201, 202, 203, 204 (any three) Choose an additional three courses from the courses listed above or from the following: ENG 260, 262; FR 201, 202, 203; GER 201, 202, 203; HUM 100, 106; JPN 201, 202, 203; MUS 101; SPAN 201, 202, 203; TA 110
Social Science	6 courses of at least 3 credit hours each, 3 of which must be an approved cluster of 3 related courses (See Note 8 below.)	Choose one of the following clusters: ANTH 102, 103 plus any one of ANTH 207, 208, or 209; EC 201, 202, 203; GEOG 106, 107 and 201 or 202; HST 110, 111, 112; HST 157, 158, 159; HST 201, 202, 203; HST 257, 258, 259; PS 201, 202, 203; PSY 201, 202, plus any one of PSY 203, 237, or 239; R 201, 202, 203; SOC 204, 205, 206; WS 101, 102, 103 Choose an additional three courses from the courses listed above or from the following: EC 115; PS 205; PSY 206, 237, 246; SOC 210, 221, 227; SP 112, 113; SSC 150
Science	6 courses of at least 3 credit hours each, 3 of which must be an approved cluster of 3 related courses (See Note 8 below.)	Choose one of the following clusters: BI 101, 102, 103; BI 231, 232, 233; BOT 201, 202, 203; CH 101, 102, 103; CH 104, 105, 106; CH 204, 205, 206; CH 226, 227, 228; G 201, 202, 203; GS 104, 105, 106; MTH 241, 243 and U of O course MTH 242; MTH 251, 252, 253; MTH 251, 252, 254; PH 201, 202, 203; PH 207, 208, 209; PH 211, 212, 213; ZOO 201, 202, 203 Choose an additional three courses from the courses listed above or from the following: ANTH 101; BI 200, 234; CH 150; CS 133F, 161, 162, 244, 274; G 142, 143, 144; GEOG 105; GS 111, 112, 113, 120; MTH 211, 212, 213, 231, 232; OC 133; PH 121; PSY 211, 219
Race, Gender, and Non-Euro-American Studies (Same course may be chosen to meet this requirement and one of the requirements listed above.)	1 course	ANTH 103, 207, 208, 209; ENG 260; HST 110, 111, 112, 157, 159, 257, 258, 259; PSY 245; R 201, 202; SSC 150; WS 101, 102, 103, 199A, B, C

- Notes:**
1. A maximum of 108 credit hours earned at a community college may be applied toward a baccalaureate degree.
 2. Only courses with letter prefixes and numbers above 100 are accepted at the University of Oregon.
 3. A maximum of 12 credit hours of vocational/technical courses are accepted.
 4. B.A. degree requires 36 credit hours in language and literature and equivalent of two years of college foreign language.
 5. B.S. degree requires 36 credit hours in social science or 36 credit hours in science. B.S. degree also requires **MTH**111, 241, and 243 or higher mathematics.
 6. Courses in which "D" grades have been earned will transfer to U of O, but will not satisfy degree requirements in writing, mathematics, or foreign language and may not be acceptable for major requirements.
 7. Students not meeting freshman admissions criteria must complete **WR**121 and 122 and **MTH**105 or 111 before transferring.
 8. No more than three courses from any one department may be used to satisfy group requirements (Arts and Letters, Social Science, and Science). Courses in the major *may not* be used to satisfy cluster requirements but may be used for the required group courses.
 9. This guide is subject to change without notice and should not be regarded as a contract between U of O and students attending Chemeketa Community College.
 10. Students with an Oregon Associate of Arts (A.A.) transfer degree from Chemeketa Community College will be considered as having met the general education requirements at U of O. The Race, Gender, and Non-Euro-American studies requirement is not satisfied by completing the A.A. degree unless one of the acceptable courses is taken as part of the A.A. degree.

Western Oregon State College

General Education Requirements
(Liberal Arts Core Curriculum)

Requirements	Credit hours	Chemeketa courses which satisfy requirements
Skills		
English Composition	9	WR121, 122, 123, 227, 241, 242, 243, 248 (three credits only), (WR121, 122, 123 preferred)
Speech	3	SP111, 112, 113, 114, 126, 130 (SP111 preferred)
Physical Education	5	Any activity courses selected from PE180, 185, 190, 194, 294 and HPE295. (HPE295 and two hours of activity classes from different activities preferred)
Mathematics	4	MTH105 or higher math. MTH211, 212, 213 (Foundation of Elementary Mathematics) required for elementary education majors.
Computer Science	3 or 4	Any course with CS prefix numbered 103 or higher.
Creative Arts (Art, Dance, Music, Theater Arts)	9	Any courses with prefix of ART, MUP*, MUS, TA, and numbered 100 or above. In addition, dance courses at WOSC meet requirement. Prefer nine hours in combination of three different areas. *A maximum of three hours of music performance courses is allowed.
Humanities (Literature, Philosophy, and Religion)	12	A sequence of at least 9 hours in the same discipline is required. All courses with ENG, PHL, R prefix and numbered 100 or above. A nine-hour literature sequence preferred: ENG101, 102, 103; ENG104, 105, 106; ENG107, 108, 109; ENG201, 202, 203; ENG253, 254, 255, and one philosophy or religion course: PHL201, 202, 203, or 204, or R201, 202, or 203
Natural Sciences and Mathematics	12	A sequence of at least eight hours in the same discipline is required. All courses numbered 100 or higher and with a prefix of BI, BOT, CH, G, GS, MTH, PH, ZOO (Prefer a 12-hour sequence in the same discipline.)
Social Science	15	A sequence of at least nine hours in the same discipline is required. All courses numbered 100 or higher with a prefix of ANTH, EC, GEOG, HST, PS, SOC A three-hour course in psychology is also required. The remaining three hours may be in any social science area including psychology and criminal justice. (PSY237 is required for elementary education majors.)
Foreign Language Alternative (optional)	12	A one-year sequence in a foreign language may replace three hours of writing, six hours of social science, and two hours of PE activity classes. Choose one sequence from CHN101, 102, 103; FR101, 102, 103; GER101, 102, 103; JPN101, 102, 103; RUS101, 102, 103; SPAN101, 102, 103; or a second-year foreign language sequence

- Notes:**
1. A maximum of 108 hours earned at a community college may be applied toward a baccalaureate degree.
 2. In general only courses with a letter prefix and a number of 100 or higher are transferable.
 3. Up to 24 hours of vocational/technical credits can be transferred as free electives.
 4. Courses in which "D" grades have been earned are accepted at WOSC.
 5. Students who have not completed all of the Liberal Arts Core Curriculum (LACC) requirements (listed above) at the time they transfer will be expected to complete them with courses among those specifically required of freshmen beginning their work at WOSC.
 6. Courses numbered 199 and 299 and Cooperative Work Experience (CWE) credits transfer to WOSC as general elective credit and are not applied to the major or LACC requirements. Up to 12 hours of CWE can be accepted.
 7. This guide is subject to change without notice and should not be regarded as a contract between Western Oregon State College and students attending Chemeketa.
 8. Students are encouraged to seek exemption from the Skills requirement by demonstrating proficiency through the appropriate departments at WOSC.
 9. Students with an Oregon Associate of Arts (A.A.) transfer degree from Chemeketa Community College will be considered to have met the LACC requirements at WOSC.

PROGRAMS OF STUDY



Occupational and College Transfer Curricula

Accounting

Are you interested in becoming a bookkeeper, accounting clerk, or junior accountant? Chemeketa's Accounting program offers you the training to qualify for entry-level positions requiring accounting in business, industry, and government agencies.

The program includes a core of accounting, business, and general education courses and emphasizes acquiring specialized business knowledge. You may select individual courses to meet your needs, or you may work toward an Associate of Applied Science degree. You may take some or most of your classes at night.

We strongly suggest that you consult with your assigned advisor to plan your course of study before you begin the first term. The college requires you to take English and mathematics placement tests before you apply for admission. If the tests show that your skills are above the levels of the required first term courses, you may request to substitute general education courses.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program. With the approval of the program chair, you may enroll in BA280 Cooperative Work Experience and earn up to six credit hours as a business elective. For more information, look un-

der Cooperative Work Experience in the catalog index.

The Accounting program provides you with an opportunity to participate in a number of accounting-related extracurricular activities. Several professional accounting organizations, such as the National Association of Accountants and the American Society of Women Accountants, encourage you to become active in Salem area chapters.

In addition to tuition, estimated costs for students who complete the entire program are books, \$1048; class fees, \$72; equipment and supplies, \$65. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 99 credit hours:

Course	Title	Credit Hours
Term 1		
BA211	Financial Accounting I**	4
CS103	Introduction to Microcomputer Applications	3
OA085	Business English II	3
OA121	Keyboarding	3
MTH095	Intermediate Algebra*	4
Term 2		
BA101	Business Environment	4
BA212	Financial Accounting II	4
BA214	Business Communications	3
CS104	LOTUS I - Worksheets	4
OA061A	Introduction to Calculators	1



Term 3

BA213	Managerial Accounting	4
BA256	Income Tax Accounting I	4
EC115	Outline of Economics or	
EC201	Principles of Economics	3
WR227	Technical Writing	3
	Approved computer science elective****	3

Term 4

BA054	Governmental/NonProfit Accounting I*** or	
BA059	Auditing	3
	or	
BA257	Income Tax Accounting II	4
BA056	Intermediate Financial Accounting I	4
BA215	Cost Accounting	3
BA226	Business Law I	3
FE205	Job Search Techniques	1
	Psychology or Sociology elective	3

Term 5

BA057	Intermediate Financial Accounting II	4
BA206	Business Management Principles	3
BA222	Financial Management	3
	Business elective or	
	Cooperative Work Experience	3
	Psychology or	
	Sociology elective	3

Term 6

BA058	Intermediate Financial Accounting III	4
BA228	Computer Accounting Applications	3
SP111	Fundamentals of Speech or	
SP130	Business and Professional Speaking	3
	Business elective or	
	Cooperative Work Experience	3
	Humanities elective	3

*MTH062 may be substituted for MTH095. MTH095 is recommended.

**You must have completed the requirements for, or be concurrently enrolled in, MTH070 or MTH061.

***If you are interested in working for a government agency, you are strongly encouraged to consider BA054.

****Choose from CS106, CS107, Word Processing or Computer Programming courses.

Agriculture

(college transfer)

Oregon State University offers Bachelor of Science degrees in Agricultural and Resource Economics, General Agriculture, Animal Science, Crop Science, Fisheries Science, Horticulture, Poultry Science, Rangeland Resources, Soil Science, and Food Science and Technology.

The two-year program outlined below is designed to meet requirements at OSU.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
First Year	1	2	3
WR121 and Writing or Speech courses*	3	3	3
Mathematics (per placement test through MTH111 College Algebra for all majors; check OSU catalog for additional Math required in some majors).	(4)	5	(4)
BI101, 102, 103 General Biology	4	4	4
HE231 Human Performance	3		
CS100 Beginning Microcomputer Use	1		
CS103 Introduction to Microcomputer Applications			3
Arts and Letters or Social Science*	3	3	3
Electives			3
Second Year	4	5	6
BA211, 212 Financial Accounting	4	4	
BA226 Business Law			3
EC201, 202 (203 recommended, not required) Principles of Economics	3	3	3
Physical Science elective* (recommend CH104 General Chemistry or GS104 or 105 or 106 Physical Science)	4		
Arts and Letters or Social Science*	3	3	3
Electives	3	6	6

*To meet four-year college general education requirements.

Anthropology

(college transfer)

Oregon State University, Portland State University, and University of Oregon offer Bachelor of Arts and/or Bachelor of Science degrees in Anthropology. Eastern Oregon State College offers a combined major in anthropology and sociology.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
First Year	1	2	3
WR121, 122 and/or 123 English Composition*	3	3	(3)
HPE295 Health and Fitness for Life or			
HE250 Personal Health*			3
ANTH101, 102, 103 Human Evolution, Archeology and Introduction to Cultural Anthropology	3	3	3
Arts and Letters/Humanities courses*	3	3	0-3

Electives or Foreign Language* (Two years of college-level Foreign Language required at PSU)	3-4	3-4	3-4
Math or Science electives*	4	4	4
Second Year	4	5	6
Social sciences electives* (SOC204, 205, 206 for EOSC and SOSC)	3	3	3
Arts and Letters/Humanities electives*	3	3	3
Second-year Foreign Language or electives*	3-4	3-4	3-4
Math or Science electives**	4	4	4
Electives*	3	3	3

*To meet four-year college general education requirements.

**MTH243 Probability & Statistics and CS103 Introduction to Microcomputer Applications recommended for students planning to do graduate work.



Art

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in Art are Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College, University of Oregon, and Western Oregon State College.

A five-year program in Art leading to the Bachelor of Fine Arts (BFA) degree is also offered at OSU, SOSC, and U of O.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121, WR122 and/or 123 English Composition*	3	3	(3)
ART115, 116, 117 Basic Design (only 6 credits required at U of O and WOSC; not required for Art History majors at U of O)	3	3	(3)
ART231, 232, 233 Drawing (U of O requires any 2; WOSC requires ART231, 232)	3	3	(3)
Science or Mathematics courses*	4	4	4
Social Science courses*			3-6
Arts and Letters/Humanities (non-art; U of O requires two years of French or German for Art History majors)*	3-4	3-4	3-4
Second Year	4	5	6
ART204, 205, 206 Art History	3	3	3
Social Science courses*	3	3	3
Arts and Letters/Humanities electives*	3-4	3-4	3-4
Science or Mathematics*	4	(4)	(4)
HPE295 Health and Fitness for Life or HE250 Personal Health*		3	
Studio Art courses (EOSC choose from ART154, 155, 281, 284, 292; OSU choose 9 hours of Studio courses; OSU Art Studio majors need 9 hours of 200 level classes; PSU choose 9 credits of ART281 or 9 credits from ART154, 155, 156, 291, 292, 293; SOSC choose ART281, 291 or other courses depending upon option chosen; U of O Art History majors take any 6 hours of Studio courses).	3	3	3
Electives (CS course required at SOSC)			0-3

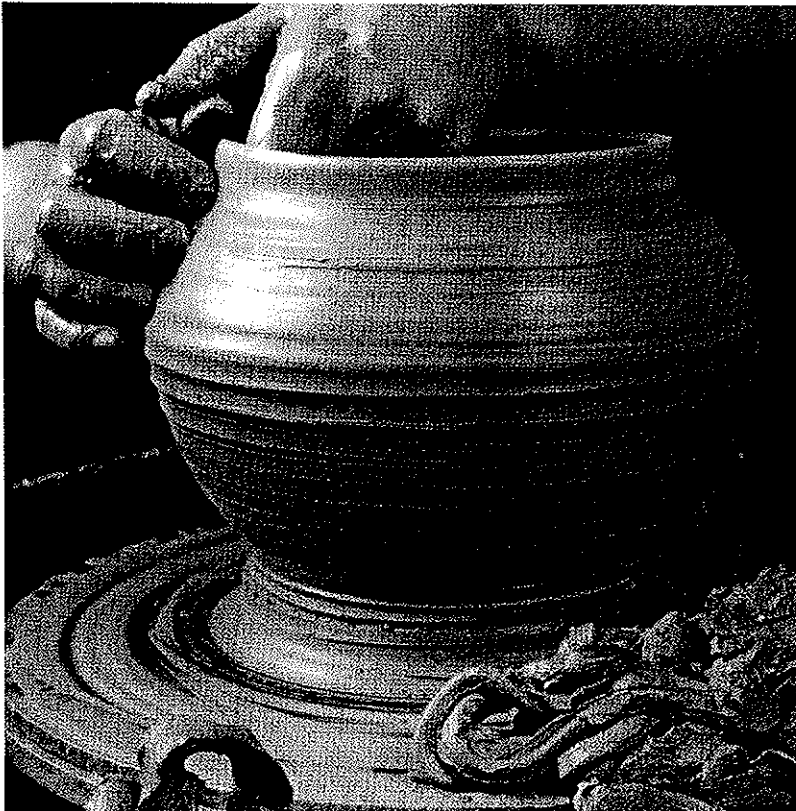
*To meet four-year college general education requirements.



Automotive Technology

Do you want to become an automotive maintenance and repair technician or an auto parts salesperson? The Automotive Technology program emphasizes technical training and development of skills through the study of the various systems of the automobile. You may select individual courses to meet your needs, or you may work toward a degree in the automotive option or a certificate in automotive parts sales.

To help you work effectively with people, the program also includes written and oral communications classes and general education electives. The curriculum emphasizes related scientific,



mathematical, and general mechanical principles.

Automotive Technician Option

Automotive training may lead to employment in the automotive service and repair field. With an increasing number of makes and models of autos, the demand for auto technicians with a broad background and diversified training is growing.

Upon graduating, you may choose to transfer to a school such as Oregon Institute of Technology to complete the course work for a bachelor's degree in industrial management.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program. With the approval of the program chair, you may enroll in AUM280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

In addition to tuition, estimated costs for students who complete the entire program are books, \$582; class fees, \$170; equipment and supplies, \$500. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these 96 required credit hours:

Course	Title	Credit Hours
Term 1		
AUM051	Basic Automotive Engines	5
AUM056	Automotive Shop Safety	1
AUM057	Automotive Brake Systems	4
COM051	Communication Skills I or	
WR121	English Composition—Exposition	3
MTH051	Basic Mathematics or General education elective	3
Term 2		
AUM052	Automotive Machine Shop	4
AUM058	Automotive Steering and Suspension	5
COM052	Communication Skills II or	
WR122	English Composition—Logic and Style	3
DRF072	Introduction to Computer Drawing	3
MTH052	Introduction to Algebra and Geometry	3
Term 3		
AUM061	Manual Drivetrains and Axles I	5
AUM068	Auto Electrical Systems I	4
AUM078	Automotive Workplace Procedures and Ethics	3
AUM092	Automotive Diesel Engines	4
Term 4		
AUM062	Manual Drivetrains and Axles II	3
AUM063	Automatic Transmissions and Transaxles	4
AUM066	Basic Fuel Systems	4
AUM076	Automotive Electrical Systems II	4
Term 5		
AUM067	Advanced Carburetion and Fuel Injection	4
AUM077	Automotive Electrical Systems III	4
AUM086	Automotive Heat and Air Conditioning	5
WLD097	Welding	2
Term 6		
AUM073	Automotive Repair	3
	or Cooperative Work Experience	3
AUM280	Tune-Up and Diagnosis	6
AUM082	New Automotive Developments	4



PSY100 Introduction to Psychology

Automotive Parts Sales Option

In Automotive Parts Sales you may learn aspects of jobber store management in addition to the sale of automotive parts.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program. With the approval of the program chair, you may enroll in AUP280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

In addition to tuition, estimated costs for students who complete the entire program are books, \$286; class fees, \$14. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing these 49 required credit hours:

Course	Title	Credit Hours
Term 1		
AUP081	Engine Theory	3
AUP082	Chassis Theory	3
AUP083	Auto Parts I	4
COM051	Communication Skills I	3
MTH051	Basic Mathematics	3

Term 2	
AUP086	Power Train Theory.....3
AUP087	Auto Electrical Theory.....3
AUP088	Auto Parts II.....4
COM052	Communication Skills II.....3
MTH061	Business Math.....3
Term 3	
AUP091	Auxiliary Systems.....3
AUP093	Fuel Systems.....3
AUP096	Auto Parts III.....4
BA051	Accounting Procedures I.....4
	or General education elective
AUP208	Cooperative Work Experience.....3

Banking and Finance

Consider the Banking and Finance program if you want training to enter the banking field or if you are a bank clerk or teller who wants to become eligible for advancement or promotion to officer trainee or officer positions. The one-year program offers training for entry level positions such as teller, proof operator, new accounts teller, accounting clerk, and data entry clerk. The two-year program offers further training for those choosing a career in banking. There are banking career opportunities in auditing, personnel, public relations, management and operations.

The basic core of the curriculum includes general education and general business courses as well as required and elective courses specifically related to the financial field. You may select individual courses to meet your needs, or you may work toward a Certificate of Completion or Associate of Applied Science degree. The banking classes are offered only at night; other required classes are offered both days and evenings.

Chemeketa and the Oregon Financial Institutions Education Association/American Institute of Banking interchange credits for specified courses. The Banking and Finance program has specific English and mathematics requirements. Initial placement in these courses is determined by results of placement tests you take when you apply for admission.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program. With the approval of the program chair, you may enroll in BAN280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

Certificate of Completion

In addition to tuition, estimated costs for students who complete the entire program are books, \$566; class fees, \$12; equipment and supplies, \$15. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing these required 47 credit hours:

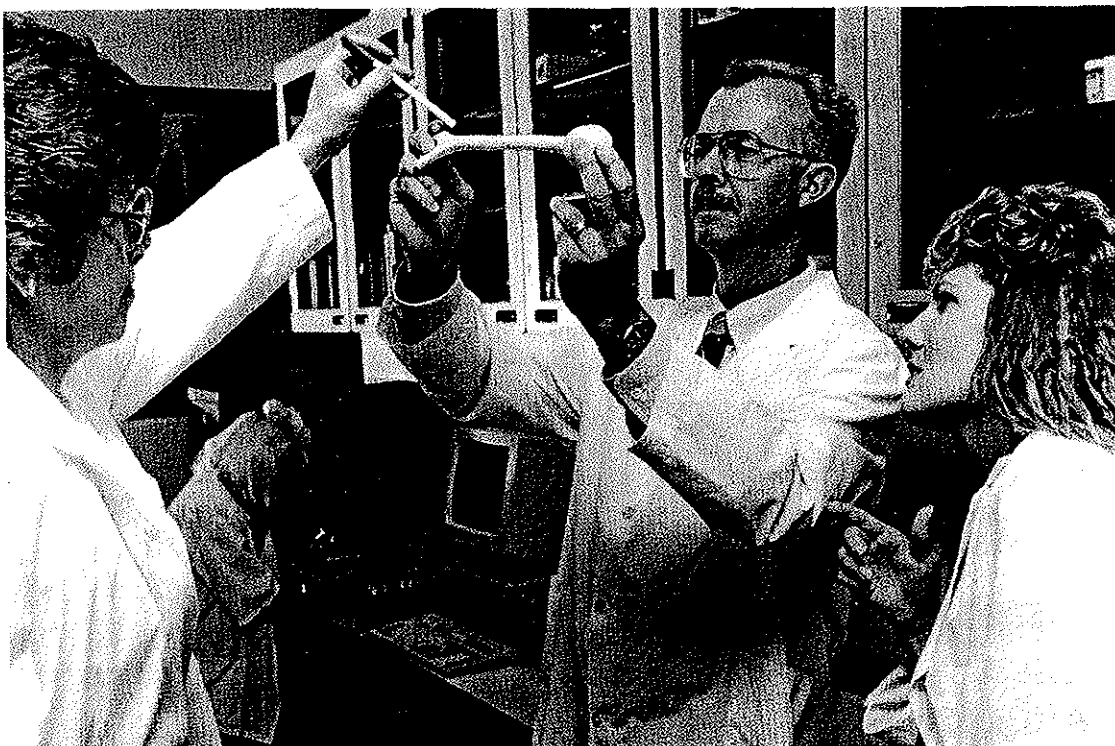
Course	Title	Credit Hours
Term 1		
BAN067	Teller Training.....1	
BA269	Principles of Banking.....3	
SP114	Interpersonal Communications.....3	
MTH061	Business Math.....3	
OA084	Business English I.....3	
OA121	Keyboarding.....3	
Term 2		
BAN063	Product Knowledge.....1	
BA051	Accounting Procedures or Financial Accounting I.....4	
BA211	Applied Business Math.....3	
MTH062	Electronic Calculators.....2	
OA061	Business English II.....3	
OA085	Filing.....2	
OA089		
Term 3		
BAN064A	Selling Bank Services.....1	
BAN078	Customer Service for Bank Personnel.....1	
BAN280	Cooperative Work Experience or Business elective.....3	
BA214	Business Communication.....3	
BA238	Sales and Persuasion.....3	
OA086	Personal and Professional Development.....3	
OA091A	Computerized Bookkeeping.....2	

Associate of Applied Science degree

In addition to tuition, estimated costs for students who complete the entire program are books, \$1,097; class fees, \$28; equipment and supplies, \$60. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 98 credit hours:

Course	Title	Credit Hours
Term 1		
BA101	Business Environment.....4	
BA269	Principles of Banking.....3	
OA084	Business English or English Composition—Exposition*.....3	
WR121	Keyboarding.....3	
OA121	Psychology elective.....3	
Term 2		
BA206	Business Management Principles.....3	
BA211	Financial Accounting I.....4	
BA270	Money and Banking.....3	
MTH065	Introductory Algebra.....4	
	or College Algebra*.....5	
MTH111	Business English II or English Composition—Logic and Style*.....3	
OA085		
WR122		
Term 3		
BA212	Financial Accounting II.....4	
BA214	Business Communications.....3	
BA284	Law and Banking Applications.....3	
MTH062	Applied Business Math.....3	
	or Probability and Statistics*.....4	
MTH243	Banking elective***.....3	
Term 4		
BA238	Sales and Persuasion.....3	
BA281	Consumer Lending.....3	
CS103	Introduction to Microcomputer Applications.....3	
EC201	Principles of Economics.....3	
OA061A	Introduction to Calculators.....1	
	Psychology elective.....3	
Term 5		
BA222	Financial Management.....3	
BA223	Principles of Marketing or Marketing for Bankers.....3	
BA273		



BA278	Law and Banking Principles.....	3
	Business elective**	
	or	
	Banking elective***	
	or	
BAN280	Cooperative Work Experience	3
EC202	Principles of Economics.....	3
	Speech elective****	3
Term 6		
BA205	Human Relations	3
BAN280	Cooperative Work Experience	
	or	
	Business elective**	
	or	
	Banking elective***	6
	Banking elective***	3
	Humanities/fine arts elective	3

*College transfer to four-year school

**Approved Business electives:
Choose courses with BA, CS, or OA prefixes. College transfer students should take BA213 or EC203.

***Approved Banking electives:
Choose courses with BAN prefixes.

****Approved Speech electives:
Choose among the following: SP105, SP111, SP114.

The two-year program outlined below is designed to meet requirements for a degree in biology at these institutions, as well as for a major in general science at EOSC, OSU, or U of O. See college catalogs for other class options and additional requirements. With minor adjustments as noted below, this outline of classes may also be followed for majors in Botany, Entomology, Environmental Health, Microbiology, or Zoology at Oregon State University.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

Biology, Botany, General Science, Entomology, Zoology

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in Biology are Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College, University of Oregon, and Western Oregon State College.

	Term		
First Year	1	2	3
WR121, 122 and/or 123 English Composition*			
	3	3	(3)
HPE295 Health and Fitness for Life			
or			
HE250 Personal Health*			3
CH204, 205, 206 General Chemistry (CH104, 105, 106 also accepted for OSU Entomology majors, SOSC and U of O)	5	5	5
Mathematics sequence (consult an advisor or four-year college catalog to determine appropriate math; most require some calculus)	4-5	4-5	4
Arts and Letters/Humanities courses**	3	3	3

Second Year	4	5	6
PH201, 202, 203 General Physics (not required at WOSC or for Entomology majors at OSU) SOSC also accepts G201,202,203 Geology	4	4	4
CH226, 227, 228 Organic Chemistry (may not replace 300-level Organic Chemistry at all colleges) or BOT201,202 General Botany for EOSC	5	5	5
Social Science courses*	3	3	3
Arts and Letters/Humanities electives*	3	3	3
Social Science electives or other electives (U of O recommends CS161 Computer Science I-PASCAL)*	3	3	3

*To meet four-year college general education requirements.

**Botany majors should take ZOO201, 202 General Zoology and BOT201, 202 General Botany. Zoology majors should take ZOO201, 202 and BOT201 or 202. Environmental Health majors should take BI101, 102, 103 General Biology.

Building Inspection Technology

The Building Inspection Technology program has two options. There is a four-term plan for students with experience in the building trades and a two-year (six-term) option for those new to the field. As a graduate of either program, you may qualify for State of Oregon certification as a building inspector at the C level or higher, depending upon your experience.

There is a need for certified building inspectors working for public agencies. If you have some experience in the field, after you graduate, you

may qualify as a construction manager or clerk-of-the-works or perform similar functions in other jobs.

The curriculum covers technical and general education courses. Classes on various codes, plans inspection techniques, and construction materials are complemented by courses in mathematics, communication skills, and public relations. You may select individual courses to meet your needs, or you may work toward an Associate of Applied Science degree or a Certificate of Completion.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program. With the approval of the program chair, you may enroll in BLD280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

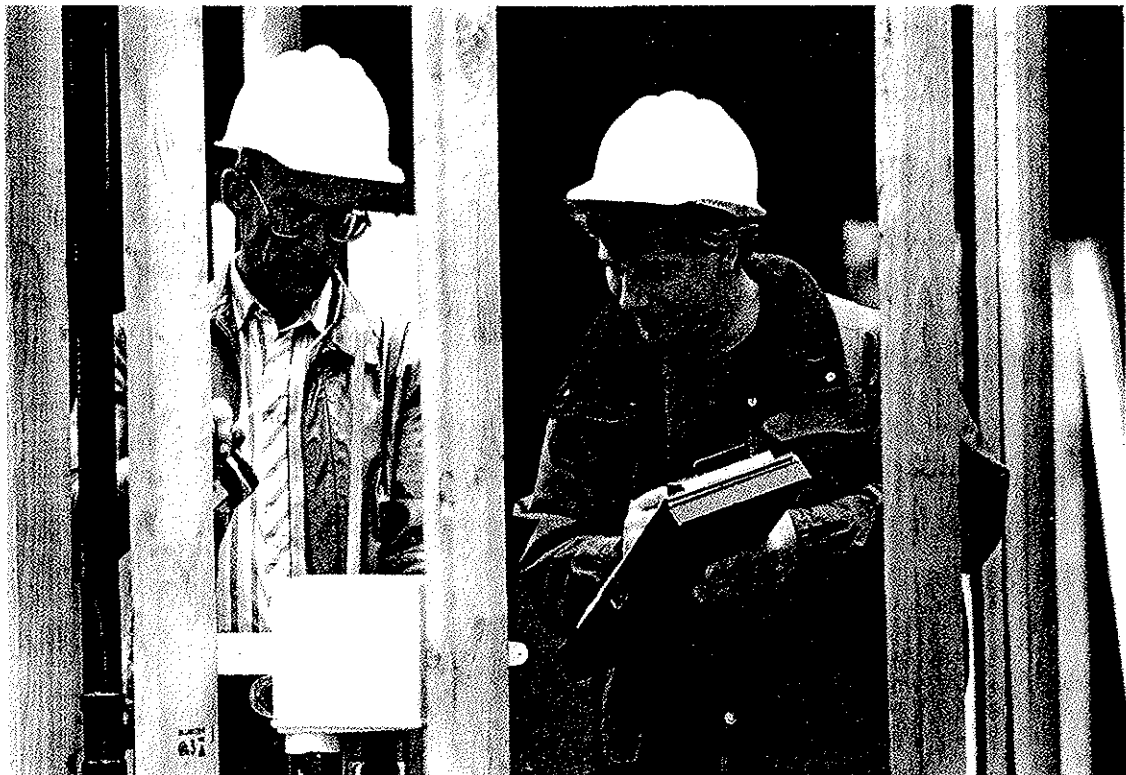
This program has special admission requirements and enrollment limits. For additional information, contact the Admissions Office (399-5006).

Certificate of Completion

In addition to tuition, estimated costs for students who complete the entire program are books, \$651; class fees, \$69; equipment and supplies, \$291. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing these 66 required credit hours:

Course	Title	Credit Hours
Term 1		
BLD051	Building Codes I	3
BLD063	Structural Inspection—Concrete	3



BLD071	Plumbing Codes I	3
BLD093A	Building Inspection—Lab	1
COM051	Communication Skills I or	
WR121	English Composition—Exposition	3
MTH051	Basic Mathematics or	
MTH052	Introduction to Algebra and Geometry	
	or	
MTH053	Introduction to Trigonometry with Geometry	3
	or	
MTH070	Elementary Algebra	
	or	
MTH081	Technical Mathematics	4
Term 2		
BLD052	Building Codes II.....	3
BLD061	Structural Inspection—Wood	3
BLD072	Plumbing Codes II	3
BLD081	Mechanical Codes I	3
BLD093B	Building Inspection—Lab	1
COM052	Communication Skills II or	
WR122	English Composition—Logic and Style	3
MTH052	Introduction to Algebra and Geometry	
	or	
MTH053	Introduction to Trigonometry with Geometry	3
	or	
MTH070	Elementary Algebra	
	or	
MTH081	Technical Mathematics I	4
Term 3		
BLD053	Building Codes III.....	3
BLD054	Dwelling Construction under UBC	3
BLD055	Building Department Administration	3
BLD062	Structural Inspection—Masonry.....	3
BLD082	Mechanical Codes II	3
BLD093C	Building Inspection—Lab	1
COM053	Technical Report Writing or	
WR227	Technical Writing	3
Term 4		
BLD280	Cooperative Work Experience*	12

*Cooperative Work Experience may not be used as a deviation in the one-year program.

Associate of Applied Science Degree

In addition to tuition, estimated costs for students who complete the entire program are books, \$1,274; class fees, \$136; equipment and supplies, \$811. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing the 97 required credit hours plus 12 credit hours of Cooperative Work Experience.

Course	Title	Credit Hours
Term 1		
BLD050	Introduction to Building Inspection	3
BLD051	Building Codes I.....	3
BLD093A	Building Inspection—Lab	1
COM051	Communication Skills I or	
WR121	English Composition—Exposition	3
CS103	Introduction to Microcomputer Applications ..	3
DRF059	Print Reading	2
MTH052	Introduction to Algebra and Geometry	
	or	
MTH053	Introduction to Trigonometry with Geometry	3
	or	
MTH070	Elementary Algebra or	

MTH081	Technical Mathematics.....	4
Term 2		
BLD052	Building Codes II	3
BLD059	Materials of Construction	2
BLD061	Structural Inspection—Wood	3
BLD093B	Building Inspection—Lab	1
COM052	Communication Skills II or	
WR122	English Composition—Logic and Style	3
DRF060	Advanced Print Reading	2
FE205	Job Search Techniques	1
MTH053	Introduction to Trigonometry with Geometry	3
	or	
MTH081	Technical Mathematics I	
	or	
MTH082	Technical Mathematics II.....	4
Term 3		
BLD053	Building Codes III.....	3
BLD054	Dwelling Construction Under UBC	3
BLD055	Building Department Administration	3
BLD062	Structural Inspection—Masonry	3
BLD093C	Building Inspection—Lab	1
COM053	Technical Report Writing or	
WR227	Technical Writing	3
Term 4		
BLD063	Structural Inspection—Concrete	3
BLD071	Plumbing Codes I.....	3
BLD093D	Building Inspection—Lab	1
CVL054	Engineering Fundamentals	3
CVL069	Soil Mechanics Fundamentals	3
PSY101	Psychology of Human Relations	3
Term 5		
BLD064	Structural Inspection—Steel.....	3
BLD066	Structural Plan Review.....	3
BLD072	Plumbing Codes II.....	3
BLD081	Mechanical Codes I	3
BLD091	One and Two Family Electrical Code	3
BLD093E	Building Inspection—Lab	1
Term 6		
ART260	General Photography	3
BLD060	Fire Protection for Buildings	3
BLD067	Nonstructural Plan Review	3
BLD082	Mechanical Codes	3
BLD093F	Building Inspection—Lab	1

Business Administration

(college transfer)

Oregon state colleges and universities offering a Bachelor of Arts and/or Bachelor of Science degrees in Business Administration are Oregon State University, Portland State University, Southern Oregon State College, University of Oregon, and Western Oregon State College. Eastern Oregon State College offers a combined degree in Business and Economics.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121 English Composition	3		
WR122 English Composition for SOSC; WR122 or 123 English Composition for U of O and WOSC; approved writing elective for OSU*		(3)	
BA214 Business Communications for PSU and SOSC			(3)
Mathematics per placement test (MTH111 College Algebra, MTH243 Probability and Statistics, MTH241 Elementary Calculus for OSU and U of O; MTH241 for EOSC; MTH241 and 243 for PSU; MTH111 and 243 for SOSC MTH111 and 241, 243 and 231 Discrete Mathematics for WOSC)	5	4	4
CS131 Introduction to Data Processing (for EOSC, OSU, and U of O).		3	
CS103 Introduction to Microcomputer Applications			3
Arts and Letters/Humanities courses*	3	3	3
Social Science courses* (U of O requires one each from Anthropology, Sociology, and Psychology)	3	3	3
HPE295 Health and Fitness for Life or HE250 Personal Health* Electives*	3		(3)
Second Year	4	5	6
BA211, 212 Financial Accounting	4	4	
BA213 Managerial Accounting			4
EC201, 202, 203 Principles of Economics	3	3	3
SP111 Fundamentals of Speech for EOSC, U of O and WOSC; SP112 Fundamentals of Persuasion for OSU, PSU; choose one from SP111, 112, 113 Fundamentals of Small Group Communication or SP114 Interpersonal Communication for SOSC	3		
BA226 Business Law for EOSC, OSU, U of O, and WOSC		3	
Business courses to meet major requirements: BA101 Business Environment for EOSC; BA206 Business Management Principles for U of O; BA232 Business Statistics for OSU and SOSC;			(3) or (3)
Arts and Letters/Humanities electives*	3		3
Science courses*	4	4	4
Social Science courses* (accounting majors at PSU need PHL203 Ethics and PS201, 202 American Government, and one course in ANTH, PSY or SOC.)	(3)	(3)	(3)

*To meet four-year college general education requirements.

Chemistry

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in Chemistry are Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College and University of Oregon.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121, 122, and/or 123 or 227 English Composition and writing/communication electives*	3	3	3
CH204, 205, 206 General Chemistry	5	5	5
Mathematics (per placement test through MTH254) OSU also requires MTH256 Applied Differential Equations	4-5	4-5	4-5
Arts and Letters/Humanities electives* (FR101,102,103 First-year French or GER101, 102, 103 or RUS101, 102, 103 for U of O; SOSC recommends second-year German for graduate work; PSU recommends a foreign language)	3-4	3-4	3-4
Students are encouraged to transfer to a four-year college after one year at Chemeketa. Those students who have not completed the mathematics requirements may choose to stay at Chemeketa a second year and take courses from the following:			
PH211, 212, 213 General Physics for Engineers and Scientists (EOSC, SOSC and U of O students may substitute PH201, 202, 203 General Physics)	4-5	4-5	4-5
Social Science courses* (U of O also requires CS133F FORTRAN and CS161 Computer Science I - PASCAL; OSU requires BI101 General Biology)	5	4	4
HPE295 Health and Fitness for Life or HE250 Personal Health*	3		
Arts and Letters/Humanities electives or Social Science*	3-4	3-4	3-4

*To meet four-year college general education requirements.

Chiropractic

(college transfer)

Western States Chiropractic College in Portland offers a degree in Chiropractic Medicine. Students must complete two years of prechiropractic credits (90 quarter credits) with at least a 2.25 grade point average as well as a 2.25 grade point average in chemistry, zoology and biology courses.

The two-year program outlined below is designed to meet requirements at Western States Chiropractic College.

As a student, you are responsible for learning the program requirements of the school to which you

plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

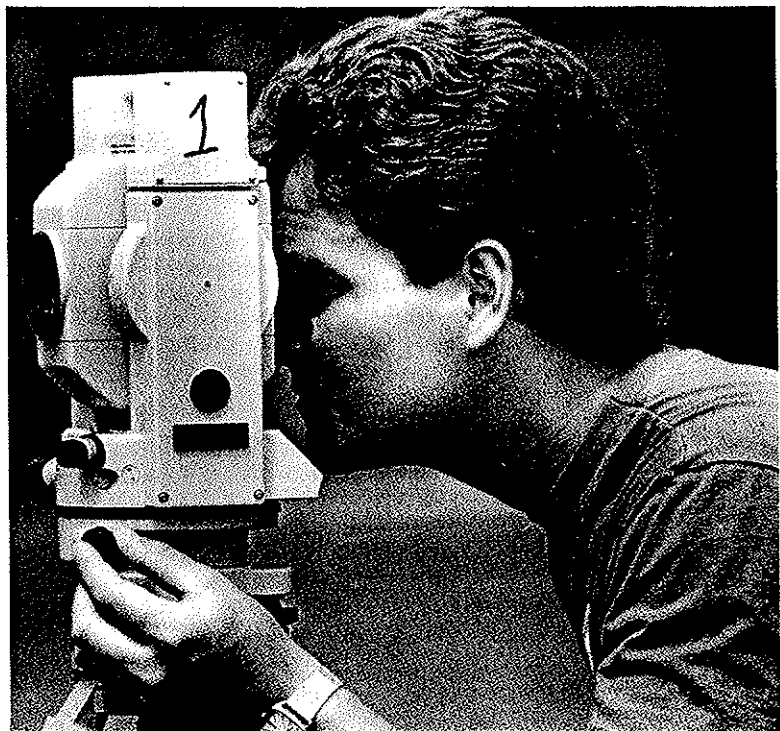
	Term		
First Year	1	2	3
CH204, 205, 206 General Chemistry	5	5	5
Mathematics per placement test through MTH111 College Algebra	5		
WR121 and 122, or 123 English Composition	3	3	
Other approved writing or speech classes			3
PSY201 and 202 or 203 General Psychology		3	3
Approved Humanities or Social Science electives*	3	6	4
Second Year	4	5	6
ZOO201, 202, 203 Zoology	4	4	4
PH201, 202, 203 General Physics	4	4	4
CH226, 227, 228 Organic Chemistry	5	5	5
Approved humanities or social science electives*	3-4	3-4	3

*It is recommended that students who do not already have a bachelor's degree meet the following requirements for the Bachelor of Science degree in Human Biology at WOSC: 12 hours of social science from courses in economics, geography, history, political science, sociology, and psychology and 12 hours of arts and humanities from chosen from art history, English, music, history, philosophy and religion (three of these 12 hours may be in basic foreign language or additional English Composition or speech courses.

Civil-Structural Engineering Technology

The Civil-Structural Engineering Technology program offers both a one-year Certificate of Completion and a two-year Associate of Applied Science Degree. The one-year certificate program prepares the student for entry-level surveying, drafting, and materials testing positions. The two-year program prepares the student to provide preliminary designs of public works and structural engineering projects. Both curricula include courses and field experiences in drafting, surveying, and materials testing. The two-year program also includes basic engineering science; timber, steel and reinforced concrete design; communication skills; psychology; water flow; and environmental and sanitary engineering.

Job opportunities vary. As a graduate of the two-year program, you may assist in the planning, design, and construction of bridges, tunnels, airports, pipelines, roads, dams, towers, and buildings. You may go into public safety and services dealing with water supply and waste water treatment systems. As a technician on construction projects, you may assist in estimating costs, writ-



ing specifications, inspecting or testing materials, surveying, drafting, or designing.

Survey Technology Certificate of Completion

In addition to tuition, estimated costs for students who complete the entire program are books, \$400; class fees, \$70; equipment and supplies, \$127. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing these 47 required credit hours:

Course	Title	Credit Hours
Term 1		
CVL053	Calculator Proficiency	2
CVL060	Plane Surveying I	5
DRF054	Drafting I	2
DRF072	Introduction to Computer Drawing	3
MTH081	Technical Mathematics I	4
	or	
MTH111	College Algebra	5
Term 2		
CVL061	Plane Surveying II	5
CVL074	Contracts, Specifications and Construction Estimating	4
DRF073	Computer-Aided Design (CAD)	3
MTH082	Technical Mathematics II	4
	or	
MTH112	Trigonometry	5
Term 3		
CVL064	Construction and Route Surveying	5
CVL076	Soils Testing Lab	1
CVL078	Concrete and Concrete Testing	3
DRF081	Mapping and Platting	3
	or	
DRF082	Civil Engineering Drafting	3
DRF093	Technical Software Applications	3

Associate of Applied Science degree

In addition to tuition, estimated costs for students who complete the entire program are books, \$1,114; class fees, \$87; equipment and supplies, \$205. Contact the financial aid office to find out if you qualify for help with these costs.

An Associate of Applied Science degree is awarded upon the successful completion of the required 96 credit hours. As a graduate of the program, you may transfer to Oregon Institute of Technology to complete course work for a Bachelor of Science degree in engineering technology.

Chemeketa also offers a pre-engineering transfer program for students who want to transfer to an accredited four-year college or university to earn a Bachelor of Science degree. For details, look under Engineering (college transfer).

Course	Title	Credit Hours
Term 1		
CVL053	Calculator Proficiency	2
CVL060	Plane Surveying I	5
DRF054	Drafting I	2
DRF072	Introduction to Computer Drawing	3
MTH081	Technical Mathematics I	4
	or	
MTH111	College Algebra	5
Term 2		
CVL061	Plane Surveying II	5
CVL074	Contracts, Specifications and Construction Estimating	4
DRF073	Computer Aided Design	3
MTH082	Technical Mathematics II	4
	or	
MTH112	Trigonometry	5
Term 3		
CVL064	Construction and Route Surveying	5
CVL076	Soils Lab	1
CVL078	Concrete Testing	3
CVL080	Applied Mechanics	3
MTH083	Technical Mathematics III	4
	or	
MTH251	Differential Calculus	5
Term 4		
CVL082	Strength of Materials I	4
CVL087	Hydraulics	4
DRF082	Civil Engineering Drafting	3
PH081	Applied Physics	4
Term 5		
COM051	Communication Skills I or	
WR121	English Composition—Exposition	3
CVL084	Soil Mechanics and Foundations	3
CVL088	Environmental and Sanitary Engineering	4
CVL094	Timber and Steel Design and Construction	4
DRF089	Structural Drafting	3
Term 6		
COM053	Technical Report Writing or	
WR227	Technical Writing	3
CVL092	Concrete Construction and Design	3
DRF083	Project Development	3
DRF093	Technical Software Applications	3
FE205	Job Search Techniques	1
PSY246	Introduction to Industrial Psychology or	
	Humanities/fine arts elective or	
	Social science elective	3

Computer Electronics Technology

see Electronics Technology

Computer Programming

Chemeketa's Computer Programming curriculum is for men and women who wish to become professional business-application main-frame programmers. As a graduate of this program, you will meet the minimum educational and experience requirements to qualify for the State of Oregon employment classification as a computer programmer trainee. After six months of experience, you may qualify as a computer programmer.

The Microcomputer Support Specialist option is for men and women who wish to become professionals in the microcomputer local area network (LAN) integrated application environment. The two-year program includes theory and technical information as well as experience in performing actual microcomputer systems maintenance tasks. The curriculum emphasizes problem solving and working effectively with people.

In either program you may select individual courses to meet your needs, or you may work toward an Associate of Applied Science degree.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program. With the approval of the program chair, you may enroll in CS280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

In addition to tuition, estimated costs for students who complete the entire program are books, \$840; class fees, \$110; equipment and supplies, \$65. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 93 credit hours:

Course	Title	Credit Hours
Term 1		
BA211	Financial Accounting I	4
CIS120	Computer Information Science I	4
MTH105	Introduction to Contemporary Mathematics ..	4
	Humanities/fine arts elective or	
	Science/applied science elective	3
Term 2		
BA212	Financial Accounting I	4
CIS121	Computer Information Science II	4
CS133C	COBOL I	4
CS171	Principles of Computer Organization	4
Term 3		
CIS122	Computer Information Science III	4
CS075	OS Concepts and Facilities	3

CS233C	COBOL II	4
FE205	Job Search Techniques	1
WR121	English Composition—Exposition	3

Term 4

CS234L	On-Line Programming Techniques	4
CS244	Systems Analysis I	3
CS280	Cooperative Work Experience or Business elective	3

SP111	Fundamentals of Speech or SP114 Interpersonal Communication	3
	Social science elective	3

Term 5

CS133A	Assembler I	4
CS274	Systems Analysis II	3
CS280	Cooperative Work Experience or Business elective	3
WR227	Technical Writing	3
	General education elective	3

Term 6

CS234C	COBOL III	4
CS275	Data Base Development	4
CS278	Data Communications	4
CS280	Cooperative Work Experience or Business elective	3

CS276	Data Base Management	3
CS280	Cooperative Work Experience or Computer science elective	3

Term 6

CS060	Techniques of User Training	2
CS061B	Computer Lab Assistant II	1
CS145	Microcomputer Hardware/ Software Evaluation	2
CS278	Data Communications	4
CS280	Cooperative Work Experience or Computer science elective	3
	Social science elective	3



Computer Science

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in Computer Science are Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College, University of Oregon, and Western Oregon State College.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

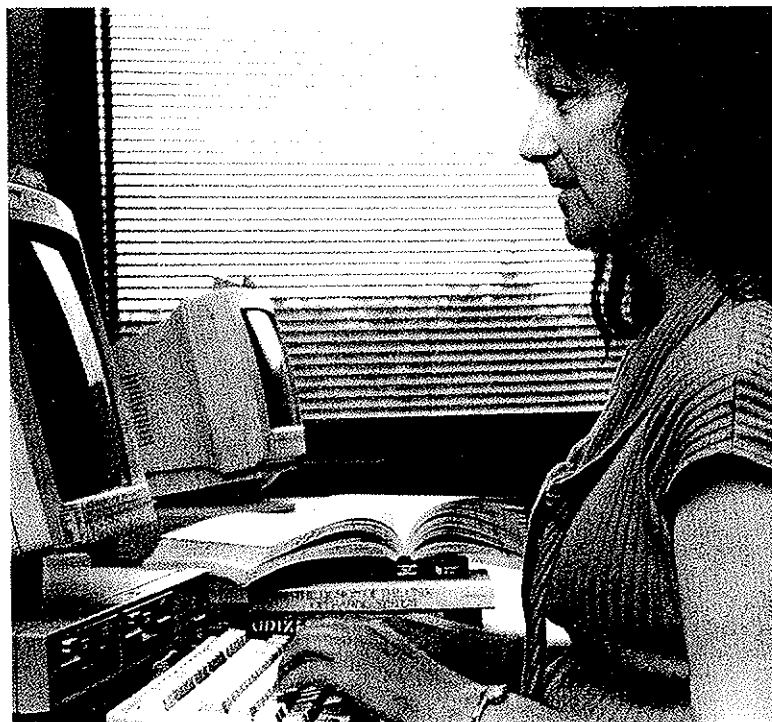
Microcomputer Support Specialist Option

This option emphasizes the horizontal integration of application packages, and includes an introduction to microcomputer programming. It includes training in installing and integrating many of the software packages used by businesses.

In addition to tuition, estimated costs for students who complete the entire program are books, \$973; class fees, \$102; equipment and supplies, \$85. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 95 credit hours:

Course	Title	Credit Hours
Term 1		
CIS120	Computer Information Science I	4
MTH105	Introduction to Contemporary Mathematics ..	4
SP111	Fundamentals of Speech	3
WR121	English Composition—Exposition	3
	Humanities/fine art elective or Science/applied science elective	3
Term 2		
BA211	Financial Accounting I	4
CIS121	Computer Information Science II	4
CS104	LOTUS I - Worksheets	4
CS171	Computer Organization	4
FE205	Job Search	1
Term		
BA212	Financial Accounting II	4
CIS122	Computer Information Science III	4
CS050	Computer Center Operations	5
CS140	Microcomputer Operating Systems	3
Term 4		
CS106	dBase III	3
CS107	LOTUS II - Macros	3
CS244	Systems Analysis I	3
CS260	Advanced MS/DOS and Utilities	4
WR227	Technical Writing	3
Term 5		
CS061A	Computer Lab Assistant I	1
CS133U	C Language	4
CS274	Systems Analysis II	3



	Term		
	1	2	3
First Year			
CS161, 162, 260 Computer Science I, II and III - PASCAL (for EOSC, OSU, PSU, and WOSC); CS161 for SOSC	4	4	4
Mathematics per placement test*	4	4	4
Science courses to meet college Computer Science major requirement* (Physical Science and Biological Science for OSU; Chemistry or Physics for U of O; Chemistry, Physics, Biology or Geology for PSU)	4-5	4-5	4-5
WR121, 122 and/or 123 English Composition and/or WR227 Technical Writing*; WR227 and SP111 Fundamentals of Speech for PSU; WR122 or 123 for U of O; WR121, 122 and 227 for SOSC and two courses from WR122, 123, 227 for WOSC	3	3	(3)
Recommend students planning to attend U of O transfer after completing one year.			
Second Year	4	5	6
Computer Science course to meet major requirements (CS133U C Language for OSU; CS133A, Assembler I, CS233A Assembler II for PSU; CS133U and 133A for SOSC)	3-4	3-4	3-4
CS171 Principles of Computer Organization (for EOSC, WOSC)			4
Mathematics to meet major requirements (through MTH255 Vector Calculus II and MTH253 Series Calculus and Linear Algebra for EOSC; through MTH253 and MTH231, 232 Discrete Mathematics for OSU; through MTH254 Vector Calculus I for PSU; through MTH255 for SOSC; through MTH254, MTH253 and MTH231 for U of O; through MTH241 for WOSC)	4	4	4
Social Science courses* (U of O requires PSY201, 202 203)	3	3	3
Arts and Letters/Humanities sequence*	3	3	3
HPE295 Health and Fitness for Life or HE250 Personal Health*	3		
Electives*		3-4	3-4

*To meet four-year college general education requirements.

Computer Support

The Computer Support program features concentrated study and practical experience in operating different types of computer systems including microcomputers, word processing, and an IBM 4381 mainframe. You may select individual courses to meet your needs, or you may work toward a Certificate of Completion.

The program emphasizes your professional performance. You take classes not only in advanced operating standards and techniques, problem solving, and recovery procedures, but also in how to work efficiently with other people.

We recommend that you consult with your assigned advisor to plan your course of study before you begin the first term. The college requires you to take English and mathematics placement tests before you apply for admission. If the re-

sults show that your skills are above the levels of the required first term courses, you may request to substitute general education courses. You should have keyboarding skills equivalent to 30 words per minute typing.

In addition to tuition, estimated costs for students who complete the entire program are books, \$464; class fees, \$60; equipment and supplies, \$40. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing these 50 required credit hours:

Course	Title	Credit Hours
Term 1		
CIS120	Computer Information Science I.....	4
MTH105	Introduction to Contemporary Mathematics ..	4
SP111	Fundamentals of Speech	3
WR121	English Composition—Exposition	3
	Elective*	3
Term 2		
BA211	Financial Accounting I	4
CIS121	Computer Information Science II.....	4
CS104	LOTUS I - Worksheets	4
CS171	Computer Organization	4
FE205	Job Search	1
Term 3		
BA212	Financial Accounting II	4
CIS122	Computer Information Science III.....	4
CS050	Computer Center Operations	5
CS140	Microcomputer Operating Systems.....	3

*It is recommended that students working toward a two-year degree choose a course from either the Humanities/fine art or Science/applied science areas.

Criminal Justice

Graduates of Chemeketa's Criminal Justice program may become law enforcement officers or correctional officers. Although there is much competition for such positions, they offer good benefits. Graduates may also find other jobs in intake and release work in correctional institutions and in private and public security work. Or, as a graduate, you may work as an insurance adjuster or a hearings officer or licensing inspector for the state Department of Motor Vehicles.

However, many employers require employees to earn a bachelor's degree before entering or advancing in this field. Chemeketa's program is planned so that you may transfer to a four-year institution. The courses also may meet social science requirements at some four-year institutions. Before you enroll at Chemeketa, consult with Chemeketa's Advising and Counseling Center and an advisor at the institution to which you plan to transfer.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program. With the approval of the program chair, you may enroll in CJ280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

In addition to tuition, estimated costs for students who complete the entire program are books, \$900. Contact the financial aid office to find out if you qualify for help with these costs.

An Associate of Applied Science degree is awarded upon successful completion of the 91 required credit hours listed below. These include the 58 credit hours listed under general education requirements, 18 credit hours of criminal justice core requirements, and 15 credit hours of Criminal Justice electives.

General education requirements (58 credit hours) (All courses must be numbered 100 or above.)

Course	Title	Credit Hours
WR121	English Composition—Exposition.....	3
WR122	English Composition Logic and Style.....	3
WR227	Technical Writing	
	or	
WR123	English Composition—Research Writing	3
	Computer science elective	
	Speech elective	3
	Mathematics elective	4
	Physical education elective	
	(three different activities).....	3
	Social science sequence	9
	Humanities sequence	9
	General education electives	18

Criminal Justice Core requirements (18 credit hours)

CJ100	Survey of the Criminal Justice System	3
CJ101	Criminology	3
CJ132	Introduction to Parole and Probation	3
CJ206	Crime and Delinquency	3
CJ215	Criminal Justice Administration	3
CJ226	Introduction to Constitutional Law.....	3

Criminal Justice electives (Select 15 credit hours)

CJ110	Introduction to Law Enforcement.....	3
CJ131	Introduction to Penology	3
CJ198C	Independent Study: Criminal Justice	3
CJ200	Police and Public Policy	3
CJ207	Seminar in Criminal Justice	3
CJ210	Introduction to Criminal Investigation.....	3
CJ220	Introduction to Substantive Law and Oregon Criminal Code	3
CJ230	Introduction to Juvenile Corrections	3
CJ231	Introduction to Corrections Process.....	3
CJ232	Introduction to Corrections Casework.....	3
CJ280	Cooperative Work Experience	3



Applicants must possess a high school diploma or GED certificate. Applicants also must be at least 18 years of age or older by January 1 of the academic year in which they are enrolling. This requirement coincides with the Oregon Board of Dentistry and OAR Chapter 818-40-060 3(c) of the Oregon Dental Practice Act.

Dental Assisting

The Dental Assisting program offers technical training to persons who want to work in dental offices and clinics. The program is accredited by the American Dental Association.

The program includes instruction in assisting dentists in private offices or dental health clinics plus clinical and field trip experiences.

Typical duties of dental assistants include preparing patients for treatment, mixing restoration materials and dental cements, checking and sterilizing equipment, taking inventory, and ordering supplies. Laboratory duties include pouring study models of teeth, fabricating custom trays and temporary crowns, and exposing and developing x-ray films. As office manager, a dental assistant is a receptionist, schedules appointments, keeps accounts and records, prepares statements, and is responsible for the general appearance of an office.

In order to graduate, you must show that your mathematics competency is equivalent to MTH007 Whole Numbers, MTH008 Fractions, and MTH009 Decimals, Proportions and Percents. Placement tests will determine competency level. You are required to earn a grade of C or better in all courses. You must also earn a State of Oregon certificate of radiological proficiency before you graduate. As a graduate you are eligible to take the National Certification Examination for Dental Assisting.

This program has special admission requirements and enrollment limits. For additional information, contact the Admissions Office (399-5006).

In addition to tuition, estimated costs for students who complete the entire program are books, \$370; class fees, \$135; equipment and supplies, \$400; test fees, \$80. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing these 62 required credit hours:

Course	Title	Credit Hours
Term 1		
BI060	Basic Science Principles	3
DEN050	Dental Sciences I.....	3
DEN051	Introductory Concepts in Dental Assisting	3
DEN052	Dental Anatomy and Physiology	4
DEN053	Dental Materials I.....	4
SP115A	Interpersonal Communication in the Health Profession.....	1
Term 2		
DEN060	Dental Sciences II.....	4
DEN061	Dental Assisting Practicum I	3
DEN062	Expanded Functions I.....	3
DEN063	Dental Materials II.....	4
DEN064	Dental Radiology I.....	4
SP115B	Nonverbal Communication in the Health Professions	1
Term 3		
CS103	Introduction to Microcomputer Applications ..	3
DEN070	Dental Office Management	3
DEN071	Dental Office Practicum II	6
DEN072	Expanded Functions II.....	3
DEN074	Dental Radiology II.....	2
SP115C	Group Dynamics in the Health Professions	1
Term 4		
DEN080	Dental Assisting Seminar.....	2
DEN081	Dental Office Practicum III.....	5

Dental Hygiene

(college transfer)

Oregon state colleges and universities offering a Bachelor of Science degree in Dental Hygiene are Oregon Health Sciences University and Oregon Institute of Technology.

Admission to the Dental Hygiene programs is competitive; only a limited number of applicants is accepted each year. It is important to check with the college of your choice for admission requirements and to obtain admission materials early, as requirements change.

The two-year program outlined below is designed to meet requirements at OHSU and OIT. Since OIT begins dental hygiene courses in the second year, it may be to the student's advantage to transfer after completing one year at Chemeketa.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institute to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121,122 English Composition	3	3	
WR227 Technical Writing for OIT			(3)
SP111 Fundamentals of Speech		3	
CH104,105,106 General Chemistry	5	5	5
PSY201 General Psychology		3	
SOC204 General Sociology	3		
PSY237 for OIT and ANTH103 for OHSU			3
Health Education elective* for OIT	(3)		
CS131 Introduction to Data Processing for OIT		(3)	
Electives for OHSU	(3)	(3)	(3)
MTH111 College Algebra (required for OIT, recommended for OHSU)			(5)
Second Year			
ZOO201,202,203 General Zoology for OHSU or BI231,232,233 Anatomy and Physiology for OIT	4	4	4
Humanities elective* (may not include first-year foreign language)	3	3	3
PE elective* for OIT	(1)	(1)	(1)
EC201 Principles of Economics for OIT	(3)		
SP113 Fundamentals of Leadership in Group Communications for OIT		(3)	
BA206 Business Management Principles for OIT	(3)		
Business electives* for OIT			(6)
Electives to bring total acceptable credits to 90 quarter hours for OHSU (PH201 General Physics recommended but not required.)	(7)	(6)	(9)
FN225 Nutrition		4	

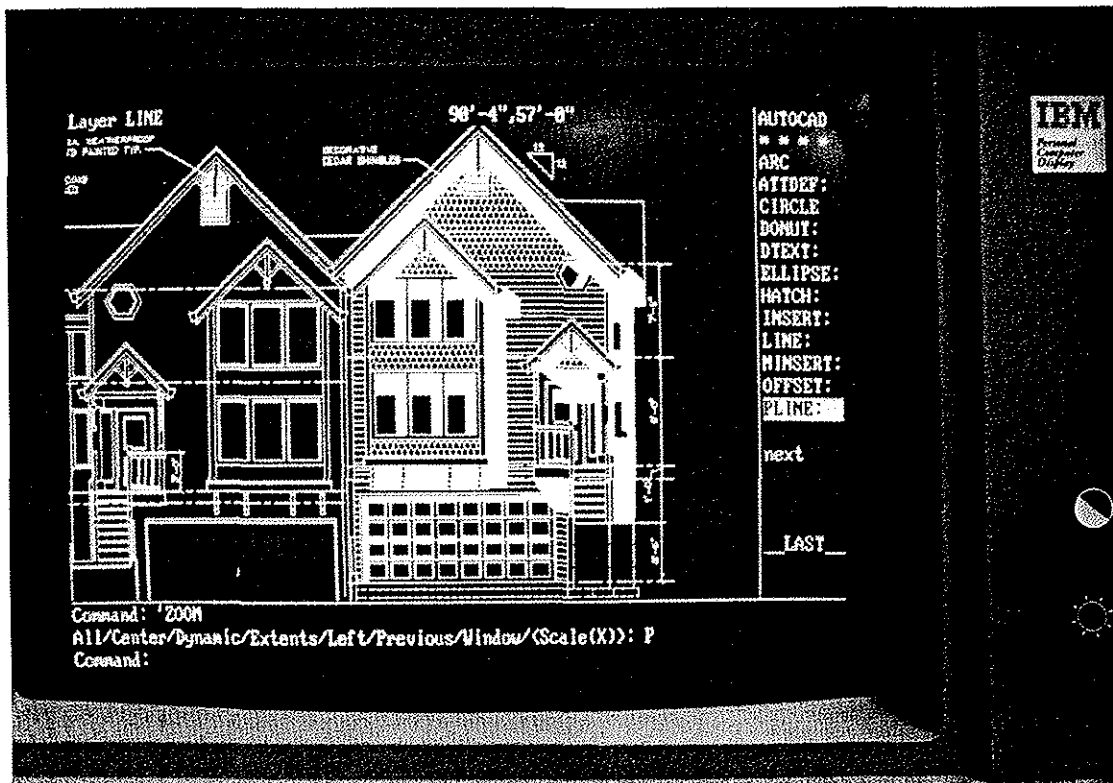
*To meet four-year college general education requirements.

Drafting Technology—CAD

Drafting Technology offers three paths of entry into careers in drafting and design: Drafting, Mechanical Design, and Computer-Aided Design/Computer-Aided Manufacturing (CAD/CAM). During the first year students in all three areas share many courses so that you may explore, gain insight, and consult with advisors to make knowledgeable decisions about your career. You may select individual courses to meet your needs, or you may work toward an Associate of Applied Science degree. You should choose Drafting, Mechanical Design or CAD/CAM as soon as possible during your first year.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program. In your third term, as a full-time student, with the approval of the program chair you may enroll in DRF280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

After graduating, you may transfer to an institution such as Oregon Institute of Technology to complete the course work for a bachelor's degree in industrial management.



Drafting Option

This curriculum offers training and knowledge in skills which apply to technical drafting but which normally you cannot gain through experience alone, such as principles of design, materials and processes, mathematics, and physical science concepts.

Drafting courses are planned to train you in conventional drafting methods such as freehand lettering, preliminary sketching, pencil and ink drafting and in Computer-Aided Drafting (CAD) and in design.

In addition to tuition, estimated costs for students who complete the entire program are books, \$940; class fees, \$121; equipment and supplies, \$227. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 96 credit hours:

Course	Title	Credit Hours
Term 1		
DRF050	Sketching	1
DRF051	Machine Drafting I.....	3
DRF065	Drafting Room Computation	2
DRF072	Introduction to Computer Drawing	3
MFG053	Manufacturing Processes	4
MTH052	Introduction to Algebra and Geometry	3
Term 2		
COM051	Communication Skills I or	
WR121	English Composition—Exposition	3
DRF052	Machine Drafting II.....	3
DRF056	Architectural Drafting	3
DRF073	Computer Aided Design.....	3
MTH053	Introduction to Trigonometry with Geometry.....	3

Term 3

CVL066	Surveying for Drafters	4
DRF074	Descriptive Geometry.....	3
DRF075	3D CAD	2
DRF081	Mapping and Platting	3
MTH070	Elementary Algebra.....	4

Term 4

CVL054	Engineering Fundamentals	3
DRF078	CAD Programming	3
DRF082	Civil Engineering Drafting.....	3
DRF085	Cartography/GIS	3
ELE060	Electronic Fundamentals.....	4

Term 5

DRF055	Architectural Design	3
DRF089	Structural Drafting	3
DRF090	Electronic Drafting	3
PH081	Applied Physics.....	4
PSY246	Introduction to Industrial Psychology or Humanities/fine arts elective or Social science elective	3

Term 6

COM053	Technical Report Writing or	
WR227	Technical Writing	3
DRF061	Technical Illustration.....	3
DRF070	CAD Pipe Systems.....	2
DRF079	CADD Electronics or	
DRF083	Project Development.....	3
DRF093	Technical Software Applications	3
CS104	LOTUS I - Worksheets	4
	Elective or	
DRF280	Cooperative Work Experience	3

Mechanical Design Option

Mechanical Design is a comprehensive drafting program with practical approaches to engineering and design concepts using both conventional and Computer-Aided Drafting (CAD) methods.

You may train to become a technician in machine, electronic, control systems, and tool-design drafting. The program emphasizes the use of the computer as a problem-solving tool in these job areas. Instruction in design also stresses the use of manufacturers' technical catalogs, technical handbooks, and practical applications of theoretical and mathematical concepts studied in courses taken concurrently.

With specific course substitutions you may transfer credits to the Mechanical Engineering Technology Program at Oregon Institute of Technology. See your advisor for details.

In addition to tuition, estimated costs for students who complete the entire program are books, \$1,152; class fees, \$103; equipment and supplies, \$289. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 97 credit hours:

Course	Title	Credit Hours
Term 1		
DRF050	Sketching	1
DRF051	Machine Drafting I	3
DRF065	Drafting Room Computation	2
DRF072	Introduction to Computer Drawing	3
MFG053	Manufacturing Processes	4
MTH081	Technical Mathematics I	4
	or	
MTH111	College Algebra	5
Term 2		
DRF052	Machine Drafting II	3
DRF068	Geometric Tolerancing	1
DRF073	Computer Aided Design	3
MTH082	Technical Mathematics II	4
	or	
MTH112	Trigonometry	5
PH081	Applied Physics	4
	or	
PH201	General Physics	4
Term 3		
CVL080	Applied Mechanics	3
DRF070	CAD Pipe Systems*	2
DRF074	Descriptive Geometry	3
DRF075	3D CAD	2
MTH083	Technical Mathematics III	4
	or	
MTH251	Differential Calculus	5
PSY246	Introduction to Industrial Psychology	
	or	
	Humanities/fine arts elective	
	or	
	Social science elective	3
Term 4		
COM051	Communication Skills I	
	or	
WR121	English Composition—Exposition	3
CVL082	Strength of Materials I	4
DRF071	Machine Design	3
DRF078	CAD Programming*	3
ELE060	Electronic Fundamentals	4
	or	
ELE061M	Electronic Circuits	4
Term 5		
CVL094	Timber and Steel Design*	4
DRF066	Tool Design	3
DRF086	Power Transmission Design	3
DRF089	Structural Drafting*	3
DRF090	Electronic Drafting*	3
Term 6		
COM053	Technical Report Writing	
	or	
WR227	Technical Writing	3
DRF061	Technical Illustration*	3

DRF079	CADD Electronics*	3
DRF087	Flexible Manufacturing Systems	3
DRF093	Technical Software Applications*	3
	or	
CS104	LOTUS I - Worksheets	4

*Courses in math, physics, and engineering 200 and above and science-related chemistry courses may be substituted.

Computer-Aided Design/ Computer-Aided Manufacturing (CAD/CAM) Option

The Computer-Aided Design/Computer-Aided Manufacturing (CAD/CAM) option offers training in using computers as tools in engineering, drafting, machine tool control, robotics, electronics, and industrial mechanical design.

You may gain knowledge and skills in operating computer design terminals, programming, and evaluating software problems. Then apply your knowledge and skills to solving increasingly complex design and machining problems. After you successfully complete this option, you may begin employment or upgrade your qualifications as an engineer and/or a design technician. This may be in the fields of engineering and manufacturing operations and in using computers in drafting and in designing and controlling machine tools.

In addition to tuition, estimated costs for students who complete the entire program are books, \$1,197; class fee, \$176; and equipment and supplies, \$100. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 95 credit hours:

Course	Title	Credit Hours
Term 1		
DRF051	Machine Drafting I	3
DRF072	Introduction to Computer Drawing	3
MFG053	Manufacturing Processes	4
MTH081	Technical Mathematics I	4
	or	
MTH111	College Algebra	5
WR121	English Composition—Exposition	
	or	
COM051	Communication Skills I	3
Term 2		
DRF052	Machine Drafting II	3
DRF068	Geometric Tolerancing	1
DRF073	Computer Aided Design	3
MTH082	Technical Mathematics II	4
	or	
MTH112	Trigonometry	5
PH081	Applied Physics	4
	or	
PH201	General Physics	4
Term 3		
CVL080	Applied Mechanics	3
DRF074	Descriptive Geometry	3
DRF075	3D CAD	2
MFG093	CNC Machine Tool Operations	5
MTH083	Technical Mathematics III	4
	or	
MTH251	Differential Calculus	5
Term 4		
CVL082	Strength of Materials I	4
DRF071	Machine Design Lab I	3
ELE060	Electronic Fundamentals	4
MFG094	Manufacturing Programming	5

Term 5

DRF066	Tool Design Lab I.....	3
DRF086	Power Transmission	3
CS145	Microcomputer Software/ Hardware Evaluation.....	2
MFG095	CAM Applications.....	5
PSY246	Introduction to Industrial Psychology or Humanities/fine arts elective or Social science elective.....	3

Term 6

COM053	Technical Report Writing or Technical Writing.....	3
WR227	Technical Writing.....	3
DRF087	Flexible Manufacturing Systems	3
DRF093	Technical Software Applications	3
MFG096	CAD-CAM Integrations	5

Early Childhood Education

Early Childhood Education is a comprehensive program of both theory and practical experiences designed to prepare you to work with young children. Many of the courses may be helpful to parents of preschool-age children and to persons working with families, children, and individuals. Graduates may qualify to be child care aides, assistants, and teachers in nursery schools, day care centers, kindergartens, and Head Start programs.

You may select individual courses to meet your needs, or you may work toward an Associate of Applied Science degree or a Certificate of Completion. Students in the program must earn grades of C or better in all Early Childhood Education courses.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program. With the approval of the program chair, you may enroll in ECE280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

One-Year Option

In addition to tuition, estimated costs for students who complete the one-year program are books, \$396; class fees, \$16; equipment and supplies, \$16. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing these 54 required credit hours:

Course	Title	Credit Hours
Term 1		
ECE066	Introduction and Observation in Early Childhood Education.....	3
ECE091	Supervised Field Experience: Infant and Prenatal.....	4
HDFS225	Prenatal, Infant and Toddler Development....	3
HDFS233	Family Dynamics.....	3
HDFS249	Working and Living with Infants and Toddlers.....	3
ES071	Work Place Safety Skills	1
Term 2		
COM051	Communication Skills I or English Composition—Exposition	3
WR121	English Composition—Exposition	3
ECE062	Child Development in the Preschool Years...3	3
ECE067	Observing and Guiding Behavior	3
ECE071	Creative Activities.....	4
ECE092	Supervised Field Experience: Preschool	5
Term 3		
ECE072	Learning Experiences	4
ECE074	Children's Literature and Literacy	3
ECE096	Directed Participation I.....	6



HDFS229	Development in Middle Childhood	3
	Communications elective	3

Two-Year Option

In addition to tuition, estimated costs for students who complete the entire program are books, \$635; class fees, \$36; equipment and supplies, \$20. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 97 credit hours:

Course	Title	Credit Hours
Term 1		
COM051	Communication Skills I	
	or	
WR121	English Composition—Exposition	3
ECE066	Introduction and Observation in Early Childhood Education	3
ES071	Work Place Safety Skills	1
HDFS225	Prenatal, Infant and Toddler Development.....	3
HDFS233	Family Dynamics.....	3
HDFS249	Introduction to Working with Infants and Toddlers	3
Term 2		
ECE062	Child Development in the Preschool Years	3
ECE067	Observing and Guiding Behavior	3
ECE071	Creative Activities.....	4
ECE091	Supervised Field Experience: Infants and Toddlers.....	4
MTH052	Introduction to Algebra and Geometry (or higher).....	3
Term 3		
ECE072	Learning Experiences	4
ECE074	Children's Literature and Literacy	3
ECE092	Supervised Field Experience: Preschool	5
HDFS229	Development in Middle Childhood	3
	Communications elective	3
Term 4		
ECE070	Environments for Young Children	3
ECE084	Professional Issues in Early Childhood Education	3
ECE096	Directed Participation I.....	6
	Humanities/fine arts elective	3
Term 5		
ECE075	Music and Movement for Young Children	3
ECE079	Child Nutrition	2
	or	
FN225	Nutrition.....	4
ECE080	Home, School and Community	3
ECE280D	Cooperative Work Experience	4
	Science/applied science elective	3
Term 6		
ECE085	Administration of Early Childhood Education Programs.....	3
ECE097	Directed Participation II.....	7
HDFS222	Partner Relationships.....	3
	Computer science elective.....	3

Economics

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in Economics are Oregon State University, Portland State University, Southern Oregon State College, University of Oregon, and Western Oregon State College. U of O also offers a five-year program combining an undergraduate eco-

nomics major and a master of business administration.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121, WR122 and/or 123			
English Composition or WR227, Technical Writing*	3	3	(3)
Social Science courses*	3	3	3
Arts and Letters/Humanities courses*	3	3	3
Math or Science courses (MTH111, College Algebra, MTH243, Probability and Statistics and MTH241, Elementary Calculus for PSU; U of O requires MTH111,241, 242 or MTH251,252,253 Calculus.)*	5	4	4
HPE295 Health and Fitness for Life or HE250 Personal Health*	3		
Electives*		3	3-6
Second Year			
EC201, 202, 203, Principles of Economics	3	3	3
Science Electives*	4	4	4
Arts and Letters/Humanities or Social Science electives*	3	3	3
Electives (BA211, Financial Accounting and CS133F Fortran IV for PSU)	6-7	6-7	6-7

*To meet four-year college general education requirements.

Education (Elementary)

(college transfer)

Oregon state colleges and universities offering Elementary Education programs are Western Oregon State College, which offers a Bachelor of Arts and/or Bachelor of Science degrees in Elementary Education, and Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College, and University of Oregon which offer fifth-year programs. (The U of O program is suspended for 1991-92.)

Students planning on attending Eastern will earn their degree in Multidisciplinary Studies. Students should see a Chemeketa education advisor or consult with the Eastern School of Education for requirements. Students planning on enrolling in a college offering a fifth-year Elementary Education program must obtain a baccalaureate degree in an academic major before being

admitted to the fifth-year teacher education program. The major may be in general or liberal studies or in any subject taught in elementary schools. Oregon State University recommends students major in Liberal Studies, General Science, Human Development, Family Studies, Exercises and Sport Science, or a single discipline that relates to the elementary school curriculum.

Admission to both four-year and fifth-year education programs requires attaining a minimum grade point average (GPA) in all college work. Required GPA's range from 2.75 to 3.00. Admission also requires passing the General Knowledge and Communications Skill sections of the National Teacher Exam (NTE). Students transferring to WOSC are advised to take the NTE exam at the completion of their general education requirements (known as Liberal Arts Core Curriculum), as NTE scores are included as data required for admission to the Elementary Education program.

Students planning to transfer to a college offering a fifth-year program should follow the program outlined in the catalog for the academic major which they plan to complete before entering a fifth-year program.

Students planning to transfer to the four-year baccalaureate degree program at WOSC should follow the program below:

	Term		
First Year	1	2	3
WR121, 122, 123 English Composition, WR227 Technical Writing acceptable in place of WR122 or 123*	3	3	3
Mathematics (per placement test through MTH211, 212, 213 Foundations of Elementary Mathematics; MTH095 prerequisite)	3-4	3-4	3-4
Literature sequence (ENG104, 105 106 Introduction to Literature or ENG107, 108, 109 World Literature recommended)*	3	3	3
Social Science sequence*	3	3	3
HPE295 Health and Fitness for Life	3		
Computer Science elective (CS103 recommended)*		3	
Speech elective (SP111 recommended)*			3
A one-year sequence in a foreign language may be substituted for 3 hours of English Composition, 6 hours of Social Science and 2 hours of PE Activity classes.			
Second Year	4	5	6
MTH211, 212, 213 Foundations of Elementary Mathematics (if not taken first year)	(3)	(3)	(3)
Creative Arts Electives (courses in ART, MUS or TA)*	3	3	3
Science Sequence*	4-5	4-5	4-5
PE electives*	1	1	
Philosophy or Religion elective	3		
Social Science electives (PSY237 Growth and Development recommended)*	3	3	
Electives in an academic specialty and/or support area. Academic specialty and supported area requirements are outlined in WOSC catalog.	0-3	3-6	3-6

*To meet four-year college general education requirements.

Education (Secondary)

(college transfer)

Oregon state colleges and universities offering secondary education programs are Western Oregon State College, which offers Bachelor of Science or Bachelor of Arts degrees in secondary education, and Eastern Oregon State College, Oregon State University, Portland State University, and University of Oregon which offer a fifth-year secondary education program. (The U of O program has been suspended for 1991-92.)

Admission to fifth-year education programs requires completion of a baccalaureate degree in the subject you plan to teach at a junior or senior high school. The secondary education program is at the graduate level. Admission to these programs requires maintaining a specific grade point average (GPA), usually 2.75 to 3.00, and successfully passing the National Teachers Examination (NTE) in your major subject area and the General Knowledge and Communication Skills exams of the NTE.

Admission to the four-year education program at Western Oregon State College requires maintaining a 2.75 GPA and passing the NTE.

You should enroll in courses that meet the general education requirements for the school to which you plan to transfer, as well as in courses that meet the requirements for the major subject in which you plan to teach.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

Electronics Technology

Career opportunities in the electronics field are diverse, exciting and rewarding. Chemeketa's electronics department offers three programs of study to meet the present and future challenges of the electronics industry: Electronics Engineering Technician, Computer Electronics, and Industrial Electronics.

If you wish to enhance your academic skills, the electronics department also offers a wide range of comprehensive preparatory courses every term including summer. For more information contact electronics pre-technical advisor Lucy

MacDonald (399-5242), the Advising and Counseling Center in Building 2 on the Salem campus (399-5120), or the electronics program chair, Gary Boyington (399-5218).

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do related to your program. You will need the program chair's approval before you may enroll in ELT280 Cooperative Work Experience. For more information, look under Cooperative Work Experience in the catalog index or contact Bruce Bothwell (399-6506).

For information on evening electrical and electronic courses, contact Frank Knight (399-5046). For tours of the electronics laboratory or career information, contact program chair, Gary Boyington (399-5218).

Computer Electronics Technology Option

Graduates of this option begin careers with companies that manufacture, install, or maintain computers or computer-like equipment. This equipment includes, but is not limited to, mainframe computers, mini and microcomputers, automated office equipment and systems (word processors, point-of-purchase terminals, local area networks), computer peripherals, engineering work stations, other automated factory products, and data communication networks.

The training includes both specific technical skills needed in the field and broader skills in communications and human relations which are necessary for career success. You'll have hands-on practice working with computer hardware and software. Classes emphasize both component- and system-level troubleshooting as well as installation and maintenance of equipment and networks.

In addition to tuition, estimated costs for students who complete the entire program are books, \$880; class fees, \$306; equipment and supplies, \$30. Contact the financial aid office (399-5018) to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 107 credit hours:

Course	Title	Credit Hours
Term 1		
COM051	Communication Skills I	
	or	
WR121	English Composition—Exposition	3
CS103	Introduction to Microcomputer Applications ..	3
ELE050	Electronic Concepts I	4
ELT058	Electronics Orientation	1
ELT061	Electronics Problems I	1
ES071	Work Place Safety Skills	1
MTH081	Technical Mathematics I	4
	or	
MTH111	College Algebra	5
Term 2		
ELE051	Electronics Concepts II	4
ELT054	Transistor Fundamentals	5
ELT062	Electronics Problems II	1
ELT066	Digital Fundamentals	4
MTH082	Technical Mathematics II	4
	or	
MTH112	Trigonometry	5

Term 3	
COM053	Technical Report Writing
	or
WR227	Technical Writing
ELE052	Electronic Concepts III
ELT055	Semiconductor Devices
ELT064	Pulse Circuits Fundamentals
ELT071	Linear IC Fundamentals
Term 4	
ELT065	Electronics Circuit Analysis
ELT067	Digital Circuit Applications
ELT091	Programming Concepts I
PH081	Applied Physics
	or
PH201	General Physics
	or
PH211	General Physics for Engineers and Scientists ...
PSY246	Introduction to Industrial Psychology
	or
PSY201	General Psychology
	or
PSY101	Psychology of Human Relations
Term 5	
COM052	Communication Skills II
	or
SP111	Fundamentals of Speech
	plus
FE205	Job Search Techniques
	or
SP113	Fundamentals of Small Group Communications
	plus
FE205	Job Search Techniques
	or
ELT068	Microcomputer Systems
ELT072	Linear IC Applications
ELT090	Computer Peripherals
PH082	Applied Physics
	or
PH202	General Physics
	or
PH203	General Physics
	or
PH212	General Physics for Engineers and Scientists ...
Term 6	
ELT070	Video Display Systems
ELT092	Programming Concepts II
ELT093	Data Communications
ELT097	Advanced Computer Architecture

Electronic Engineering Technician Option

Upon graduation from the Electronic Engineering Technician option, you may begin a career assisting in the design, manufacturing, installation, and service of telecommunication equipment and systems, electronic test instruments, medical measuring and monitoring equipment, computers, video systems, automation products, security and safety systems, process control systems, and flexible automation systems (robots).

As a graduate of this option, you may also choose to transfer to a school such as Oregon Institute of Technology to complete the course work required for a bachelor's degree in electronic engineering technology or industrial management. If you wish to transfer, declare your intent before the first term and work closely with the electronic engineering advisor, Roger White (399-5068) and the institution to which you plan to transfer.

In addition to tuition, estimated costs for students who complete the entire program are books, \$810; class fees, \$297; equipment and supplies,

\$30. Contact the financial aid office (399-5018), to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 105 credit hours:

Course	Title	Credit Hours
Term 1		
COM051	Communication Skills I	
	or	
WR121	English Composition—Exposition	3
DRF091	Basic CAD for Electronics	2
	or	
DRF072	Introduction to Computer Drawing	3
ELE050	Electronic Concepts I	4
ELT058	Electronics Orientation	1
ELT061	Electronic Problems I	1
ES071	Work Place Safety Skills	1
MTH081	Technical Mathematics I	4
	or	
MTH111	College Algebra	5
Term 2		
ELE051	Electronic Concepts II	4
ELT054	Transistor Fundamentals	5
ELT062	Electronic Problems II	1
ELT066	Digital Fundamentals	4
MTH082	Technical Mathematics II	4
	or	
MTH112	Trigonometry	5
Term 3		
COM053	Technical Report Writing	
	or	
WR227	Technical Writing	3
ELE052	Electronic Concepts III	4
ELT055	Semiconductor Devices	3
ELT084	Pulse Circuit Fundamentals	3
ELT071	Linear IC Fundamentals	4
Term 4		
COM052	Communication Skills II	3
	or	
SP111	Fundamentals of Speech	3
	plus	
FE205	Job Search Techniques	1
	or	
SP113	Fundamentals of Small Group Communications	3
	plus	
FE205	Job Search Techniques	1
ELT067	Digital Circuit Applications	3
CS133B	Introduction to Programming BASIC	3
	or	
ELT091	Programming Concepts I (recommended)	
	or	
CS161	Computer Science I—PASCAL	4
PH081	Applied Physics	
	or	
PH201	General Physics	4
	or	
PH211	General Physics for Engineers and Scientists	5
ELT065	Electronic Circuit Analysis	4
Term 5		
ELT068	Microcomputer Systems	5
ELT072	Linear IC Applications	3
ELT076	Antennas and Transmission Lines	2
ELT077	Telecommunications	3
PH082	Applied Physics	
	or	
PH202	General Physics	
	or	
PH203	General Physics	4
	or	
PH212	General Physics for Engineers and Scientists	5
Term 6		
ELT070	Video Display Systems	5
ELT075	Advanced Industrial Electronics	4
MTH083	Technical Mathematics III	
	or	
MTH241	Elementary Calculus	
	or	
MTH243	Probability and Statistics	4
	or	

MTH251	Differential Calculus	5
	or	
ELT092	Programming Concepts II	
	or	
CS162	Computer Science II—PASCAL	4
PSY246	Introduction to Industrial Psychology	
	or	
PSY201	General Psychology	
	or	
PSY101	Psychology of Human Relations	3
	Approved electronics elective*	3

***Approved electronic electives:**

ELT074	FCC License Preparation	3
ELT081	Logical Troubleshooting	4
ELT090	Computer Peripherals	4
ELT093	Data Communications	4
ELT097	Advanced Computer Architecture	5
ELT280	Cooperative Work Experience (For second-year students with prior approval of the program chair.)	
MTH252	Integral Calculus	5
PH203	General Physics	4
PH213	General Physics for Engineers and Scientists	5

Industrial Electronics Technology Option

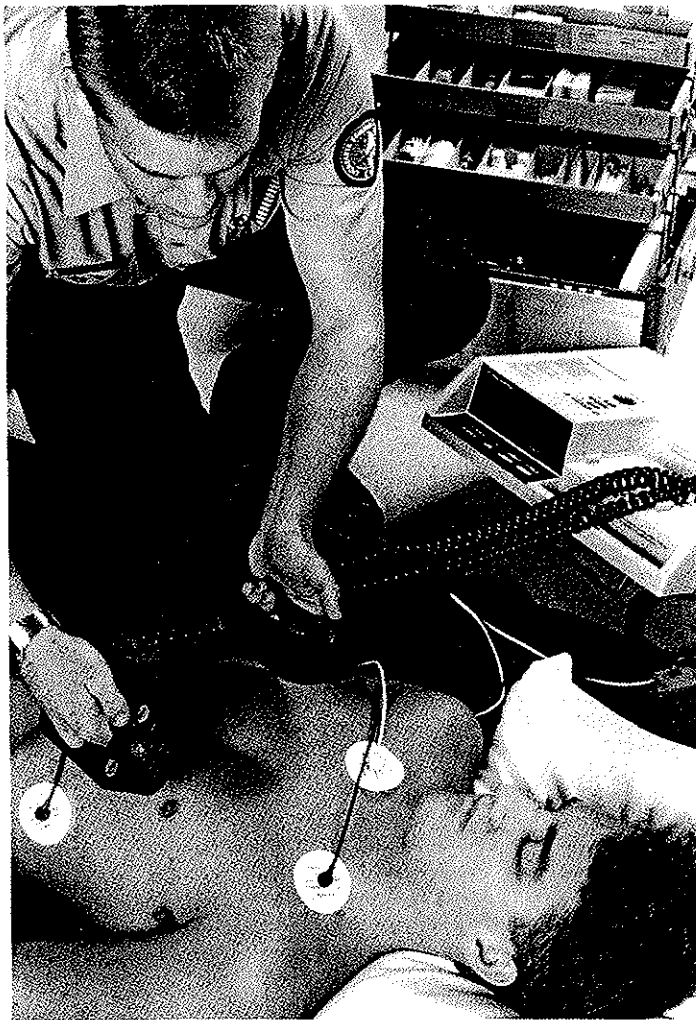
Graduates of this option may begin a career assisting in the development, manufacturing, installation and service of computer-integrated manufacturing systems, process control equipment, data acquisition equipment, electro-mechanical equipment, robots, measurement and monitoring systems.

This option stresses both mechanical and electronic systems and theories. You are required to participate actively every term in a professional organization, such as Instrument Society of America (ISA) or Society of Manufacturing Engineers (SME). For additional information, contact the Industrial Electronics advisor, Marybelle Beigh (399-6507).

In addition to tuition, estimated costs for students who complete the entire program are books, \$750; class fees, \$235; equipment and supplies, \$30. Contact the Financial Aid Office (399-5018), to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 100 credit hours:

Course	Title	Credit Hours
Term 1		
COM051	Communication Skills I	
	or	
WR121	English Composition—Exposition	3
DRF091	Basic CAD for Electronics	2
	or	
DRF072	Introduction to Computer Drawing	3
ELE050	Electronic Concepts I	4
ELT058	Electronics Orientation	1
ELT061	Electronic Problems I	1
ES071	Work Place Safety Skills	1
MTH081	Technical Mathematics I	4
	or	
MTH111	College Algebra	5
Term 2		
ELE051	Electronic Concepts II	4
ELT054	Transistor Fundamentals	5
ELT062	Electronic Problems II	1
ELT066	Digital Fundamentals	4
MTH082	Technical Mathematics II*	4
	or	
MTH112	Trigonometry	5



Term 3	
COM053	Technical Report Writing or
WR227	Technical Writing3
ELE052	Electronic Concepts III4
ELT055	Semiconductor Devices3
ELT064	Pulse Circuit Fundamentals3
ELT071	Linear IC Fundamentals4
Term 4	
COM052	Communication Skills II*3 or
SP111	Fundamentals of Speech3 plus
FE205	Job Search Techniques1 or
SP113	Fundamentals of Small Group Communications3 plus
FE205	Job Search Techniques1
DRF086	Power Transmissions Design3
ELT067	Digital Circuit Applications3
ELT091	Programming Concepts I4
PH081	Applied Physics4 or
PH201	General Physics4 or
PH211	General Physics for Engineers and Scientists ...5
Term 5	
ELT068	Microcomputer Systems5
ELT072	Linear IC Applications3
MFG088	Fluid Power Systems4
PH082	Applied Physics4 or
PH202	General Physics or
PH203	General Physics4 or

PH212 General Physics for Engineers and Scientists ...5

Term 6

DRF087	Flexible Manufacturing Systems3
ELT075	Advanced Industrial Electronics4
ELT280	Cooperative Work Experience* 6-9
PSY246	Introduction to Industrial Psychology or
PSY201	General Psychology or
PSY101	Psychology of Human Relations3

***Cooperative Work Experience:** Students must notify the electronics Cooperative Work Experience coordinator three terms prior to taking Cooperative Work Experience. This is necessary so that a Cooperative Work Experience training site can be selected and reserved for you.

Emergency Medical Technology

The Emergency Medical Technology (EMT) program offers career training for entry level personnel as well as certification and continuing education courses. Chemeketa offers a diverse, experienced EMT faculty, excellent on-campus facilities, and outstanding clinical training sites. The program is fully accredited by the Oregon Department of Education and the Oregon State Health Division.

Students successfully completing a level of training (EMT 1, 2, 3, or 4) will be eligible to sit for the state certification exam at that level.

Emergency medical technicians may be employed by ambulance companies, fire departments, police departments, and industries. There remains a great demand for EMTs and paramedics both locally and nationally.

Students working towards EMT 3 or 4 certification will complete approximately 300 hours of hospital clinical experience, 100 hours of EMT observation, and 100 hours of field internship. Clinical experiences focus on developing the skills, attitudes, and work habits necessary to be successful in their field.

The program has special admission requirements and enrollment limits. Those seeking certification as EMT 1, 2, or 3 should contact the program chair for admission, prerequisites, and co-requisite requirements. For additional information, contact the Admissions Office (399-5006).

In addition to tuition, estimated costs for students who complete the entire program are books, \$966; class fees, \$150; equipment and supplies, \$214. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing the required 100 credit hours.

Course	Title	Credit Hours
Term 1		
BI231	Human Anatomy and Physiology4	
EMT050	Emergency Medical Technology I8	
EMT075	Introduction to Emergency Medical Services ...4	

Term 2

BI232	Human Anatomy and Physiology	4
EMT060	Emergency Medical Technology II	6
MED055	Medical Law and Ethics	3
MTH070	Elementary Algebra	4

Term 3

BI233	Human Anatomy and Physiology	4
EMT069	EMT Rescue	3
EMT080	Emergency Medical Technology III Part 1	5
EMT081	Emergency Medical Technology III Part 1 Clinical	2
HPE295	Health and Fitness for Life	3

Term 4

EMT082	Emergency Medical Technology III Part 2	5
EMT083	Emergency Medical Technology III Part 2 Clinical	3
EMT280B	Cooperative Work Experience (MICU)	2
SP111	Fundamentals of Speech	3
WR121	English Composition—Exposition	3

Term 5

CS103	Introduction Microcomputer Applications	3
EMT070	Emergency Communication and Patient Transport	3
EMT084	Emergency Medical Technology IV Part 1	5
EMT085	Emergency Medical Technology IV Part 1 Clinical	3
EMT280B	Cooperative Work Experience (MICU)	2
	Technical elective*	3

Term 6

AH080	Crisis Intervention	3
EMT086	Emergency Medical Technology IV Part 2	5
EMT087	Emergency Medical Technology IV Part 2 Clinical	2
EMT280B	Cooperative Work Experience (MICU)	2
MS259	Death and Dying	3

***Technical electives:**

AH050	Health Care Delivery	1
EMT069	EMT Rescue	3
EMT079	Disaster Planning and Management	3
HE262	Cardiopulmonary Resuscitation Instruction	2
FRP064	Hazardous Materials Operations	3
MED064	Introduction to Medical Science	3

****Communication electives (three hours required):**

COM051	Communication Skills I	3
COM052	Communication Skills II	3
SP114	Interpersonal Communication	3
SP130	Business and Professional Speaking	3
WR121	English Composition—Exposition	3

*****Social science elective (three hours required):**

EC115	Outline of Economics	3
EC201	Principles of Economics	3
EC202	Principles of Economics	3
MS259	Death and Dying	3
PS201	American Government	3
PS203	State and Local Governments	3
SOC204	General Sociology—Introduction	3
WS101	Introduction to Women's Studies	3

******Approved electives (six hours required):**

BA101	Business Environment	4
BA173	Public Relations in Business	3
BA206	Business Management Principles	3
BA211	Financial Accounting I	4
BA224	Personnel Management	3
BA226	Business Law I	3
ED201	American Sign Language—Beginning I	3
EMT280	Cooperative Work Experience up to	3
FRP050	Introduction to Fire Protection	3
FRP064	Hazardous Materials Operations	3
FRP065	Hazardous Materials Technician II (Part A)	4
HE250	Personal Health	3
HE268	Pharmacodynamics in Health Care	3
HS101	Alcohol Use, Misuse, and Addiction	3
HS150	Self-Awareness and Interpersonal Skills	3
HS154	Community Resources	3
MED066	Medical Reimbursement Management	3
MS259	Death and Dying	3
MTH243	Probability and Statistics	4
	Physical education electives (limited to three credit hours)	3

PE185CA,CB,CC	Conditioning	1
PE185GF,GQ,GR	Gymnastics	1
PE185HA,HB,HC	Handball	1
PE185JJ,JK,JL	Jogging	1
PE185KA,KB,KC	Karate	1
PE185PA	Personal Defense	1
PE185RA,RB,RC	Racquetball	1
PE185SD,SE,SF	Swim for Fitness	1
PE185SL,SM,SN	Get in Shape	1
PE185SS,ST,SU	Swimming	1
PE185TL,TM,TN	Track and Field	1
PE185WD,WE,WF	Weight Training	1
PSY100	Introduction to Psychology	3
PSY101	Psychology of Human Relations	3
PSY114	Career Development Personal Perspective	3
PSY119	Processes in Living	3
PSY201	General Psychology	3
PSY246	Introduction to Industrial Psychology	3
SOC291	Introduction to Data Collection and Interpretation	3

Engineering

(college transfer)

Oregon State University and Portland State University offer a Bachelor of Science or a Bachelor of Arts in Engineering. OSU offers degrees in Chemical, Civil, Construction Engineering Management, Electrical and Computer, Engineering Physics, Geological, Industrial and Manufacturing, Mechanical, Metallurgical, Mining, and Nuclear Engineering. PSU offers degrees in Civil, Computer, Electrical, and Mechanical Engineering.

The program outlined below follows closely the pre-engineering program at Oregon State University, and is similar to requirements of other Bachelor of Arts and Bachelor of Science degree Engineering programs. If you plan to apply for admission to the professional engineering program at Oregon State University, you must meet pre-engineering course requirements. Requirements vary by engineering field.

Students planning to transfer to PSU should consult with a PSU engineering advisor for approval of Chemeketa Engineering courses to transfer to Portland State University's program.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

First Year	1	2	3
GE101 Engineering Orientation	2		
GE102, Engineering Commutations		3	
GE103 Engineering Computations (not required for Electrical Engineering)			3
or			
CS133F FORTRAN IV (not required for Mechanical or Civil Engineering)			3-4
GE115 Graphics (not required for Electrical Engineering)	(3)		

MTH251, 252 Calculus and Calculus with Analytic Geometry, MTH254 Vector Calculus I	5	5	4
CH201, 202, 203 Chemistry for Engineers (CH203 not required for Civil and Electrical Engineering)	4	4	(4)
Biological Science course*	4		
WR121 English Composition		3	
WR227 Technical Writing			3
HPE295 Health and Fitness for Life			3
Arts and Letters/Humanities or Social Science electives*		3	3
Second Year	4	5	6
ENGR211 Statics	4		
ENGR212 Dynamics			4
ENGR213 Strength of Materials (not required for Electrical Engineers)			(4)
ENGR201, 202 Electrical Fundamentals I & II (ENGR202 not required for Civil Engineers)	4	(4)	
ENGR203 Electric Control Fundamentals (not required for Mechanical or Civil Engineering)			(4)
MTH256 Applied Differential Equations	4		
MTH253 Series Calculus and Linear Algebra			4
MTH255 Vector Calculus II (not required for Mechanical Engineering)			(4)
PH211, 212, 213 General Physics for Engineers and Scientists	5	5	5
Arts and Letters/Humanities or Social Science electives or SP111 Fundamentals of Speech or SP112 Fundamentals of Persuasion (SP111 or 112 required in Chemical and Electrical Engineering)*		0-6	0-6

*To meet four-year college general education requirements.



English

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in English are Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College, University of Oregon, and Western Oregon State College.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121, 122, 123 English Composition (Chemeketa recommends taking all courses although some colleges do not require both WR122 and 123)		3	3
Literature sequence (ENG201,202 Introduction to Shakespeare and courses in English and American Literature for EOSC; choose two sequences from ENG101, 102, 103 Introduction to English Literature, ENG107, 108 109 World Literature, or ENG253, 254, 255 Introduction to American Literature for OSU; SOSC requires ENG104, 105, 106 Introduction to Literature, or ENG107, 108, 109, or ENG201, 202,203; choose one sequence from ENG101, 102, 103, ENG107, 108, 109, ENG253, 254, 255 for U of O).		3	3
First-year Foreign Language (required at EOSC, OSU and U of O; recommended at PSU; required for B.A. degree at SOSC and WOSC but not for B.S. degree).	4	4	4
Social Science courses (U of O requires HST110, 111, 112 World History or HST201, 202, 203 History of the United States; EOSC recommends history.)		3	3
Science or Math*	4	4	4
Second Year	4	5	6
ENG201, 202, 203 Introduction to Shakespeare (required for EOSC, U of O; OSU requires one course from ENG201,202,203)		3	3
Second-year Foreign Language sequence or electives	4	4	4
Arts and Letters/Humanities electives* (EOSC recommends Philosophy)		3	3
HPE295 Health and Fitness for Life or HE250 Personal Health*			3
Additional Social Science or Math/Science courses*	3-4	3-4	3-4
Additional Literature courses to meet major requirements or electives		3	3

*To meet four-year college general education requirements.



Entomology see Biology



Farm Business Management

The Farm Business Management program assists farm operators with the financial aspects of farm management. You and your spouse may enroll in the program if you operate, lease, or manage a farm and have access to its financial records.

Instructors visit your farm and hold monthly class sessions on basic farm records, annual computer analyses, and cost production summaries. They show you how to apply analysis information for improving the management and organization of your business.

Tuition covers instruction, record book, farm visits, and a year-end computer farm business analysis. For information, call 399-5052 or the Chemeketa McMinnville Center, 472-9482.

The program includes the following:

9801 Farm Management I

Includes a survey of farm management skills and family goals, uses of farm records, net worth statements, enterprise record keeping, inventories and depreciation, farm income and expenses budgeting, cash flow projections, business principles, closing of account books for analysis, credit planning, tax management, and development of profit and loss statements.

9802 Farm Management II

Covers monitoring goal achievements, interpreting and analyzing farm records, monitoring cash flow, measuring efficiency and business size, determining crop and livestock costs and returns and labor costs and returns. Also discusses government regulations affecting payroll, capital costs and returns, legal aspects of farm management contracts, rental agreements, liabilities, use of computerized farm records, system and tax management, closing accounts for analysis, profit and loss statements, and processes of decision making.

9803 Farm Management III

Includes evaluating the farm business, net worth, credit planning and budgeting, optimum production levels; studying income possibilities, developing crop and livestock plans, planning investments in building and equipment; and purchasing or leasing land. Begins consideration of wills and estate planning, farm business organization (proprietorship vs. partnership vs. corporations), use of futures, hedging, future contracting or marketing tools, development of alternative farm plans, and closure of accounts for analysis.

9804 Farm Management IV

Focuses on analyzing effects of farm reorganization, updated current year's income tax laws, re-evaluating farm and family goals, treating farm real estate as an investment, calculating risk and uncertainties, and using programmed calculators in making decisions.

9805 Farm Management V

Emphasizes advanced estate planning, income tax management strategies, use of supplemental records, use of computers in farm management, advanced cash flow analysis, and roles government agencies and programs play in farm management.

Fire Protection Technology

The Fire Protection program offers career training in Fire Suppression and Fire Prevention-Insurance Risk Inspection. Both options include training and education for those wanting to enter the ca-



reer field and for those already employed. Chemeketa has a well-equipped fire station and training center on the Salem campus. Course work is accredited by the Oregon Fire Standards and Accreditation Board.

Fire Suppression Option

Most firefighters work for public fire departments. Chemeketa's program includes a variety of courses in writing, mathematics, and speech as well as technical fire protection. Each term, students take a Fire Incident Related Experience course which focuses on developing required skills, attitudes, and work habits. As a pre-service student, you will work a 24-hour duty shift weekly and respond to actual emergency incidents under the supervision of county fire district and city fire department officers.

This program has special admission requirements and enrollment limits. For additional information, contact the Admissions Office (399-5006). Applications are accepted beginning January 1 for the next academic year.

In addition to tuition, estimated costs for students who complete the entire program are books, \$890; class fees, \$163; equipment and supplies,

\$250. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these 97 required credit hours:

Course	Title	Credit Hours
Term 1		
EMT051	EMT Basic Emergency Medical Technology I Part A	3
FRP050	Introduction to Fire Protection	3
FRP051	Fire Incident Related Experience	3
FRP055	Elementary Science for Firefighters	4
GS104	Physical Science	4
CH104	General Chemistry	5
PH201	General Physics	4
FRP064	Hazardous Materials Operations	3
Term 2		
EMT052	Emergency Medical Technology I Part B	3
FRP052	Fire Incident Related Experience	3
FRP057	Fire Science	3
GS105	Physical Science	4
CH105	General Chemistry	5
PH202	General Physics	4
MTH095	Intermediate Algebra	4
MTH111	College Algebra	5
WR121	English Composition—Exposition	3
Term 3		
CS103	Introduction Microcomputer Applications	3
FRP053	Fire Incident Related Experience	3
FRP054	Water Supply Operations	3
FRP058	Fire Pump Construction and Operation	3
FRP069	Fire Dept Leadership	3
SP111	Fundamentals of Speech	3
Term 4		
FRP060	Fundamentals of Fire Prevention	3
FRP061	Fire Incident Related Experience	3
FRP061H	Fire Incident Related Experience-Honors	3
HPE295	Health and Fitness for Life	3
	Approved elective*	6
	General education elective	3
Term 5		
FRP056	Fire Service Rescue Practices	4
FRP062	Fire Incident Related Experience	3
FRP062H	Fire Incident Related Experience-Honors	3
	Approved electives*	6
Term 6		
FRP063	Fire Incident Related Experience	3
FRP063H	Fire Incident Related Experience-Honors	3
PSY101	Psychology of Human Relations	3
WR227	Technical Writing	3
	Approved electives*	6
*Approved Electives (18 hours required):		
BA255	Elements of Supervision	3
BLD050	Introduction to Uniform Building Code	3
BLD051	Building Code I	3
BLD052	Building Code II	3
EMT053	Emergency Medical Technician I Part C	1
EMT060	Emergency Medical Technician II	6
EMT081	Emergency Medical Technician III Part 1 Clinical	5
EMT082	Emergency Medical Technician III Part 2	6
EMT083	Emergency Medical Technician III Part 2 Clinical	5
FRP066	Building Construction for Fire Suppression	3
FRP059	Major Emergency Tactics and Strategy	3
FRP074	Fire Investigation	3
FRP070	Fire Fighting Tactics and Strategy	3
FRP071	Fire Protection Systems and Extinguishers	3
FRP072	Fire Codes and Ordinances	3

FRP073	Fire Fighters Law	2
FRP075	Aircraft Crash/Fire Rescue	1
FRP077	Fire Service Instructor Training	2
FRP079	Wildland Urban Interface	2
FRP082	Evidence Photography for Fire and Arson Investigators	3
FRP085	Industrial Fire Protection	3
FRP086	Advanced Detection and Protection Systems	3
FRP087	Fire Insurance Fundamentals	3
HE262	Cardiopulmonary Resuscitation Instruction	2

Fire Prevention—Insurance Risk Inspection Option

Graduates enrolled in this option may be hired by public fire departments, industrial businesses, and insurance companies as fire prevention specialists.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program such as working for a state or local fire prevention bureau. With the approval of the program chair, you may enroll in FRP280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

In addition to tuition, estimated costs for students who complete the entire program are books, \$850; class fees, \$61. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 98 credit hours:

Course	Title	Credit Hours
Term 1		
CS103	Introduction Microcomputer Applications	3
FRP050	Introduction to Fire Protection	3
FRP055	Elementary Science for Firefighters	4
GS104	Physical Science	4
CH104	General Chemistry	5
PH201	General Physics	4
FRP060	Fundamentals of Fire Prevention	3
	General education elective	3
Term 2		
FRP057	Fire Science	3
GS105	Physical Science	4
CH105	General Chemistry	5
PH202	General Physics	4
BLD060	Fire Protection for Buildings	3
FRP072	Fire Codes and Ordinances	3
MTH095	Intermediate Algebra	4
MTH111	College Algebra	5
WR121	English Composition—Exposition	3
Term 3		
FRP081	Fire Prevention Inspection	3
FRP071	Fire Protection Systems and Extinguishers	3
FRP280C	Cooperative Work Experience	3
PSY101	Psychology of Human Relations	3
SP111	Fundamentals of Speech	3
WR227	Technical Writing	3
Term 4		
BDL051	Building Codes I	3
FRP074	Fire Investigation	3
FRP080	Hazardous Materials for Inspectors	3
FRP085	Industrial Fire Protection	3
	Approved electives*	3

Term 5		
BLD052	Building Codes II.....	3
FRP067	Hazardous Materials Regulations.....	3
BLD081	Mechanical Codes I.....	3
FRP073	Firefighter's Law.....	2
FRP280C	Cooperative Work Experience.....	3

Term 6		
BLD067	Nonstructural Plan Review.....	3
FRP086	Advanced Detection and Protection Systems.....	3
FRP087	Fire Insurance Fundamentals.....	3
FRP054	Water Supply Operations.....	3
FRP280C	Cooperative Work Experience.....	3
	Approved electives*.....	3

***Approved electives (six hours required):**

FRP066	Building Construction for Fire Suppression...	3
FRP069	Fire Department Leadership.....	3
FRP070	Fire Fighting Tactics and Strategy.....	3
FRP077	Fire Service Instructor Training.....	2
FRP079	Wildland Urban Interface.....	2
FRP082	Evidence Photography for Fire and Arson Investigators.....	3
FRP280C	Cooperative Work Experience.....	3
FRP064	Hazardous Materials Operations.....	3
DRF059	Print Reading.....	3

Foreign Language sequence (French, German, Japanese, Russian or Spanish)				4	4	4
Social Science* (History or Geography classes recommended by PSU)				3	3	3
HPE295 Health and Fitness for Life or HE250 Personal Health*						3
Second Year				4	5	6
Foreign language sequence (second year)				4	4	4
Social Science*				3	3	3
Arts and Letters or Humanities* Science*				3	3	3
Electives (OSU requires a second-year foreign language sequence in addition to the one chosen for the major. SOSC requires computer literacy.)				4	4	4
				3	3	3

*To meet four-year college general education requirements.

Foreign Languages

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts degrees in foreign languages are Oregon State University, Portland State University, Southern Oregon State College, University of Oregon, and Western Oregon State College. OSU offers degrees in French, German, and Spanish; PSU offers degrees in French, German, Russian, and Spanish; SOSC offers a Spanish degree; U of O has degrees in Chinese, French, German, Greek, Italian, Japanese, Latin, Russian, and Spanish, and WOSC offers a degree in Spanish. Eastern Oregon State College offers a program to prepare students to be foreign language teachers.

If you complete your second year of course work in the language during your first year at Chemeketa, plan to transfer to a four-year institution for your sophomore year.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
First Year	1	2	3
WR121, WR122 and/or WR123 English Composition*	3	3	(3)
Arts and Letters or Humanities courses*	3	3	3
Mathematics or Science courses*	4	4	4

Forest Resources Technology

(Formerly Forest Technology)

The Forest Technology curriculum is currently being revised and the name of the program will be changed to Forest Resources Technology. The new curriculum will include instruction in the forestry skills required of technicians who will be involved in managing our natural resources.

Courses in fish and wildlife management, watershed management, and recreation will be added. Computer courses will introduce the use of data recorders, geographic information systems, and global positioning systems.

For information, contact Tim Dunn or Al Minato (399-5253) of the Forest Resources Technology program.

Forestry

(college transfer)

Oregon State University offers degrees in Forest Engineering, Forest Management, Forest Products, and Forest Recreation Resources. Although these programs are designed as four-year programs, most students take more than four years to complete them as the programs require 204 credits, rather than the normal 192 credits, to complete a baccalaureate degree. Students should plan to transfer after one year at Chemeketa.

The program suggested below is for students wishing to transfer to OSU for Forest Management or Forest Recreation Resources. Those students wishing to transfer into the Forest Products or Forest Engineering majors should check with a counselor or forestry advisor for appropriate courses.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Ad-



vising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at OSU to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
First Year	1	2	3
BI101, 102, 103 General Biology	4	4	4
CH104, 105, 106 General Chemistry (Forest Management only)	5	5	5
or			
CH104 and EC201, 202 Principles of Economics (Forest Recreation Resources only)	5	3	3
Mathematics (per placement test through MTH241 Elementary Calculus)	4-5	4-5	4-5
WR121 English Composition Writing and/or Speech*	3	3	3
HPE295 Health and Fitness for Life	0-3		
Electives*			0-3

*To meet four-year college general education requirements.

General Studies

(college transfer)

Most Oregon state colleges and universities offer Bachelor of Arts and/or Bachelor of Science degrees in General Studies. The major is listed as General Studies at Portland State University, as Liberal Studies at Eastern Oregon State College and Oregon State University, as Arts and Letters at University of Oregon, and as Interdisciplinary Studies at Western Oregon State College.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
First Year	1	2	3
WR121, WR122 and/or WR123 English Composition or WR227 Technical Writing*	3	3	(3)
Social Science courses* (HST110, 111, 112 World History for U of O)	3	3	3
Mathematics per placement test* (through MTH111 for OSU and U of O) or Science courses*	4-5	4-5	4-5
Arts and Letters/Humanities* (U of O requires second year college level foreign language)	3-4	3-4	3-4
HPE295 Health and Fitness for Life or HE250 Personal Health*			(3)
Electives	0-3	0-3	0-3
Second Year	4	5	6
Arts and Letters/Humanities* (ENG101, 102, 103 Introduction to English Literature recommended for U of O)	3	3	3
Social Science courses*	3	3	3
Science sequence or electives*	4	4	4
Electives* or to meet Chemeketa's A.A. degree requirements. (CS103 Introduction to Microcomputer Applications and a speech course recommended)	6	6	6

*To meet four-year college general education requirements.

Geography

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in Geography are Oregon State University, Portland State University, Southern Oregon

State College, University of Oregon, and Western Oregon State College. Eastern Oregon State College offers a degree in Geography and Regional Planning.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
First Year	1	2	3
WR121, 122 and/or 123 English Composition	3	3	(3)
GEOG105, 106, 107 (not all schools require all three courses)	3	3	3
Mathematics per placement test*, ** (MTH111 College Algebra required at EOSC, MTH111, and 112 Trigonometry for OSU and U of O; MTH243 for PSU)	4-5	4-5	4-5
HPE295 Health and Fitness for Life or HE250 Personal Health*		3	
Arts and Letters/Humanities electives* ***	3	3	3
Electives*	3		3-6
Second Year	4	5	6
Social Science electives* (EOSC requires EC201, 202 Principles of Economics and PS201, 202 American Government)	3	3	3
Science electives*	4	4	4
Arts and Letters/Humanities electives*	3	3	3
Electives (EOSC requires computer courses in computer systems including Word Perfect and dBase III. SOSC requires computer literacy. WOSC requires 3-4 credits in Computer Science and Social Science electives.)	6	6	6

*To meet four-year college general education requirements.

**A three-term sequence in calculus is required for graduate work at U of O.

***Foreign language required for some options at U of O.

Geology

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in Geology are Oregon State University, Portland State University, Southern Oregon State College, and University of Oregon.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
First Year	1	2	3
WR121, 122 and/or WR123 or 227	3	3	(3)
Arts and Letters/Humanities courses*	3	3	3
Mathematics per placement test (OSU requires Math through MTH252 Integral Calculus; PSU through MTH254 Vector Calculus I; SOSC through MTH252 Integral Calculus, MTH253 Series Calculus and Linear Algebra and MTH243 Probability and Statistics; U of O through MTH253)	4-5	4-5	4-5
G201, 202, 203 Geology	4	4	4
Social Science*	3	3	3-6
Second Year	4	5	6
PH201, 202, 203 General Physics (or PH211, 212, 213 General Physics for Engineers and Scientists)	4	4	4
CH204, 205, 206 General Chemistry (CH104, 105, 106 General Chemistry also accepted at OSU and at U of O)	5	5	5
HPE295 Health and Fitness for Life or HE250 Personal Health*		3	
Arts and Letters/Humanities or Social Science electives*	3		3
CS133F FORTRAN IV (required at PSU and recommended for U of O)			(3)
Electives (OSU requires four credits of a biological science)	3-4	3-4	3-4

*To meet four-year college general education requirements.

Health, Health Education

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in Health and/or Health Education are Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College, University of Oregon, and Western Oregon State College. Oregon State University offers options in Environmental Health (see Biology for courses to take), Health Education and Safety Studies; Portland State University offers options in Community Health Education and School Health Education; and University of Oregon offers options in School Health, Community Health and Gerontology. (The U of O program has been suspended for 1991-92.) South-

ern Oregon State College offers only a post-baccalaureate program in Health Education.

The two-year program outlined below is designed to meet requirements at these institutions. These requirements are tentative as not all four-year college requirements were available when Chemeketa Community College's catalog went to press.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Those students planning to teach health will need to complete a fifth year of post baccalaureate work to meet teachers certification at all state-system colleges except WOSC. Please refer to the section on Elementary and Secondary Education in Chemeketa's catalog.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121, 122 and/or 123 or 227 English Composition or WR227 Technical Writing*	3	3	(3)
BI101, 102, 103 General Biology for U of O; BI231, 232, 233 Anatomy and Physiology for EOSC OSU and SOSC (elective science sequence for WOSC)	4	4	4
Mathematics per placement test* (Environmental Health at OSU requires MTH241 Elementary Calculus)	4	4	4
HPE295 Health and Fitness for Life* HE250 Personal Health (required at SOSC and WOSC)*	3		3
Arts and Letters/Humanities* Electives (HE252 First Aid at EOSC, and SOSC; BI234 Microbiology at PSU and WOSC)	3	3	3
			3
Second Year	4	5	6
CH104, 105, 106 General Chemistry (may not be required at WOSC)	5	5	5
Social Science courses to meet four-year college general education or major requirements (Some OSU options require EC201, 202, 203 Principles of Economics and/or PSY201, 202 General Psychology and/or SOC204 General Sociology. U of O requires a sequence in Psychology or Sociology.)	6	6	6
SP111 Fundamentals of Speech (for U of O and WOSC)	3		
Electives to meet four-year college general education or major requirements (Some OSU options require BI234 Medical Microbiology and/or CS103 Introduction to Microcomputer Applications and CS131 Intro to Data Processing and CH226, 227 Organic Chemistry; PSU requires CS131; U of O requires FN225 Nutrition, WOSC requires PSY201, 202.)	6	3-6	6

*To meet four-year college general education requirements.

Health Care Support Services

The Health Care Support Services program offers both one-year and two-year training for students on a career ladder in health care delivery. You may enroll in a one-year program to be trained as a medical office assistant, health information technician or medical transcriptionist or complete only two terms to train as a unit clerk. The two-year program trains you to become a health services coordinator.

One-Year Options

In each of these options, you may earn a Certificate of Completion by successfully completing the required credit hours given below. (Three terms for Medical Office Assistant, Health Information Technician, and Medical Transcriptionist or two terms for Unit Clerk.) You may then qualify for a job as a team member.

Students in the programs must earn grades of C or better in all medically related courses. OA121 Keyboarding is required for all students.

Medical Office Assistant

The Medical Office Assistant program prepares you for a wide range of duties in medical offices. Business responsibilities may include scheduling and receiving patients, keeping medical records, handling telephone calls and correspondence, and purchasing and maintaining supplies and equipment. Medical office assistants may be responsible for an office and for processing insurance matters, accounts, fees, and collections.

Your clinical duties may include assisting with examinations and treatments, taking medical histories, performing certain diagnostic tests and laboratory procedures in a physician's office, and sterilizing instruments and equipment.

The program offers clinical experience as well as theory and laboratory courses. Students in the program must earn grades of C or better in all medically related courses. OA121 Keyboarding I is required for all students.

This curriculum is accredited by the Council on Allied Health Education of the American Medical Association in collaboration with the American Association of Medical Assistants, which certifies graduates by examination.

This program has special admission requirements and enrollment limits. For additional information, contact the Admissions Office (399-5006).

In addition to tuition, estimated costs for students who complete the entire program are books, \$288; class fees, \$135; equipment and supplies, \$135. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing these 53 required credit hours:

Course	Title	Credit Hours
Term 1		
BI071	Body Structure and Function I	3
ES071	Work Place Safety Skills	1
HE261	Cardiopulmonary Resuscitation	1
MED051	Medical Terminology I	3
MED055	Medical Law and Ethics	3
MED056	Medical Assisting Basic Procedures	4
OA121	Keyboarding*	3
Term 2		
BI072	Body Structure and Function II	3
FE205	Job Search Techniques	1
MED052	Medical Terminology II	3
MED054	Medical Office Procedures	4
MED057	Medical Assisting, Advanced Procedures	5
MED060	Medical Transcription	3
Term 3		
MED064	Introduction to Medical Science	3
MED078	Medical Practice Seminar	1
MED079	Medical Office Practice	6
OA090	Bookkeeping	3
PSY101	Psychology of Human Relations or	
AH080	Crisis Intervention	3

*If student can demonstrate competency of 35 wpm, OA200, OA201P may be substituted for this requirement.

Unit Clerk

Graduates are prepared to become a member of a nursing unit team who relays telephone messages and doctors' orders; charts vital signs; performs clerical tasks for patient admission, discharge and transfer; and prepares patient charts before surgery and various diagnostic procedures. Unit clerks work with physicians, various hospital departments, patients' relatives and friends, and other allied health professionals.

This program has special admission requirements and enrollment limits. For additional information, contact the Admissions Office (399-5006).

In addition to tuition, estimated costs for students who complete the entire program are books, \$200; class fees, \$48; and supplies, \$25. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing these 36 required credit hours:

Course	Title	Credit Hours
Term 1		
BI071	Body Structure and Function I	3
HE261	Cardiopulmonary Resuscitation	1
MED011	Health Care Skills I	1
MED051	Medical Terminology I	3
MED055	Medical Law and Ethics	3
MED061	Health Information Systems Procedures I	4
OA121	Keyboarding*	3
Term 2		
BI072	Body Structure and Function II	3
MED052	Medical Terminology II	3
MED062	Health Information Systems Procedures II	5
MED078	Medical Practice Seminar or	
FE205	Job Search Techniques	1
MED079	Medical Office Practice or	
MED280F	Cooperative Work Experience	6

*If student can demonstrate competency of 35 wpm, OA200, OA201P may be substituted for this requirement.

Health Information Technician-Medical Transcriptionist

As a graduate of the Health Information Technician-Medical Transcriptionist program, you may become a health information technician, medical transcriptionist, or you may continue your education in medical record technology and administration programs at other schools.

Health information technicians primarily perform the technical tasks of handling medical records such as classifying diseases and operations, qualitatively and quantitatively analyzing current and discharged records, assisting in the collection of data for research and special studies, compiling vital and health statistical information, transcribing various medical reports, abstracting medical information for correspondence purposes, admitting patients to hospitals, filing and retrieving medical information, and performing many other duties related to medical records and health information keeping.

Medical transcriptionists must be familiar with medical terminology and proficient in transcribing, using transcription machines, preparing medical reports of all types with accuracy and speed, using the telephone, and performing clerical duties in medical record offices.

If you plan to transfer to Portland Community College to earn an associate degree as a medical records technician, you should take nine credit hours in general education at Chemeketa in addition to the 53 credit hours required for a Certificate of Completion. These nine hours should include CS131 Introduction to Data Processing or an equivalent.

This program has special admission requirements and enrollment limits. For additional information, contact the Admissions Office (399-5006).

In addition to tuition, estimated costs for students who complete the entire program are books, \$320; class fees, \$60; equipment and supplies, \$25. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing these 53 required credit hours:

Course	Title	Credit Hours
Term 1		
BI071	Body Structure and Function I	3
HE261	Cardiopulmonary Resuscitation	1
MED011	Health Care Skills	1
MED051	Medical Terminology I	3
MED055	Medical Law and Ethics	3
MED061	Health Information Systems Procedures I	4
OA121	Keyboarding*	3
Term 2		
BI072	Body Structure and Function II	3
MED052	Medical Terminology II	3
MED060	Medical Transcription	3
MED062	Health Information Systems Procedures II	5
MED066	Medical Reimbursement Management	3
Term 3		
ES071	Work Place Safety Skills	1
FE205	Job Search Techniques	1



MED064	Introduction to Medical Science	3
MED065	Introduction to Medical Coding Systems.....	3
MED078	Medical Practice Seminar	1
MED079	Medical Office Practice	6
	Elective	3

*If student can demonstrate competency of 35 wpm, OA200, OA201P may be substituted for this requirement.

Two-Year Option

Health Services Coordinator

As a graduate of the two-year program in Health Care Support Services, you will be prepared to serve as a health services coordinator. This program will prepare you for employment in clinical or administrative areas in traditional and emerging health care services, such as health maintenance organizations, clinics, home health care agencies, and insurance groups.

You may earn an Associate of Applied Science degree by successfully completing the required 99 credit hours. If you have completed a one-year Health Care Support Services program at Chemeketa, you may continue for a second year and earn your degree by completing the 46 credit hours listed below. If you have an extensive work background, you may be evaluated for credit for prior learning and seek admission directly into the second year. Contact the program chair for further information.

In addition to tuition, estimated costs for students who complete the entire second year are books, \$400; class fees, \$17; equipment and supplies, \$30. Contact the financial aid office to find out if you qualify for help with these costs.

Course	Title	Credit Hours
Term 4		
BA206	Business Management Principles	3
CS103	Introduction to Microcomputer Applications.....	3
MED080	Health Service Organizational Structure	3
MED081	Introduction to Medical Services Science.....	3
WR121	English Composition—Exposition	3
Term 5		
MED066	Medical Reimbursement Management	3
MED082	Advance Medical Services Science	3
MED083	Introduction to Health Care Monitoring Systems	3
MTH052	Introduction to Algebra and Geometry (or higher).....	3
PSY101	Psychology of Human Relations	3
Term 6		
MED065	Introduction to Medical Coding Systems	3
MED085	Health Services Externship	6
MED086	Health Service Seminar.....	1
SP105	Effective Listening (or higher) or	
COM051	Communication Skills I (or higher)	3
	Approved elective*	3

If a required course has been completed as a part of a certificate program, an approved elective may be substituted.

*Approved electives:

AH080	Crisis Intervention	3
AH205	Biomedical Ethics	3
BA205	Human Relations in Business	3
BA214	Business Communications	3
BA224	Personnel Management	3
CPL120	Prior Learning Resume	3
EC201	Principles of Economics	3
HS150	Self-Awareness and Interpersonal Skills	3
MED053	Medication Terminology III.....	3
MED280	Cooperative Work Experience.....	3
OA114	AlphaHand I	4
SP114	Interpersonal Communication	3
WR227	Technical Writing	3

History

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in History are Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College, University of Oregon, and Western Oregon State College.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121, 122 and/or 123 English Composition	3	3	(3)
HST110, 111, 112 World History	3	3	3
Science courses*	4	4	4
Arts and Letters/Humanities courses* (EOSC recommends foreign language for those planning graduate work; U of O requires foreign language for B.S. and B.A.)	3-4	3-4	3-4
HPE295 Health and Fitness for Life or HE250 Personal Health*	3		
Electives (EOSC and SOSC require CS103 Introduction to Microcomputers)		3	6
Second Year	4	5	6
HST201, 202, 203 History of the United States	3	3	3
Mathematics per placement test*	4	4-5	
Arts and Letters/Humanities* (EOSC recommends second year foreign language for graduate work; U of O requires second year foreign language)	3-4	3-4	3-4
Social Science courses other than history*	3	3	3
Additional Arts and Letters/Humanities or Social Sciences or electives*	3	3	6

*To meet four-year college general education requirements.

Home Economics

(college transfer)

Oregon State University offers a Bachelor of Science degree in Home Economics. Students major in Apparel, Interiors, Housing, and Merchandising or Human Development and Family Science; or Nutrition and Food Management. There are several options for each major. It is essential that you work closely with Chemeketa's home economics advisor or an advisor from OSU to assure that you choose appropriate courses.

The program outlined below is designed to meet requirements for these majors.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at OSU to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121 English Composition	3		
Writing or Speech electives* or **		3	3
Mathematics per placement (through MTH105 Introduction to Contemporary Mathematics or MTH111 College Algebra			

depending on major; some majors require higher math)	(4)	4-5	
HPE295 Health and Fitness for Life			3
Biological and Physical Science**	4-5	4-5	4-5
Social Science**	6	3	6
Literature and Arts elective*	3		

Second Year 4 5 6

Additional required courses can be taken at Chemeketa during a second year. These vary considerably, depending upon option chosen. It is important to work carefully with a home economics advisor to meet OSU's general education (Baccalaureate core) requirements, major requirements, and option requirements.

*To meet OSU general education requirements.

**Check OSU catalog for requirements in your majors and option.

Hospitality Systems Management

The Hospitality Systems Management curriculum focuses on the four components of today's hospitality industry: food and beverage; travel and tourism; lodging, recreation, and leisure; and meeting planning and convention management. Upon graduation you may enter the hospitality industry working in such areas as travel and tourism organizations, hotel operations, restaurant management, convention and visitor associations, and recreation resource management.

You may be interested in our Cooperative Work Experience program which allows you to earn three college credit hours to apply toward graduation requirements for work you do relating to your program. If you have a 2.0 grade point average or higher and the program chair approves, you may enroll in FS280 Cooperative Work Experience. For more information, look under Cooperative Work Experience in the catalog index.

In addition to tuition, estimated costs for students who complete the entire program are books, \$400; class fees, \$40. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing 95 credit hours required.

Course	Title	Credit Hours
Term 1		
FS061	Sanitation and Safety	2
HRTM104	Introduction to Travel and Tourism Industry	3
HSM080	Introduction to the Hospitality Industry	3
MTH061	Business Math	3
OA084	Business English I	3
PSY101	Psychology of Human Relations	3
Term 2		
BI060	Basic Science Principles	3
FS055	Dining Room Management	2
FS070	Purchasing and Store Control	3
HRTM105	Introduction to the Foodservice Industry	3

HSM081	Meeting, Planning and Convention Management.....	3
MTH062	Applied Business Math	3
Term 3		
BA205	Human Relations in Business	3
HRTM106	Introduction to the Lodging Industry.....	3
HSM082	Marketing for the Hospitality Industry.....	3
SP112	Fundamentals of Speech	3
WR121	English Composition—Exposition	3
Term 4		
FE205	Job Search Techniques.....	1
FS060	Basic Food and Nutrition.....	2
FS071	Beverage Management.....	2
FS072	Food Service Facilities Design.....	3
HSM086	Leisure in America	3
SP130	Business and Professional Speaking.....	3
Term 5		
BA051	Accounting Procedures I or Financial Accounting I.....	4
BA211	Personnel Management.....	3
HSM083	Hotel, Restaurant and Travel Law.....	3
HSM087	Foundations in Resource Recreation Management	3
TR054	Travel Agent Basics I	3
Term 6		
BA052	Accounting Procedures I or Financial Accounting II.....	4
CS103	Introduction to Microcomputer Applications ..	3
FS073	Hospitality Systems Management.....	3
FS280C	Cooperative Work Experience	3
WR227	Technical Writing.....	3

Human Services

The Human Services Program offers training for entry-level positions in human service agencies. It is a two-year program which combines academic course work with five quarters of supervised field work. Students specialize in one of three options: Gerontology, Social Services, or Alcohol and Drug training.

This program has special admissions requirements and enrollment limits. For additional information, contact the Admissions Office (399-5006).

By enrolling in the CPL120 Credit for Prior Learning Resume course, you may be able to earn credit for prior learning you acquired through your job, non-credit classes, community or volunteer service, and individual study.

Gerontology Option

The Gerontology Option trains men and women who plan to work in social service agencies, long-term care facilities, and other programs for older citizens. The program includes courses in interviewing, counseling, and intervention. Graduates may become caseworkers, activity directors, and social service workers.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$645; class fees, \$31; equipment and supplies, \$75. Contact the financial aid office to find out if you qualify for help with these costs.

An Associate of Applied Science degree is awarded upon successful completion of the required 99 credit hours. Twenty-five credits of

practicum are required, at least 15 of which must be in a gerontology placement.

Course	Title	Credit Hours
Term 1		
HS150	Self-Awareness and Interpersonal Skills.....	3
HS154	Community Resources	3
HS220	Aging and Society	3
HS170	Introduction to Practicum	3
WR121	English Composition—Exposition	3
Term 2		
HS152	Stress Management	1
HS155	Interviewing Theory and Techniques	3
HS221	Physical Aging	3
HS291G-	Practicum: Human Services	3-8
HS296G	Fundamentals of Persuasion or Business and Professional Speaking	3
SP112		
SP130		
Term 3		
HS101	Alcohol Use, Misuse, and Addiction	3
HS260	Group Dynamics	3
HS222	Aging and Behavior.....	3
HS291G-	Practicum: Human Services	3-8
HS296G	Introduction to Algebra and Geometry (or higher)	3
MTH052		
Term 4		
HS265	Intervention Strategies I	3
HS291G-	Practicum: Human Services	3-8
HS296G	General Sociology.....	3
SOC204	General Psychology	3
PSY201	Introduction to Microcomputer Applications...	3
CS103		
Term 5		
HS266	Intervention Strategy II	3
HS291G-	Practicum: Human Services	3-8
HS296G	General Psychology	3
PSY202	General Sociology.....	3
SOC205	Approved gerontology elective*.....	3
FE205	Job Search Techniques	1
Term 6		
HS291G-	Practicum: Human Services	3-8
HS296G	Growth and Development	3
PSY237	Ethnic Cultures of the Willamette Valley.....	3
SSC150	Humanities/fine arts elective or Science/applied science elective.....	3
	Approved gerontology elective*.....	3

*Approved gerontology electives (6 hours total):

Include hours selected from the following:

AH205	Biomedical Ethics	3
ES071	Work Place Safety Skills	1
HE261	Cardiopulmonary Resuscitation	1
HS165	Activity Director Training for Long Term Care	3
HS262	Misuse and Abuse of Alcohol and Drugs Among the Elderly.....	1
HS267	Intervention Strategies III	3
MS259	Death and Dying	3
PE185DA	Aerobics, Low Impact—Beginning	1
PE185DB	Aerobics, Low Impact—Intermediate	1
PE185DC	Aerobics, Low Impact—Advanced	1

Social Services Option

The Social Services option is for students interested in working for social welfare agencies. These may be serving people in such areas as aging, crisis counseling, corrections, health, recreation, retardation, and residential treatment.

The curriculum includes courses in observing, interviewing, and individual and group counseling. You may also gain a working knowledge of the various health, social, and welfare services in the community.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$671; class fees, \$12; equipment and supplies, \$90. Contact the financial aid office to find out if you qualify for help with these costs.

An Associate of Applied Science degree is awarded upon successful completion of the required 97 credit hours. Twenty-five credits of practicum are required, at least 15 of which must be in a social service placement.

Course	Title	Credit Hours
Term 1		
HS150	Self-Awareness and Interpersonal Skills	3
HS154	Community Resources	3
HS170	Introduction to Practicum	3
PSY201	General Psychology	3
WR121	English Composition—Exposition	3
Term 2		
HS152	Stress Management	1
HS155	Interviewing Theory and Techniques	3
HS291S- HS296S	Practicum: Human Services	3-8
PSY202	General Psychology	3
SP112	Fundamentals of Persuasion or Business and Professional Speaking	3
SP130	Business and Professional Speaking	3
Term 3		
HS101	Alcohol Use, Misuse, and Addiction	3
HS260	Group Dynamics	3
HS291S- HS296S	Practicum: Human Services	3-8
MTH052	Introduction to Algebra and Geometry (or higher)	3
PSY237	Growth and Development	3
Term 4		
CS103	Introduction to Microcomputer Applications ..	3
HS265	Intervention Strategies I	3
HS291S- HS296S	Practicum: Human Services	3-8
SOC204	General Sociology	3
	Approved elective*	3
Term 5		
FE205	Job Search Techniques	1
HS266	Intervention Strategies II	3
HS291S- HS296S	Practicum: Human Services	3-8
SOC205	General Sociology	3
	Approved elective*	3
Term 6		
HS267	Intervention Strategies III	3
HS291S- HS296S	Practicum: Human Services	3-8
SSC150	Ethnic Cultures of the Willamette Valley	3
	Humanities/fine arts elective or Science/applied science elective	3
	Approved elective*	3

***Approved electives (9 hours total):**

Includes hours selected from classes in aging, chemical dependency, education, juvenile corrections, mental retardation, sign language, or independent studies with the approval of the academic advisor.

Alcohol and Drug Option

The Alcohol and Drug option is for students interested in working for public or private agencies offering treatment to chemically dependent people and their families. The agencies provide inpatient and outpatient programs.

The curriculum includes courses in alcohol and drug information, family dynamics, youth addiction, criminality, and individual and group skills in counseling chemically dependent clients.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$597; class fees, \$16; equipment and supplies, \$90. Contact the financial aid office to find out if you qualify for help with these costs.

An Associate of Applied Science degree is awarded upon successful completion of the required 99 credit hours. Twenty-five credits of practicum are required, at least 15 of which must be in an alcohol and drug placement.

Course	Title	Credit Hours
Term 1		
HS101	Alcohol Use, Misuse, and Addiction	3
HS150	Self-Awareness and Interpersonal Skills	3
HS154	Community Resources	3
HS170	Introduction to Practicum	3
WR121	English Composition—Exposition	3
Term 2		
HS102	Drug Use, Misuse, and Addiction	3
HS152	Stress Management	1
HS155	Interviewing Theory and Techniques	3
HS291A- HS296A	Practicum: Human Services	3-8
SP112	Fundamentals of Persuasion or Business and Professional Speaking	3
SP130	Business and Professional Speaking	3
Term 3		
HS201	Family Alcoholism	3
HS260	Group Dynamics	3
HS291A- HS296A	Practicum: Human Services	3-8
MTH052	Introduction to Algebra and Geometry (or higher)	3
PSY201	General Psychology	3
Term 4		
HS202	Counseling the Chemically- Dependent Client I	3
HS265	Intervention Strategies I	3
HS291A- HS296A	Practicum: Human Services	3-8
SOC204	General Sociology	3
CS103	Introduction to Microcomputer Applications ..	3
Term 5		
FE205	Job Search Techniques	1
HS203	Counseling the Chemically Dependent Client II	3
HS266	Intervention Strategies II	3
HS291A- HS296A	Practicum: Human Services	3-8
PSY202	General Psychology	3
SOC205	General Sociology	3
Term 6		
HS204	Counseling the Chemically Dependent Client III	3
HS291A- HS296A	Practicum: Human Services	3-8
PSY237	Growth and Development	3
SSC150	Ethnic Cultures of the Willamette Valley	3
	Humanities/fine arts elective or Science/applied science electives	3

Industrial Technology and Apprenticeship

Industrial Technology

Chemeketa Community college grants an Associate of Applied Science degree in industrial technology. Journeymen and women may earn credit for on-the-job training and related instruc-

tion. To earn the degree, you must meet the following requirements:

1. Have achieved journeyman status in a skilled occupation.
2. Complete a minimum of 30 credit hours or equivalent at Chemeketa Community College.
3. Complete general education requirements for an Associate of Applied Science degree. (See Page 27 of the catalog.)
4. Compile a total of 90 credit hours. You may be awarded up to 45 credit hours for journeyman status and 27 credit hours for trade-related training.

In addition to tuition, estimated costs for students who complete the entire program will vary. Contact the financial aid office to find out if you qualify for help with these costs.

Apprenticeship

Apprenticeship training as a method of vocational education is administered by the Oregon Bureau of Labor. It combines full-time, on-the-job work experience with trade-related theoretical instruction.

The instruction at Chemeketa is for persons working at particular trades who need to improve their knowledge of trade theory. Students generally are apprentices registered with the Oregon Bureau of Labor, journeymen who wish to upgrade their skills and knowledge, pre-apprenticeship students, and others as approved by local committees.

Chemeketa has apprenticeship classes for plumbers, industrial workers, electricians, sheet metal workers, automotive mechanics, machinists, welders, bakers, and other trades, as required by local committees.

Instructional Assistant

The Instructional Assistant program offers the training required to become a teacher's assistant in public schools and institutions.

You may select individual courses to meet your needs, or you may work toward an Associate of Applied Science degree or a Certificate of Completion.

First-year students take a core of required courses, including practicum. Classes are in five general areas: instruction, non-instructional support, human relations, communication and computer-assisted instruction.

Second-year students specialize in working with children at certain grade levels (kindergarten, primary, or secondary) or with bilingual children, or in assisting students who are in special education or vocational-technical programs.

The program also offers ED209B Practicum, Introductory Observation and Experience, a one-term orientation for students exploring education as a career.

One-Year Option

In addition to tuition, estimated costs for students who complete the one-year program are books, \$345; class fees, \$5. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing these 49 required credit hours:

Course	Title	Credit Hours
Term 1		
ED131	Teaching Techniques.....	3
ED133	Instructional Media and Equipment	3
ED209A	Practicum: Introductory Observation and Experience	3
COM051	Communication Skills I or	
WR121	English Composition—Exposition	3
	Approved elective.....	3
Term 2		
ED110	Psychology of Learning.....	3
ED123	Classroom Techniques in Reading and Language	3
ED210	Practicum	6
ES071	Work Place Safety Skills	1
SP111	Fundamentals of Speech or	
SP114	Interpersonal Communication	3
Term 3		
ED111	Contemporary Education	3
ED124	Classroom Techniques in Mathematics and Science	3
ED136	Computers and Advanced Media in Education.....	3
ED211	Advanced Practicum	6
FE205	Job Search Techniques	1
OA121AB	Keyboarding A, B	2

Two-Year Options

Classroom Assistant Core

You may earn an Associate of Applied Science degree after you successfully complete 91 credit hours. These include the 49 credit hours listed under the one-year option; 33 credits hours of required courses listed under the Classroom Assistant Core; and nine additional hours in the option you elect. Before you select elective courses consult with the program chair.

Required courses for all options:

Course	Title	Credit Hours
ED212	Practicum: Specialized Education	6
ED217	Comprehensive Classroom Management	3
ED251	Overview of Handicapping Conditions	3
MTH052	Introduction to Algebra and Geometry.....	3
PSY237	Growth and Development	3
	Humanities/fine arts elective or	
	Science/applied science elective.....	3
	Communications, Health Ed, Humanities/Fine Arts, Math, PE, Science or Social Science elective numbered 050 or higher	3
	Elective.....	9

Classroom Assistant Options

Select nine credit hours in the option you have chosen.

Kindergarten-Primary Option

MTH211	Foundations of Elementary Mathematics.....	3
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MTH212	Foundations of Elementary Mathematics	3
MTH213	Foundations of Elementary Mathematics	3
ECE062	Child Development in the Preschool Years	3
ECE070	Environments for Young Children	3
ECE071	Creative Activities	4
ECE072	Learning Experience for Young Children	4
ECE074	Children's Literature and Literacy	3
ECE075	Music and Movement for Young Children	3
ED208	Tutoring Techniques for Elementary Physical Education	3
HDFS225	Prenatal and Infant Development	3
HDFS250	Developmental Kindergarten	3

Intermediate Elementary Option (4th-6th Grade) See Advisor.

Middle-Senior High Option

Social Science sequence	9
Humanities sequence	9

Bilingual-Bicultural Option

Select nine credit hours.

ED257	Second Language Teaching Techniques for Paraprofessional	3
ED258	Multicultural Education and Paraprofessional	3
ED259	Bilingual Methodology	3
	Language course	4
SSC150	Ethnic Cultures of the Willamette Valley	3

Developmental Disabilities Option

Select nine credit hours in the option you have chosen.

Deaf-Blind

ED201, ED202, ED204	American Sign Language—Beginning I,II,III	9
ED252	Applied Behavior Modification	3
ED282	Teaching Techniques for Vocational Trainers	3

Mentally Retarded, Physically Disabled, Emotionally Disturbed

ED252	Applied Behavior Modification	3
ED268	Educating the Mildly and Severely Handicapped	3
ED269	Classroom Management of the Learning-Disabled Student	3
ED282	Teaching Techniques for Vocational Trainers	3

Vocational-Technical Option

ED252	Applied Behavior Modification	3
ED281	Introduction to Vocational-Technical Education	3
ED282	Teaching Techniques for Vocational Trainers	3
ED292	Occupational Analysis and Curriculum Development	3



Journalism

(college transfer)

The University of Oregon offers Bachelor of Arts and Bachelor of Science degrees in Journalism. Southern Oregon State College offers a Bachelor of Arts and Bachelor of Science in Communication: Journalism. Students planning to transfer to the University of Oregon should consult the U of O catalog for requirements for admission as a

journalism major and to determine when to transfer.

The two-year program outlined below is designed to meet requirements at these institutions

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
First Year	1	2	3
WR121, 122 and/or 123 English Composition*	3	3	
Humanities courses* (ENG104, 105, 106 Introduction to Fiction, Dramatic Literature, and Poetry or ENG107, 108, 109 World Literature recommended for U of O.)	3	3	3
HST110, 111, 112 World History or HST201, 202, 203 History of the United States (Required at U of O, recommended at SOSC)	3	3	3
Speech courses* (SP111 Fundamentals of Speech required at U of O)			3
Mathematics per placement test through MTH111 College Algebra or higher (MTH105 Contemporary Math also accepted at SOSC)	(4)	5	(4)
Electives (recommend J224 Introduction to Journalism, J225 Advertising/Public Relations and J226 Layout Production)	3	3	3
HE250 Personal Health (U of O)			3
Second Year	4	5	6
Social Science sequence* (SOSC recommends one year of political science) U of O requires sequence in Anthropology, Geography, History, Political Science, Psychology, Religion, or Sociology to meet U of O's general education requirements			
or Arts and Letters sequence in Art History, foreign language or philosophy to meet U of O's general education requirement or choose additional social science courses from the list above.	3-4	3-4	3-4
Humanities (SOSC recommends two years of foreign language; U of O requires a total of six literature courses)	3	3	3
EC201, 202, 203 Principles of Economics (recommended at SOSC, required at U of O)	3	3	3
Science courses*	3	3	3
Electives	3	3	3

*To meet OSU general education requirements.



Management

As a graduate of Chemeketa's Management program, you may become a management trainee

or other entry-level employee of a small business or large firm.

You may select individual courses to meet your needs, or you may work toward an Associate of Applied Science degree.

We strongly suggest that you consult with your assigned advisor to plan your course of study before you begin the first term. The college requires you to take English and mathematics placement tests before you apply for admission. If the results show that your skills are above the levels of the required first term courses, you may request to substitute elective or general education courses. If the results show that your skills are below those levels, you may have to enroll in preparatory courses.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program. With the approval of the program chair, you may enroll in BA280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

In addition to tuition, estimated costs for students who complete the entire program are books, \$1,012; class fees, \$36; equipment and supplies, \$70. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 97 credit hours:

Course	Title	Credit Hours
Term 1		
BA101	Business Environment	4
BA211	Financial Accounting I*	4
OA085	Business English II**	3
OA121	Keyboarding	3
	Approved Social Science elective***	3
Term 2		
BA212	Financial Accounting II*	4
BA214	Business Communications**	3
CS103	Introduction to Microcomputer Applications ..	3
MTH095	Intermediate Algebra**	4
Term 3		
BA206	Business Management Principles	3
BA213	Managerial Accounting	4
BA223	Principles of Marketing	3
CS104	LOTUS I - Worksheets	4
	Approved Social Science elective***	3
Term 4		
BA215	Cost Accounting	3
BA226	Business Law I	3
EC201	Principles of Economics	3
FE205	Job Search Techniques	1
	Business elective	3
	Humanities/fine arts elective	3
Term 5		
BA222	Financial Management	3
BA227	Business Law II	3
BA277	Business Ethics	
	or	
WR227	Technical Writing ****	3
SP111	Fundamentals of Speech	3
	Business elective	3
	Business elective (BA280 Cooperative Work Experience recommended)	3

Term 6

BA224	Personnel Management	3
BA238	Sales and Persuasion	3
	Business elective	3
	Business elective (BA280 Cooperative Work Experience recommended)	6

*BA051, BA052 and BA053 may be substituted for BA211 and BA212. BA211 or BA051 requires concurrent enrollment in MTH061 or MTH095 or higher math placement.

**Placement in math and English determined by testing. MTH062 may be substituted for MTH095. College transfer classes may be substituted.

***Choose from PSY100, 101, 201, 202, 203; SOC204, 205, 206; HST110, 111, 112, HST201, 202, 203.

****Requires WR121 prerequisite.

Manufacturing Engineering Technologies

The Manufacturing Engineering Technologies program offers training in manufacturing skills. Employees may become involved in research and development; inspection and quality control; planning, managing, and producing prototypes; performing routine manufacturing; or completing simple to complex repairs. You may enroll in the three-term Manufacturing Operations option or the six-term Manufacturing Technologies option. You may select individual courses to meet your needs, or you may work toward an Associate of Applied Science degree or a Certificate of Completion.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for on-the-job work you do relating to your program. With the approval of the program chair, you may enroll in MFG280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

Manufacturing Operations Option

The Manufacturing Operations option provides training in the basic setup and operation of machine tools (both manual and computer controlled) such as lathes, drills, mills, saws, and grinders; bench and layout work; inspection and quality control; and print reading and sketching relating to manufacturing careers. As a graduate, you may qualify to work as a machine tool operator; an entry-level machinist; a quality control inspector or variety of manufacturing related jobs.

In addition to tuition, estimated costs for students who complete the entire program are books, \$487; class fees, \$152; equipment and supplies, \$200. Contact the financial aid office to find out if you qualify for help with these costs.

A Certificate of Completion is awarded upon successful completion of these 50 required credit hours.

Course	Title	Credit Hours
Term 1		
MFG063	Print Reading	5
MFG064	Manufacturing Fundamentals	5
MFG068	Manufacturing Measuring Inspection and Quality Control	3
MFG097	Interaction Skills.....	3
Term 2		
MFG065	Tool and Work Holding Methods.....	5
MFG069	QC Fundamentals/CMM Operations	4
MFG076	Manufacturing Materials and Cutting Tools...	6
MTH052	Introduction to Algebra and Geometry	3
Term 3		
COM051	Communication Skills I or	
WR121	English Composition I—Exposition	3
MFG066	Material Cutting/Removal Methods.....	5
MFG093	CNC Machine Tool Operations	5
MTH053	Introduction to Trigonometry and Geometry	3

Term 3		
COM051	Communication Skills I or	
WR121	English Composition I—Exposition	3
MFG066	Material Cutting/Removal Methods.....	5
MFG093	CNC Machine Tool Operations.....	5
MTH053	Introduction to Trigonometry and Geometry..	3
Term 4		
DRF072	Introduction to Computer Drawing	3
MFG081	Manufacturing Process Planning	5
MFG094	Manufacturing Programming.....	5
PH052	Practical Physics	4
Term 5		
MFG079	Industrial Systems.....	5
MFG082	Manufacturing Production/ Assembly Methods.....	5
MFG095	CAM Applications	5
Term 6		
COM053	Communications Skills III or	
WR227	Technical Writing	3
EC201	Introduction to Economics	3
MFG083	Manufacturing Production Control.....	5
MFG096	CAD-CAM Integrations.....	5

Manufacturing Technologies Option

The Manufacturing Technologies option offers training in the knowledge and skills used by employees in manufacturing and related occupations. The curriculum includes courses in manufacturing materials; print reading; sketching, layout, and measuring practices; inspection and coordinate measuring machine practices; and in written and verbal communication skills.

In this option, you set up and operate manual and computer controlled machine tools including drill presses, engine lathes, milling machines, grinders, and saws. You work from prints or sketches to produce mechanical items in a variety of materials. This requires planning, layout, and fabricating using jigs, fixtures, and patterns; work holding; cutting tool selection; and applications.

As a graduate, you may qualify for positions in manufacturing including supervisor, technical report writer, estimator, purchaser, planner, or quality control technician, or in the areas of maintenance and repair, production, specialty work, machine setup and operation, or bench and layout work. You may also transfer to a school such as Oregon Institute of Technology to complete the course work for a bachelor's degree in manufacturing engineering or industrial management.

In addition to tuition, estimated costs for students who complete the entire program are books, \$701; class fees, \$324; equipment and supplies, \$200. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these 98 required credit hours:

Course	Title	Credit Hours
Term 1		
MFG063	Print Reading	5
MFG064	Manufacturing Fundamentals	5
MFG068	Manufacturing Measuring, and Quality Control	3
MFG097	Interaction Skills.....	3
Term 2		
MFG065	Tool and Work Holding Methods.....	5
MFG069	QC Fundamentals/CMM Operations	4
MFG076	Manufacturing Materials and Cutting Tools...	6
MTH052	Introduction to Algebra and Geometry	3

Mathematics

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in Mathematics are Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College, University of Oregon, and Western Oregon State College.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisors at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
First Year	1	2	3
WR121, 122 and/or WR123, English Composition and/or WR227 Technical Writing*	3	3	(3)
Mathematics (per placement test)* MTH251, 252, 254 Calculus required. (EOSC requires MTH253 instead of MTH254). Those students beginning at a lower level will need more than four years to complete B.A. or B.S. requirements)	4-5	4-5	4-5
Arts and Letters/Humanities courses** (U of O requires two second year level languages from German, French or Russian for admission to Ph.D program)	3-4	3-4	3-4
Computer Science courses or electives (EOSC: approved			

computer science electives; OSU: CS161 Computer Science I - PASCAL and CS133F FORTRAN IV or CS133V C Language; PSU: CS133F or CS161; SOSC recommends CS133F or CS161; WOSC: CS161.	4	4	4
HPE295 Health and Fitness for Life or HE250 Personal Health*			3
Second Year	4	5	6
Mathematics through MTH255 Vector Calculus II and MTH253 Series and Linear Algebra (OSU also requires MTH256 Differential Equations	4	(4)	(4)
Science courses* (OSU requires either PH211, 212, 213 or PH211 and one- year course in the physical or biological sciences.	4	4	4
Social Science courses*	3	3	3
Arts and Letters/Humanities or Social Science electives*	3	3	3
Electives	3	3-6	3-6

*To meet four-year college general education requirements.

**PSU strongly advises students planning to do graduate work in mathematics to complete two years of study in German, French or Russian.

Nursing

Chemeketa offers a career ladder program in nursing for women and men who want to become licensed practical nurses or registered nurses.

Chemeketa staff members are ready to advise and help you plan your pre-nursing programs if you plan to transfer to a school of nursing that grants baccalaureate degrees. Chemeketa offers general education courses that apply to a Bachelor of Science program. See information under Nursing (college transfer).

There are some courses that must be completed with a grade of C or better prior to applying to the Nursing Program. Specific entry requirements are outlined in an application packet which you may obtain from the Admissions Office. Enrollment in the program is limited, and there is an early deadline for applications. We recommend that you contact the Admissions Office (399-5006), or the Advising and Counseling Office (399-5120) for details if you are considering the Nursing program.

The nursing curriculum is designed to prepare you for positions as licensed personnel at the following levels:

Nursing Assistant

If you leave the program after successfully completing the required first-term courses, you are eligible to receive a certificate as a nursing assistant.

As a nursing assistant, you may work under the direction and supervision of a registered nurse or licensed practical nurse. You may assist licensed nurses in meeting normal patient needs for safety, comfort, hygiene, activity, rest, sleep, nutrition, elimination and fluid balances, oxygen, and emotional support.

Level I—Licensed Practical Nurse

A licensed practical nurse is a member of a nursing or health team and gives nursing care to patients of all ages in simple nursing situations. As a licensed practical nurse, you assist a registered nurse in complex nursing situations.

In addition to tuition, estimated costs for students who complete the entire program are books, \$650; class fees, \$90; equipment and supplies, \$330; testing fee, \$15. Contact the financial aid office to find out if you qualify for help with these costs.

After completing the one-year program, you may take the Oregon licensure examination to become a licensed practical nurse. You may earn a Certificate of Completion by successfully completing the required 49 credit hours. You must earn grades of C or better in all required courses.

Course	Title	Credit Hours
Term 1		
NUR106	Nursing.....	9
BI232	Human Anatomy and Physiology.....	4
PSY201	General Psychology.....	3
Term 2		
NUR108	Nursing.....	9
BI233	Human Anatomy and Physiology.....	4
PSY237	Growth and Development.....	3
Term 3		
NUR109	Nursing.....	10
BI234	Medical Microbiology.....	4
WR121	English Composition—Exposition.....	3

Level II—Registered Nurse

A registered nurse, or RN, applies knowledge drawn from a broad, in-depth education in the social and physical sciences. RNs assess, plan, order, give, delegate, teach, and supervise care that promotes a patient's optimum health and independence.

An RN guides other team members with less education and/or experience, evaluates need for patient instruction, plans and participates in health teaching, and applies mental health principles to nursing care and function. RNs must also assume responsibility for their professional development.

In addition to tuition, estimated costs for students in Level II are books, \$200; class fees, \$45; equipment and supplies, \$120; testing fee, \$30. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing 92 required credit hours, including the 49 credit hours listed under Level I. In this two-year program, you must earn grades of C or better in all required courses.

Course	Title	Credit Hours
Term 4		
NUR206	Nursing.....	10
CS103	Introduction to Microcomputer Applications...3	
Term 5		
NUR208	Nursing.....	10
	Social science elective.....	3
	Sociology elective.....	3
Term 6		
NUR209	Nursing.....	8

Humanities/fine arts elective..... 3
 General education elective 3

Nine credit hours of electives combined with required courses meet Oregon State Board of Nursing minimum requirements:

Specialized and Re-entry Courses

The college also offers specialized and re-entry courses to help registered nurses, licensed practical nurses, and other health care personnel keep abreast of current knowledge and new developments in Nursing. Re-entry courses are offered fall term only; for more information contact the nursing office.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program. With the approval of the program chair, you may enroll in NUR280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.



Nursing

(college transfer)

Oregon state colleges and universities offering Bachelor of Science degrees in Nursing are Oregon Health Sciences University, Oregon Institute of Technology, and Southern Oregon State College.

Admission to the nursing programs is competitive. Students must complete 45 credits of general education before being admitted to the nursing major. A 2.5 GPA is required for application to all schools. OHSU and OIT require the Scholastic Aptitude Test (SAT). Deadlines for admission to the programs are February 15 (OHSU), March 31 (OIT), and April 15 (SOSC). It is important to check with the college of your choice in September for admission requirements and to obtain admissions materials early as requirements change and vary from school to school.

Each of these schools provides an opportunity for licensed practical nurses and registered nurses, including those completing Chemeketa's Licensed Practical Nurse and Registered Nurse program, to complete requirements for a baccalaureate degree. Contact specific colleges for transfer requirement.

The class outline below indicates courses required for admission to the nursing major, as well as some other required courses which may be taken at Chemeketa.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.



	Term		
	1	2	3
First Year	1	2	3
WR121 and 122 English Composition	3	3	
WR123 English Composition (required only at SOSC)			(3)
WR227 Technical Writing (required only at OIT)			(3)
SP111 Fundamentals of Speech (OIT), SP113 Fundamentals of Small Group Communications ,or SP114 Interpersonal Communications (SOSC)			(3)
FN225 Nutrition (not required at SOSC)			4
CH104, 105, 106 or CH204, 205, 206 General Chemistry (OHSU also accepts CH101, 102, 103 Chemistry for Allied Health)	4-5	4-5	4-5
MTH111 College Algebra (begin math per placement test)	(4)	5	
Social Science (OHSU 9 hrs suggests ANTH, SOC, PSY, PSY237 Growth and Development required; OIT requires PSY201 General Psychology and PSY237 and recommends ANTH103 Introduction to Cultural Anthropology; SOSC requires PSY201 or SOC204 General Sociology and ANTH103 Introduction to Cultural Anthropology and PSY237)	3	3	3
BI231, 232, 233 Human Anatomy and Physiology for SOSC (also required at OHSU and OIT but usually taken in second year)	(4)	(4)	(4)
Humanities* (for OHSU select from ART204, 205, 206 Introduction to Art History; ENG (Literature); MUS201, 202, 203 Introduction to Music and Its Literature; PHL, SP, TA, WS or second year foreign language)	3	3	3
Arts and Letters/Humanities and/or Science or Social Science			

electives* (OHSU recommends
BI103 General Biology; OIT
requires CS131 Introduction
to Data Processing)

3 (3) (3)

*To meet four-year college general education requirements.

Office Administration and Technology

Chemeketa offers short-term, one-year, and two-year programs in office administration and technology for those who wish to pursue a career as an office support specialist.

The short-term program is an open-entry, open-exit curriculum for people who want to develop or refresh their clerical skills in order to qualify for office work. You may select individual courses to meet your needs, or you may work toward a Certificate of Completion.

The one-year program offers three areas of office support specialization. After completing the first term, you may pursue a course of study in information processing, bookkeeping, or general clerical skills. You may earn a Certificate of Completion by successfully completing the credit hours required.

The two-year program is designed for people who want to become secretaries, administrative assistants, or other administrative support specialists. The program has six options: engineering, executive, information processing, legal, medical, and office accounting. You may earn an Associate of Applied Science degree by successfully completing the credit hours required for each option.

If you are enrolling in the one- or two-year programs, consult with an advisor to plan your course of study before you begin the first term. The college requires you to take English and mathematics placement tests before you apply for admission. If the results show that your skills are above the levels of the required first-term courses, you may request to substitute general education courses. If the test results are below the levels of the required first term courses, you may have to enroll in preparatory courses.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do on approved job sites in the business community. With the approval of the program chair, you may enroll in OA280, Cooperative Work Experience, and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

Short-Term Program

The average length of time to complete the full program is two terms (22 weeks) if you attend 30 hours per week. If you wish to refresh specific skills, you may enroll on a weekly basis.

A four-week non-credit intensive refresher program is available if you are a current or former

office worker wishing to update or improve your skills.

The short-term program is offered on the Salem campus and by Chemeketa centers in Dallas, McMinnville, and Woodburn. For additional information, call 399-5169 in Salem, 623-5567 in Dallas, 472-9482 in McMinnville, and 981-8820 in Woodburn.

In addition to tuition, estimated costs for students who complete the required courses are books, \$224; class fees, \$44; equipment and supplies, \$34. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion and proficiency statement by successfully completing the required credit hours listed below. If you enroll weekly, you may earn a proficiency statement.

Required Courses:

Course	Title	Credit Hours
OA051	Civil Service Exam Preparation.....	3
OA061A	Electronic Calculators A.....	1
OA084	Business English I.....	3
OA089A	Filing A.....	1
OA089B	Filing B.....	1
OA090	Bookkeeping.....	3
OA099AB	Proofreading/Editing A, B.....	2
OA116	Office Procedures.....	3
OA121A	Keyboarding A.....	1
OA121B	Keyboarding B.....	1
OA122A	Keyboard Skillbuilding A.....	1
OA123A	Formatting A.....	1
OA123B	Formatting B.....	1
OA123C	Formatting C.....	1
OA201P	Word Processing Procedures I —WordPerfect	1
	or	
OA200	Introduction to Information Processing.....	3
OA225A	Machine Transcription IA.....	1

Optional Courses:

MTH061	Business Math.....	3
OA058AB	Shorthand Refresher I,II.....	2 ea.
OA061B	Electronic Calculators B.....	1
OA091	Computerized Bookkeeping and Payroll Procedures.....	4
OA099C	Proofreading/Editing C.....	1
OA101	Office Careers Survey.....	1
OA114	AlphaHand I.....	4
OA121C	Keyboarding C.....	1
OA225BC	Machine Transcription IB,IC.....	1 ea.
OA280	Cooperative Work Experience.....	6 max.
FE205	Job Search Techniques.....	1
9746A	Office Occupation Short-Term Training.....	0
9746B	Office Occupation Short-Term Training.....	0

One-Year Program

The one-year program has three areas of office support specialization: bookkeeping, general clerical, and information processing. These areas of specialization provide training for those interested in working as word processing operators, general office clerks, receptionists, typists, file clerks, transcriptionists, bookkeepers, and accounting clerks.

You may enroll part time or full time.

In addition to tuition, estimated costs for students who complete the bookkeeping required courses are books, \$489; class fees, \$60; equipment and supplies, \$30. For students who complete the general clerical required courses: books, \$434; class fees, \$72; equipment and supplies, \$30. For students who complete the information processing required courses: books, \$417; class fees, \$96; equipment and supplies, \$30. Contact

the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion in the one-year program by successfully completing 46 required credit hours in any of the three speciality areas.

Course	Title	Credit Hours
Term 1 (Required for all areas of specialization.)		
MTH061	Business Math	3
OA084	Business English I	3
OA116	Office Procedures	3
OA122	Keyboard Skillbuilding	3
OA200	Introduction to Information Processing	3
Term 2 (Bookkeeping)		
BA051	Accounting Procedures I	4
MTH062	Applied Business Math	3
OA061	Electronic Calculators	2
OA210	Office Microcomputer Applications.....	3
OA085	Business English II	3
Term 3 (Bookkeeping)		
BA052	Accounting Procedures II.....	4
BA214	Business Communications	3
OA089	Filing	2
OA091	Computerized Bookkeeping and Payroll Procedures.....	4
OA123	Formatting.....	3
Term 2 (General Clerical)		
OA061	Electronic Calculators	2
OA085	Business English II	3
OA089	Filing	2
OA123	Formatting.....	3
OA201P	Word Processing Procedures I —WordPerfect	3
	Business elective	3
Term 3 (General Clerical)		
BA214	Business Communications	3
OA210	Office Microcomputer Applications.....	3
OA099	Proofreading/Editing	3
	Business elective	3
	Elective*	3
Term 2 (Information Processing)		
OA061	Electronic Calculators	2
OA085	Business English II	3
OA089	Filing	2
OA123	Formatting.....	3
OA201P	Word Processing Procedures I —WordPerfect	3
OA099	Proofreading/Editing	3
Term 3 (Information Processing)		
BA214	Business Communications	3
OA210	Office Microcomputer Applications.....	3
OA202P	Word Processing Procedures II— WordPerfect	3
OA225ABC	Machine Transcription I.....	3
	Elective*	3
*List of Suggested Electives: (Depending upon interest and background)		
FE205	Job Search Techniques	1
OA086	Personal and Professional Development.....	3
OA225ABC	Machine Transcription I.....	3
OA280	Cooperative Work Experience	2-3
PSY102	Assertiveness Training.....	3

Two-Year Program

Chemeketa's Office Administration and Technology two-year program is designed for people who want to become secretaries, administrative assistants, or other administrative support specialists.

If you are employed as an office support worker and you want to increase your skills in order to advance in your career, you may benefit from this training. You may select individual courses to meet your needs, or you may work toward an Associate of Applied Science degree.

The program has six options: engineering, executive, information processing, legal, medical, and office accounting.

You may earn an Associate of Applied Science degree by successfully completing the credit hours required for each option.

Engineering Option

The Engineering option prepares you to work for a consulting firm, a civil or structural engineering business, or a drafting and architectural company. In these offices, you may have a variety of duties such as typing contracts and specifications, billing, handling and drafting correspondence, keeping financial records, and maintaining technical reference materials and manuals.

To prepare you for these jobs, the program includes classes in written communication skills, technical mathematics, and civil and structural engineering, as well as office skills.

In addition to tuition, estimated costs for students who complete the entire program are books, \$1,087; class fees, \$120; equipment and supplies, \$60. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 96 credit hours:

Course	Title	Credit Hours
Term 1		
CVL045	Engineering Orientation for the Office Professional	1
MTH061	Business Math	3
MTH070	Elementary Algebra.....	4
OA084	Business English I.....	3
OA116	Office Procedures	3
OA200	Introduction to Information Processing.....	3
Term 2		
MTH081	Technical Mathematics I.....	4
OA061	Electronic Calculators	2
OA062	Reprographics.....	3
OA085	Business English II.....	3
OA089	Filing	2
OA122	Keyboard Skillbuilding.....	3
Term 3		
BA214	Business Communications	3
MTH082	Technical Mathematics II.....	4
OA099	Proofreading/Editing.....	3
OA123	Formatting.....	3
OA201P	Word Processing Procedures I —WordPerfect.....	3
Term 4		
BA101	Business Environment	4
BA244	Records Management.....	3
DRF059	Print Reading	2
OA225ABC	Machine Transcription I.....	3
	Business elective	3
Term 5		
BA211	Financial Accounting I or Accounting Procedures I.....	4
BA251	Office Management.....	3
BLD059	Materials of Construction	2
CVL074	Contracts, Specification and Construction Estimating	4
OA210	Office Microcomputer Applications.....	3
Term 6		
OA117	Executive Office Simulation	3
	Business elective (OA280 Cooperative Work Experience recommended).....	3
	Humanities/fine arts elective or	

	Science/applied science elective	3
	Social science elective	3
SP111	Fundamentals of Speech	
	or	
SP114	Interpersonal Communication	
	or	
SP130	Business and Professional Speaking	3

Executive Option

The Executive option prepares you for a variety of positions as a secretary, administrative assistant, or other administrative support staff person. This work requires you to be able to organize a variety of tasks, accept responsibility, show initiative while a member of a team, and work well with others. You should be skilled in areas such as English use, keyboarding, transcribing from machine or Alphahand dictation, and operating business machines. You should have knowledge of records management, word processing, data processing, accounting, and office procedures.

If you satisfactorily complete the curriculum requirements, you are eligible to apply to sit for the Certified Professional Secretary examination in the spring of your second year during your final term.

In addition to tuition, estimated costs for students who complete the entire program are books, \$945; class fees, \$156; equipment and supplies, \$80. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 96 credit hours:

Course	Title	Credit Hours
Term 1		
BA101	Business Environment	4
OA084	Business English I	3
OA116	Office Procedures	3
OA122	Keyboard Skillbuilding	3
OA200	Introduction to Information Processing	3
Term 2		
MTH061	Business Math	3
OA085	Business English II	3
OA114	AlphaHand I	4
OA123	Formatting	3
OA201P	Word Processing Procedures I —WordPerfect	3
Term 3		
BA214	Business Communications	3
OA061	Electronic Calculators	2
OA089	Filing	2
OA072	AlphaHand II	4
OA202P	Word Processing Procedures II —WordPerfect	3
SP111	Fundamentals of Speech	
	or	
SP114	Interpersonal Communication	
	or	
SP130	Business and Professional Speaking	3
Term 4		
BA211	Financial Accounting I	
	or	
BA051	Accounting Procedures I	4
BA244	Records Management	3
EC115	Outline of Economics	
	or	
EC201	Principles of Economics	3
OA099	Proofreading/Editing	3
OA225ABC	Machine Transcription IA, IB, IC	3
Term 5		
BA212	Financial Accounting II	
	or	
BA052	Accounting Procedures II	4

BA226	Business Law	3
BA251	Office Management	3
OA210	Office Microcomputer Applications	3
	Business elective	3

Term 6

OA062	Reprographics	3
OA117	Executive Office Simulation	3
	Business elective (OA280 Cooperative Work Experience recommended)	3
	Humanities/fine arts elective	
	or	
	Science/applied science elective	3
	Social science elective	3

Information Processing Option

The Information Processing option prepares you for a career in either a centralized word processing environment or an office emphasizing information processing. It emphasizes training on both dedicated word processing equipment and microcomputers using popular office software applications.

In addition, you will develop skills in proofreading, transcription, and formatting, as well as other office skills needed to succeed in today's electronic office.

In addition to tuition, estimated costs for students who complete the entire program are books, \$916; class fees, \$158; equipment and supplies, \$65. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 95 credit hours:

Course	Title	Credit Hours
Term 1		
MTH061	Business Math	3
OA084	Business English I	3
OA116	Office Procedures	3
OA122	Keyboard Skillbuilding	3
OA200	Introduction to Information Processing	3
Term 2		
OA062	Reprographics	3
OA210	Office Microcomputer Applications	3
OA085	Business English II	3
OA123	Formatting	3
OA201P	Word Processing Procedures I —WordPerfect	3
Term 3		
BA214	Business Communications	3
OA061	Electronic Calculators	2
OA089	Filing	2
OA099	Proofreading/Editing	3
OA202P	Word Processing Procedures II —WordPerfect	3
	Business elective	3
Term 4		
BA101	Business Environment	4
BA244	Records Management	3
OA205	Desktop Publishing I	3
OA225ABC	Machine Transcription I	3
	Business elective	3
Term 5		
BA211	Financial Accounting I	
	or	
BA051	Accounting Procedures I	4
BA251	Office Management	3
OA204	Advanced WordPerfect	3
OA117	Executive Office Simulation	3
	Business elective (CS104 LOTUS or OA206 Desktop Publishing II)	3
Term 6		
OA226B	Machine Transcription II	2

SP111	Fundamentals of Speech or	
SP114	Interpersonal Communication or	
SP130	Business and Professional Speaking.....	3
	Business elective (OA280 CWE recommended).....	3
	Humanities/fine arts elective or	
	Science/applied science elective	3
	Social science elective.....	3
	Business elective	3

Legal Option

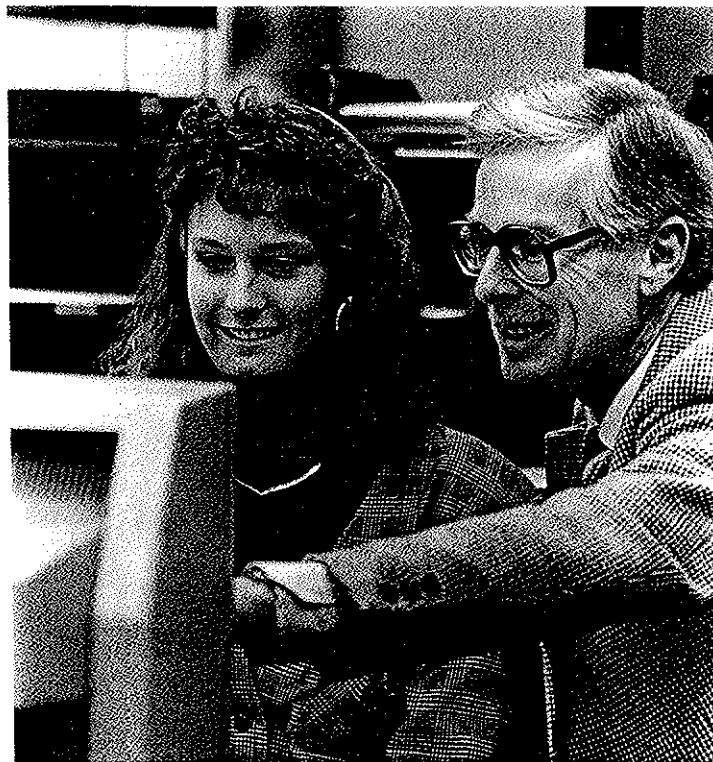
The Legal option prepares you for a beginning position in a law office or in the legal department of a company or agency.

The program emphasizes training in typing legal documents and correspondence, managing legal files, answering telephones, keeping office records, typing from machine transcription, and taking Alphahand dictation. Students work with documents in real estate and property transfer, litigation, probate, and corporations and partnerships.

In addition to tuition, estimated costs for students who complete the entire program are books, \$880; class fees, \$168; equipment and supplies, \$65. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 95 credit hours:

Course	Title	Credit Hours
Term 1		
BA101	Business Environment.....	4
OA084	Business English I	3
OA116	Office Procedures	3
OA122	Keyboarding Skillbuilding.....	3
OA200	Introduction to Information Processing	3
Term 2		
MTH061	Business Math	3
OA085	Business English II	3
OA114	AlphaHand I	4
OA123	Keyboard Formatting	3
OA201P	Word Processing Procedures I —WordPerfect	3
Term 3		
BA214	Business Communications	3
BA226	Business Law.....	3
OA061AB	Electronic Calculators	2
OA075	Legal Office Procedures I	3
OA089	Filing	2
OA072	AlphaHand II	4
Term 4		
BA244	Records Management	3
OA076	Legal Office Procedures II	3
OA099	Proofreading/Editing	3
OA225ABC	Machine Transcription I.....	3
SP111	Fundamentals of Speech or	
SP114	Interpersonal Communication or	
SP130	Business and Professional Speaking.....	3
Term 5		
BA211	Financial Accounting I or	
BA051	Accounting Procedures I.....	4
BA251	Office Management	3
OA210	Office Microcomputer Applications.....	3
OA077	Legal Machine Transcription I.....	3
OA202P	Word Processing Procedures II —WordPerfect	3
Term 6		
OA062	Reprographics	3



OA117	Executive Office Simulation	3
	Business elective (OA280 Cooperative Work Experience recommended).....	3
	Social science elective	3
	Humanities/fine arts elective or	
	Science/applied science elective	3

Medical Option

The Medical option prepares you to work in medically-related offices where you may make appointments, manage patient records, meet patients, type correspondence, transcribe patient records, maintain financial records, and complete insurance forms.

In addition to tuition, estimated costs for students who complete the entire program are books, \$1,008; class fees, \$153; equipment and supplies, \$65. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 95 credit hours:

Course	Title	Credit Hours
Term 1		
MED051	Medical Terminology I	3
OA084	Business English I	3
OA116	Office Procedures	3
OA122	Keyboard Skillbuilding.....	3
OA200	Introduction to Information Processing.....	3
Term 2		
MED052	Medical Terminology II	3
MTH061	Business Math	3
OA061	Electronic Calculators	2
OA085	Business English II.....	3
OA089	Filing	2
OA123	Formatting.....	3
Term 3		
BA214	Business Communications	3
ES071	Work Place Safety Skills	1
MED055	Medical Law and Ethics	3
OA062	Reprographics.....	3

OA099	Proofreading/Editing	3
OA201P	Word Processing Procedures I —WordPerfect.....	3

Term 4

BA211	Financial Accounting I or Accounting Procedures I.....	4
BA244	Records Management.....	3
BI071	Body Structure and Function I.....	3
OA210	Office Microcomputer Applications.....	3
OA225ABC	Machine Transcription I.....	3

Term 5

BA101	Business Environment	4
BA251	Office Management.....	3
BI072	Body Structure and Function II.....	3
MED054	Medical Office Procedures.....	4
	Social science elective.....	3

Term 6

MED064	Introduction to Medical Science	3
OA080	Medical Machine Transcription	3
OA117	Executive Office Simulation	3
	Business elective (OA280 Cooperative Work Experience recommended).....	3
SP111	Fundamentals of Speech or Interpersonal Communication	3
SP114	Interpersonal Communication or Business and Professional Speaking.....	3

Office Accounting Option

The Office Accounting option prepares you for office positions where accounting tasks are heavily emphasized and for positions such as accounting clerk, payroll clerk, or full-cycle bookkeeper.

This option provides you with a broad range of training in accounting, both manual and computerized, in addition to training in office skills such as information processing, office procedures, records management, and office management.

In addition to tuition, estimated costs for students who complete the entire program are books, \$908; class fees, \$132; equipment and supplies, \$65. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 96 credit hours:

Course	Title	Credit Hours
Term 1		
BA051	Accounting Procedures I.....	4
MTH061	Business Math	3
OA084	Business English I.....	3
OA116	Office Procedures	3
OA200	Introduction to Information Processing	3
Term 2		
BA052	Accounting Procedures II.....	4
MTH062	Applied Business Math	3
OA061	Electronic Calculators	2
OA085	Business English II.....	3
OA091A	Computerized Bookkeeping.....	2
OA122	Keyboard Skillbuilding.....	3
Term 3		
BA053	Accounting Procedures III.....	4
OA089	Filing	2
OA091B	Payroll Procedures.....	2
OA099	Proofreading/Editing	3
OA123	Formatting.....	3
OA201P	Word Processing Procedures I —WordPerfect.....	3
Term 4		
BA214	Business Communications.....	3
BA244	Records Management.....	3
OA210	Office Microcomputer Applications.....	3

CS103	Introduction to Microcomputer Applications...3
OA225ABC	Machine Transcription I.....3
	Business elective.....3

Term 5

BA101	Business Environment.....	4
BA251	Office Management.....	3
OA062	Reprographics	3
OA117	Executive Office Simulation.....	3
	Business elective (CS104 Lotus I- Worksheets recommended)	3

Term 6

BA226	Business Law	3
SP111	Fundamentals of Speech or Interpersonal Communication	3
SP114	Interpersonal Communication or Business and Professional Speaking	3
SP130	Business and Professional Speaking	3
	Business elective (OA280 Cooperative Work Experience recommended)	3
	Humanities/fine arts elective or Science/applied science elective.....	3
	Social science elective	3

Philosophy

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in Philosophy are Oregon State University, Portland State University, and University of Oregon.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121, 122 and/or 123 English Composition*	3	3	(3)
Arts and Letters/Humanities courses*	3	3	3
Science or Mathematics courses*	4-5	4-5	4-5
Social Science courses*	3	3	3
HPE295 Health and Fitness for Life or HE250 Personal Health*			3
Electives	3	3	3
Second Year	4	5	6
PHL201, 202, Problems of Philosophy, PHL203 Elementary Ethics (PHL 201 and 203 required at PSU; none required at OSU and U of O) or Humanities courses*	3	3	3
Social Science electives*	3	3	3
Math or Science electives*	4	4	4
Electives	6	6	6

*To meet four-year college general education requirements.

Physical Education/ Human Movement Studies

(college transfer)

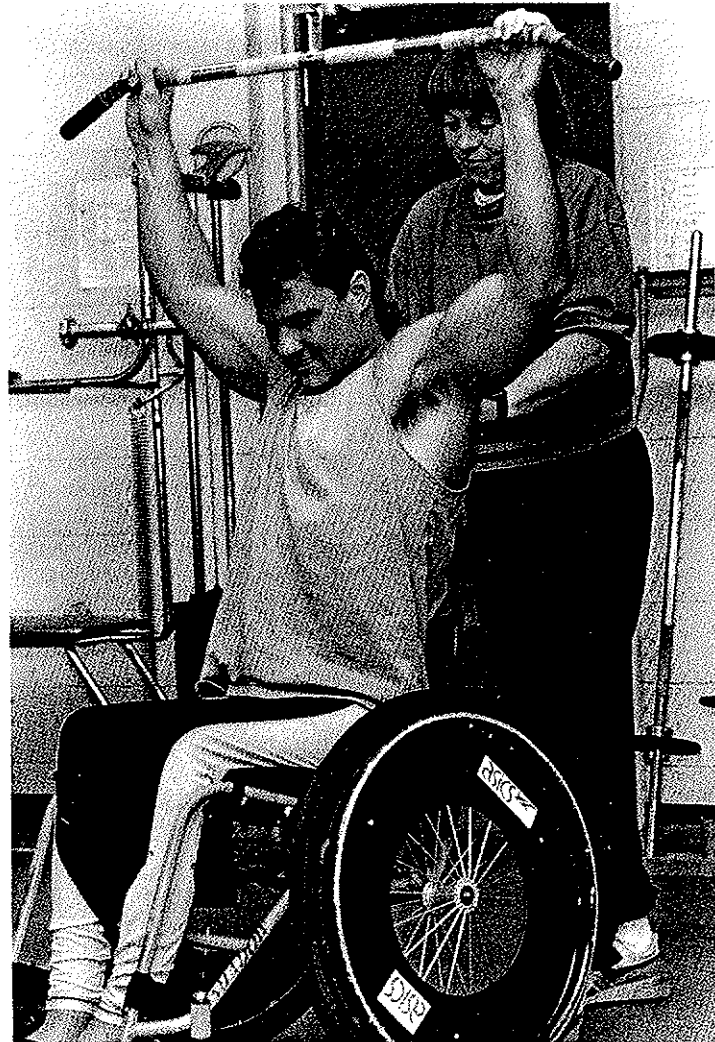
Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in Physical Education or Human Movement Studies are Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College, University of Oregon, and Western Oregon State College. Oregon State University offers a bachelor's degree in Exercise and Sports Science with options in Athletic Training, Commercial and Industrial Fitness, School Physical Education, Sports Leadership, Physical Activity for the Older Adult, and Applied Exercise and Sports Science. Portland State University offers options in Teacher Education, Exercise Science, and Urban Community Physical Education. University of Oregon offers emphasis in Exercise and Sport Sciences, Fitness Management, and School Physical Education. (The U of O programs have been suspended for 1991-92.)

Those students planning to teach Physical Education will need to complete a year of post-baccalaureate work to meet teacher certification at all state system colleges except WOSC. Please refer to the section on Elementary and Secondary Education in Chemeketa's catalog.

These requirements are tentative as four-year college requirements were not available when Chemeketa Community College's catalog went to press.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.



	Term		
First Year	1	2	3
WR121 and/or WR122 or 123 English Composition or Fundamentals of Speech*	3	3	(3)
Mathematics per placement test (through MTH112 Trigonometry for OSU; to meet general education or B.S. degree requirements at SOSC, U of O and WOSC)	(4)	4-5	4-5
Arts and Letters/Humanities courses*	3	3	3
PE194 Professional Activities Science courses*	2	2	2

(BI231, 232, 233 Human Anatomy and Physiology for EOSC, OSU and SOSC; BI101, 102, 103 General Biology for U of O)	4	4	4
PE131 Introduction to Physical Education	3		
Elective			(3)
Second Year	4	5	6
Social Science courses (PSY 201, 202, 203 for OSU and U of O)*	3	3	3
HPE295 Health and Fitness for Life* (OSU, PSU, WOSC)		3	
HE250 Personal Health (except PSU)	3		
CH104, 105, 106 General Chemistry or CH204, 205, 206 General Chemistry required at OSU and for some options at U of O; choose electives for other colleges	(5)	(5)	(5)
Social Science electives* (some OSU options require Sociology or Anthropology)	3	3	3
Arts and Letters/Humanities* or electives (FN225 Nutrition required at OSU and for some options at PSU; PH201, 202, 203 Physics required for one option at U of O; PHL204 Introduction to Logic required for one option at PSU).	0-6	0-6	0-6
PE194 Professional Activities (not required at all schools recommend as electives)	2	2	2

*To meet four-year college general education requirements.

Physics

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in Physics are Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College, and University of Oregon.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
Mathematics per placement test (all colleges require math through MTH254 Vector Calculus I; EOSC, PSU and SOSC also require MTH253 Series Calculus and Linear Algebra)	4-5	4-5	4-5
CH204, 205, 206 General Chemistry (Not required but recommended at SOSC; CH104, 105, 106 General Chemistry also accepted at U of O)	5	5	5
WR121, WR122 and/or WR123 English Composition or WR227 Technical Writing*	3	3	(3)
Arts and Letters/Humanities or Social Science courses* **	3-4	3-4	3-4
HPE295 Health and Fitness for Life or HE250 Personal Health*			(3)
Second Year	4	5	6
Mathematics per placement test (Most colleges require or recommend math through MTH254; PSU also requires MTH253 and MTH256 Applied Differential Equations; SOSC recommends through MTH256)	4-5	(4-5)	(4-5)
PH211, 212, 213 General Physics for Engineers and Scientists (PSU and U of O also accept PH201, 202, 203 General Physics)	5	5	5
Arts and Letters/Humanities or Social Science courses*	3-4	3-4	3-4
Additional Arts and Letters/ Social Science electives* or free electives	3	3	3
Electives (EOSC requires CS133F FORTRAN IV or CS161 Computer Science I - PASCAL; OSU requires CS133F and CS161; PSU requires BI101, 102, 103 General Biology G201, 202, 203 Geology or other approved courses in a related area of science. SOSC requires computer literacy. Chemeketa recommends all students take CS161)	(3-4)	(3-4)	(3-4)

*To meet four-year college general education requirements.

**French, German, or Russian recommended for students planning on graduate work.

Pre-Engineering

see Engineering

Political Science

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts or Bachelor of Science degrees in Political Science are Oregon State University, Portland State University, and Southern Oregon State College.

The two-year program outlined below is designed to meet requirements at these institutions. These recommendations are based on information available as this catalog goes to press.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or the Chemeketa advisor in your program. It is advisable for you to make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121, 122 and/or 123 English Composition*	3	3	(3)
Social Science courses*	3	3	3
Arts and Letters/Humanities courses*	3	3	3
HPE295 Health and Fitness for Life or HE250 Personal Health*			3
Math/Science courses*	4	4	4
Electives (CS103 Introduction to Microcomputer Applications for SOSC)	3	3	3
Second Year	4	5	6
PS201, 202 American Government recommended (required at SOSC)	3	3	
PS203 and/or PS205 recommended			3
Math/Science courses*	4	4	4
Arts and Letters/Humanities courses*	3	3	3
Social Science courses*	3	3	3
Electives	3	3	3

*To meet four-year college general education requirements.

Pre-Law

(college transfer)

University of Oregon is the only Oregon state college or university which has a School of Law. (Lewis and Clark College and Willamette University are the Oregon private schools which have Schools of Law).

Applicants for law school must have a baccalaureate degree from an accredited college or university. Admission to law schools is highly competitive.

Law schools do not recommend any particular major for pre-legal education. In general, they prefer a liberal undergraduate background to one which is narrowly specialized. Students may pursue an undergraduate major of their choice. The University of Oregon School of Law emphasizes the importance of well-developed skills in writing and communications and of acquiring the ability to read with understanding, to think logically and to perform research and analysis competently.

Pre-Professional Study (medicine, dentistry, veterinary medicine)

(college transfer)

Oregon Health Sciences University offers a D.M.D. degree in Dentistry and an M.D. degree in medicine, and Oregon State University offers a D.V.M. in Veterinary Medicine.

Because admission into these professional schools is highly competitive, students should plan to transfer to a four-year institution upon completion of the first year. Students should complete the most rigorous chemistry sequence for which they are qualified, as well as stipulated courses in basic science and general education.

The one-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
First Year	1	2	3
WR121, WR122 and/or WR123 English Composition/or approved Communications course*	3	3	3

CH204, 205, 206 General Chemistry (CH104, 105, 106 General Chemistry if not qualified for CH204-206)	5	5	5
Mathematics (per placement test)	4-5	4-5	4-5
Arts and Letters/Humanities sequence	3	3	3
Social Science sequence or electives*	3	3	3

*To meet four-year college general education requirements.

Psychology

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts and/or Bachelor of Science degrees in psychology are Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College, University of Oregon, and Western Oregon State College.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
First Year	1	2	3
WR121, 122 and/or WR123 English Composition (WR227 Technical Writing required by SOSC)*	3	3	(3)
PSY201, 202, 203 General Psychology	3	3	3
Mathematics per placement test* (Mathematics through MTH111 College Algebra required by EOSC, OSU, U of O; PSU requires MTH243 Probability and Statistics)	(4)	4-5	(4)
Arts and Letters/Humanities courses*	3	3	3
HPE295 Health and Fitness for Life or HE250 Personal Health* Electives	3-6	3-6	0-6
Second Year	4	5	6
Social Science courses*	3	3	3
Arts and Letters/Humanities* (EOSC requires five hours of philosophy)	3	3	3
Science courses* (EOSC requires BI101 General Biology or CH104 or CH204 General Chemistry; U of O requires biology, chemistry or physics)	4-5	4-5	4-5
Electives (PSU requires CS133 FORTRAN IV or MTH366. Chemeketa			

recommends CS103 Introduction to Microcomputer Applications or other Computer Science courses for all schools.)

6 6 6

*To meet four-year college general education requirements.

Real Estate

The goal of the Real Estate program is to prepare students for a wide variety of jobs which require knowledge of the complexities of real estate. The required courses cover factors affecting the value, control, use, appreciation, responsibilities, and privileges associated with real property. You may select individual courses to meet your needs, or you may work toward an Associate of Applied Science degree.

With this technical training, you may fill a variety of jobs in county assessors' or county recorders' offices, city planning departments, the Federal Housing Administration, veterans affairs agencies, title insurance companies, escrow departments, state highway departments, mortgage companies, savings and loan associations, commercial banks, state tax commissions, federal land banks, farm credit administration, building and subdividing firms, real estate brokerages, and appraising offices.



The program as shown reflects the 1990-91 curriculum. State requirements for appraisal licensing and certification are under revision as this catalog is being prepared. Students beginning fall term 1991 should consult the business director, Barbara Cockrell (399-5114), or the real estate program chair, Jim Cockrell (399-6069).

We strongly suggest that you consult with your assigned advisor to plan your course of study before you begin the first term. The college requires you to take English and mathematics placement tests before you apply for admission. If the results show that your skills are above the levels of the required first term courses, you may request to substitute elective or general education courses.

You may be interested in our Cooperative Work Experience program which allows you to earn college credit for work you do relating to your program. With the approval of the program chair, you may enroll in RE280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

In addition to tuition, estimated costs for students who complete the entire program are books, \$918; class fees, \$36; equipment and supplies, \$60. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 96 credit hours:

Course	Title	Credit Hours
Term 1		
BA101	Business Environment.....	4
BA260	Real Estate Principles.....	3
MTH062	Applied Business Math.....	3
OA085	Business English II.....	3
OA121	Keyboarding.....	3
Term 2		
BA263	Real Estate Law.....	3
BA264	Real Estate Finance.....	3
CS103	Introduction to Microcomputer Applications.....	3
EC115	Outline of Economics	
	or	
EC201	Principles of Economics.....	3
MTH070	Elementary Algebra.....	4
Term 3		
BA211	Financial Accounting I.....	4
BA262	Real Estate Practices.....	3
CS104	LOTUS I—Worksheets.....	4
RE051	Legal Description, Platting and Map Reading	
	or	
DRF085	Project Graphics.....	2
RE061	Real Estate Appraisal I.....	3
Term 4		
BA214	Business Communications.....	3
PSY101	Psychology of Human Relations.....	3
RE056	Escrow Procedures I.....	3
RE062	Real Estate Appraisal II.....	3
RE066	Real Estate Investment Analysis I—Principles.....	3
	Humanities/Science elective*.....	3
Term 5		
BA232	Introduction to Business Statistics.....	3
RE063	Real Estate Appraisal III.....	3
RE069	Elements of Design and Construction.....	3
RE070	Zoning, Subdividing and Community Planning	
	or	

BLD058	Zoning Enforcement and Administration.....	3
	Business elective (RE280 Cooperative Work Experience recommended).....	3
Term 6		
BA261	Land Use Economics.....	3
BLD054	Dwelling Construction under the UBC.....	3
RE090	Applied Title Operations.....	3
	Business elective (RE280 Cooperative Work Experience recommended).....	6

*Students may choose among the following electives: Art, Foreign Languages, Multidisciplinary Studies, Philosophy; General Science, Geology, Physical Science and Physics.

Small Business Management

Small Business Management is a three-year program for owners and their spouses who operate small businesses and have access to the financial records of the business. The purpose is to teach record-keeping, decision-making, and management skills.

Class meetings are held each month, and the instructor visits each business monthly. Instruction includes record-keeping, computer analysis of records, cost of operations, summaries, and use of records for management decision-making.

Tuition covers the instruction and an annual computer analysis. For enrollment information call 399-5183.

First Year 9298 Small Business Management I— Inservice

Discusses the importance of keeping records, how to measure the progress of a small family business, the uses of business and home records, the importance of inventories, and how to keep business accounts current. Also covers balance sheets and monthly summaries, cash flow

and cash flow projections, employer's records, social security and income taxes, unemployment compensation, workers' compensation and fair labor standards act, employee relations, and Occupational Safety and Health Administration and safety considerations. Includes depreciation schedules, income tax management and tax planning, end-of-year inventory, and record book closing for computer analysis.

Second Year 9298A Small Business Management II

How to calculate income, self-employment, and Social Security taxes; how to measure business profit and size; the importance of inventories; how to analyze customer service departments and mechanization; calculation of labor, equipment, and building costs; analysis of major department efficiencies; income tax planning and management; and closing business account books for analysis.

Third Year 9298B Small Business Management III

Covers attributes of successful small business entrepreneurs. How to determine the most profitable levels of operation, select departments, evaluate customer service and other major departments, evaluate overhead and general business costs, maximize income, choose building sites, handle merchandise, plan, go through transitional stages, and analyze records for closing a business year.

Sociology

(college transfer)

Oregon state colleges and universities offering Bachelor of Arts or Bachelor of Science degrees in Sociology are Oregon State University, Portland State University, University of Oregon, and



Western Oregon State College. Eastern Oregon State College offers an Anthropology/Sociology degree with emphasis in Sociology and Southern Oregon State College's degree is in Sociology and Anthropology.

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or a Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121, 122 and/or 123 English Composition or WR227 Technical Writing* (SOSC requires WR123)	3	3	(3)
SOC204, 205, 206 General Sociology (OSU requires only SOC204; SOSC, SOC204 and 205)	3	3	3
Mathematics or Science* (PSU requires math through MTH243; OSU and U of O require math through MTH111)	4-5	4-5	4-5
Arts and Letters/Humanities sequence* (OSU strongly recommends PHL201 Problems of Philosophy)	3	3	3
Second Year	4	5	6
Social Science electives* (EOSC requires Anthropology; SOSC requires ANTH103 Introduction to Cultural Anthropology)	3	3	3
Arts and Letters/Humanities electives*	3	3	3
Math or Science courses*	4	4	4
HPE295 Health and Fitness for Life or HE250 Personal Health*	3		
Electives* (CS103 Introduction to Microcomputer Applications for EOSC)	3	6	6

*To meet four-year college general education requirements.

Speech

(college transfer)

Oregon State University, Portland State University, University of Oregon, and Western Oregon State College offer Bachelor of Arts and/or Bachelor of Science degrees in Speech. Southern Oregon State College offers a baccalaureate degree in Communications with options in Human Communications and Broadcasting. (U of O's program has been suspended for 1991-92.)

The two-year program outlined below is designed to meet requirements at these institutions.

As a student, you are responsible for learning the program requirements of the school to which you plan to transfer. Consult with Chemeketa's Advising and Counseling Center or Chemeketa advisor in your program. You should also make early contact with an advisor at the institution to which you plan to transfer to learn of any possible changes in a program.

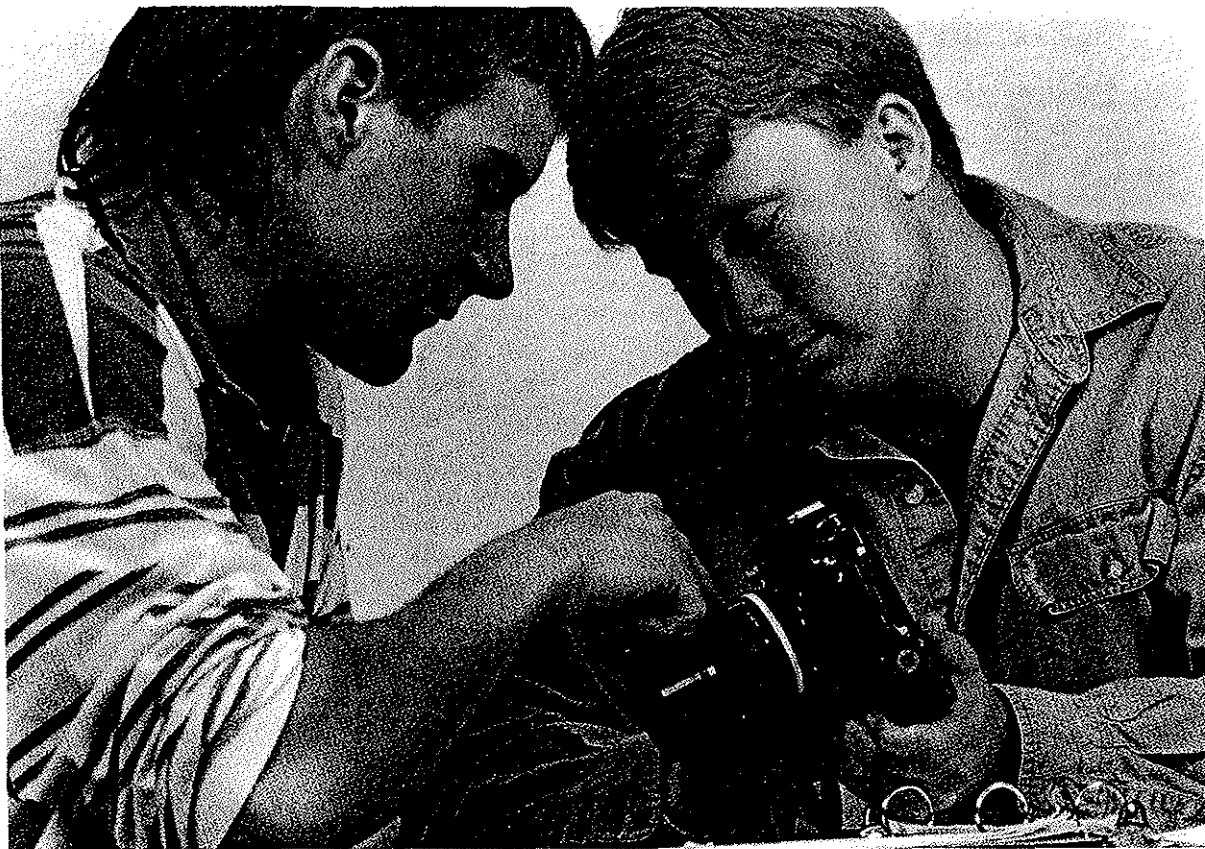
Refer to the Associate of Arts Degree information in the Degrees, Diplomas, Certificates, and Transfer Information section of this catalog beginning on Page 23.

	Term		
	1	2	3
First Year			
WR121, 122 and/or 123	3	3	(3)
SP111 Fundamentals of Speech (Not required at PSU)	3		
SP112 Fundamentals of Persuasion		3	
SP113 Fundamentals of Small Group Communication			3
SP114 Interpersonal Communication (for SOSC, choose two of the four listed speech courses)			3
Arts and Letters/Humanities courses*	3	3	3
Social Science courses*	3	3	3
Math or Science* (U of O requires MTH111 College Algebra and CS103 Introduction to Microcomputer Applications)	4	4	4
Second Year	4	5	6
Social Science electives* (HST110, 111, 112 World History or ENG107, 108, 109 World Literature for U of O telecommunications majors)	3	3	3
Arts and Letters/Humanities electives*	3	3	3
Science courses*	4	4	4
HPE295 Health and Fitness for Life or HE250 Personal Health*	3		
Electives (SOSC recommends PHL203 Elementary Ethics and PHL204 Introduction to Logic for Human Communications majors and J224 for Broadcasting majors; WOSC requires courses in Journalism and writing. J224 Introduction to Journalism recommended.)	3	6	6

*To meet four-year college general education requirements.

Visual Communications

The Visual Communications curriculum offers students opportunities to gain knowledge, skills, and experience to become press operators, process photographers, typesetters, and graphic designers. You may learn about desktop publishing and how to operate a variety of equipment including process cameras, printing presses, densitometers, and enlargers. You may substitute lower division college transfer courses for the general education mathematics and science classes to complete program requirements. These changes and any others must be approved by the program chair.



This program has special admission requirements and enrollment limits. For additional information, contact the Admissions Office (399-5006).

In addition to tuition, estimated costs for students who complete the entire program are books, \$430; class fees, \$25; equipment and supplies, \$250. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these 92 required credit hours:

Course	Title	Credit Hours
Term 1		
COM051	Communication Skills I	3
CS100	Beginning Microcomputer Use *	1
MTH051	Basic Mathematics.....	3
	General education elective	3
VC051	Graphic Design and Character Generation	
	or	
VC052	Process Photography, Stripping and Platemaking	
	or	
VC053	Presswork and Reproduction Systems.....	6
Term 2		
COM052	Communication Skills II	3
MTH052	Introduction to Algebra and Geometry	3
VC067	Basic Technical Photography	5
VC051	Graphic Design and Character Generation	
	or	
VC052	Process Photography, Stripping and Platemaking	
	or	
VC053	Presswork and Reproduction Systems.....	6
Term 3		
PSY100	Introduction to Psychology	3

	Humanities/fine arts elective or Science/applied science elective *	3
VC051	Graphic Design and Character Generation	
	or	
VC052	Process Photography, Stripping and Platemaking	
	or	
VC053	Presswork and Reproduction Systems	6

The second year consists of 44 credits in the technical area of Visual Communications and three credits of general education electives to be selected with the program chair. Term 4, 5, and 6 are suggested as follows:

Term 4		
VC068	Intermediate Technical Photography	6
VC073	Special Problems	3
VC061	Advanced Graphic Design or	
VC062	Image Conversion and Image Carriers for Offset Lithography	
	or	
VC063	Advanced Presswork	6
Term 5		
VC061	Advanced Graphic Design or	
VC062	Image Conversion and Image Carriers for Offset Lithography	
	or	
VC063	Advanced Presswork	6
VC074	Special Problems in Graphic Communication.....	4
VC083	Cost Accounting for Printers.....	3
	Communications, health education, humanities/fine arts, math, physical education, science or social science general education elective	3
Term 6		
VC071-079	Special Problems in Graphic Communications	16

*See general education requirements on Page 27.

Welding

The Welding program offers two options. The three-term Welding Technology program combines training with classes in the background knowledge needed by workers in welding occupations. You practice and develop your welding skills in the laboratory and may take an examination for certification in arc welding. The six-term Welding Fabrication program is for persons who want to acquire the technical knowledge and skills required for workers in welding, fabrication, and related occupations.

Welding fabrication technicians are skilled in the use of oxyacetylene welding and cutting equipment, manual arc, tungsten inert gas and metallic inert gas processes, and have a working knowledge of shop blueprints and welding symbols, jig fabrication, and assembly processes.

Welding Technology

This program prepares you for a variety of positions in job specialty production and maintenance shops. Graduates may find work as metallic inert gas (MIG) welders, arc welders, oxyacetylene welders, semiautomatic welding equipment operators and tungsten inert gas (TIG) welders.

In addition to tuition, estimated costs for students who complete the entire program are books, \$158; class fees, \$227; equipment and supplies, \$390; certification test \$100 (optional). Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion by successfully completing these 45 required credit hours:

Course	Title	Credit Hours
Term 1		
MTH051	Basic Mathematics	3
WLD051	Basic Arc Welding	5
WLD056	Blueprint Reading and Sketching	2
WLD061	Basic Gas Metal Arc Welding (MIG)	2
WLD071	Basic Oxyacetylene Welding	2
WLD074	Weld Shop Safety	1
Term 2		
WLD052	Intermediate Arc Welding	5
WLD057	Layout Practices	1
WLD062	Intermediate Gas Metal Arc Welding (MIG)	2
WLD072	Oxyacetylene Cutting	2
WLD073	Basic Gas Tungsten Arc Welding (TIG)	3
WLD081	Welding Metallurgy I	2
Term 3		
WLD053	Advanced Arc Welding	3
WLD058	Welding Shop Problems	7
WLD063	Advance Gas Metal Arc Welding (MIG)	3
WLD082	Welding Metallurgy II	2

Welding Fabrication Program

As a graduate of the Welding Fabrication program you may qualify for several types of positions in business and industry such as machinery fabrication, structural fabrication, welding fitting and layout, automatic and semiautomatic weld-

ing, automatic flame cutter operation, millwright welding, plant maintenance, and quality control and development.

The program offers you a background in manufacturing materials, processes, and systems including shear and press brake operation, blueprint reading, and shop drawing and layout. The curriculum includes written and oral communications and general education classes and emphasizes related scientific, mathematical, and general mechanical principles.

At the end of the sixth term you may take a plate or pipe certification test. The fee for this test is determined by the number of students involved and the type of test.

In addition to tuition, estimated costs for students who complete the entire program are books, \$519; class fees, \$396; equipment and supplies, \$390; certification test \$100 (optional). Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Applied Science degree by successfully completing these required 99 credit hours:

Course	Title	Credit Hours
Term 1		
MTH051	Basic Math	3
WLD051	Basic Arc Welding	5
WLD056	Blueprint Reading and Sketching	2
WLD061	Basic Gas Metal Arc Welding (MIG)	2
WLD071	Basic Oxyacetylene Welding	2
WLD074	Weld Shop Safety	1
Term 2		
MTH052	Introduction to Algebra and Geometry	3
WLD052	Intermediate Arc Welding	5
WLD057	Layout Practices	1
WLD062	Intermediate Gas Metal Arc Welding (MIG)	2
WLD072	Oxyacetylene Cutting	2
WLD073	Basic Gas Tungsten Arc Welding (TIG)	3
WLD081	Welding Metallurgy I	2
Term 3		
MTH053	Introduction to Trigonometry with Geometry	3
WLD053	Advanced Arc Welding	3
WLD063	Advanced Gas Metal Arc Welding (MIG)	3
WLD058	Weld Shop Problems	7
WLD082	Welding Metallurgy II	2
Term 4		
DRF072	Introduction to Computer Drawing	3
GS104	Physical Science	4
MFG056	Machining Fundamentals I	3
MFG093	CNC Machine Tool Operations	5
WFB087	Fabrication Practices III	3
Term 5		
COM051	Communication Skills I	3
MFG057	Machining Fundamentals II	3
MFG079	Industrial Systems	5
MFG094	Manufacturing Programming	5
Term 6		
COM052	Communication Skills II	3
MFG097	Interaction Skills	3
PSY100	Introduction to Psychology	3
WFB088	Fabrication Practices IV	3
WFB096	Shop Projects	2

Zoology see Biology

COURSE DESCRIPTIONS



Course Descriptions

How courses are numbered

Courses in this catalog are numbered to conform with course numbers used throughout the Oregon state system of higher education.

The numbers following the letters of course numbers indicate these classifications:

001 to 049 Basic skills courses. Credits for these courses do not apply toward a degree and may not be transferred to a four-year college or university.

050 to 099 Occupational courses. Credits for most of these courses may be applied toward an Associate of Applied Science degree.

100 to 199 Freshman-level college courses. Normally, these credits may be transferred to higher-education institutions in Oregon.

200 to 299 Sophomore-level college courses. Normally, these credits may be transferred to higher-education institutions in Oregon.

This list of course descriptions reflects the diversity and scope of the many credit courses Chemeketa currently offers. However, all of our current courses may not be included here as the college may add classes after this catalog is published.

The courses are listed alphabetically by letter prefix.

You will find prerequisites specified in many of these course descriptions. These are conditions you must meet before you enroll in a course. It is your responsibility as a student to fulfill the prerequisite.

Some prerequisites indicate that you must complete certain preparatory courses or must have the consent of the course instructor. To gain consent, meet with the instructor. Consent is based upon the instructor's assessment of your readiness to enroll in the course.

The letters, **F**, **W**, **Sp**, and **Su** at the end of a course description indicate the term (fall, winter, spring, summer) the course is usually offered.

For information on when and where classes meet, consult the *Schedule of Classes* published each term.

Chemeketa also offers many non-credit personal enrichment courses not included here. They are also listed in the *Schedule of Classes*.

Definitions of Electives

You may find this table helpful in choosing the classes necessary to fulfill your Associate of Applied Science degree requirements.

Electives	Course prefixes which satisfy electives <i>(All courses selected must be numbered 050 or higher)</i>
Social Science	ANTH (Anthropology), EC (Economics), GEOG (Geography), HIS (History), HDFS (Human Development and Family Studies), PS (Political Science), PSY (Psychology), SOC (Sociology), SSC (Social Science), WS (Women's Studies)
Humanities/ Fine Arts	ART (Art), ED (American Sign Language classes only) CHN (Chinese), ENG (English), FA (Film Arts), FR (French), GER (German), JPN (Japanese), HUM (Humanities), NOR (Norwegian), MS (Multidisciplinary Studies), MUS (Music), MUP (Music Performance), PHL (Philosophy), R (Religion), RUS (Russian), SPAN (Spanish), TA (Theater Arts)
Science/ Applied Science	BI (Biology), BOT (Botany), CH (Chemistry), FN (Foods and Nutrition), G (Geology), GS (General Sciences), GE (General Engineering), OC (Oceanography), PH (Physics), ZOO (Zoology)
Communications	COM (Communication Skills), ENL (English as a Non-Native Language), J (Journalism), SP (Speech), WR (Writing), plus these specific classes: RD115 , RD116 , and HD112

Accounting, see Business Administration

AH

Allied Health, see also Chemistry, Dental Assisting, Emergency Medical Technology, Emergency Services, Health Education, Health Care Support Services, and Nursing.

AH050 Health Care Delivery Systems
1 class hr/wk, 1 cr.

Organization of resources for health care and services, the role of health workers as members of a health team, and the rights and responsibilities of patients as members of a health team. **F, W, Sp, Su**

AH080 Crisis Intervention

3 class hrs/wk, 3 cr.

Intervention in behavioral crises of sudden death, suicide, rape, murder, vehicle accidents, disease, trauma, and child abuse. Resources supporting behavioral patterns and handling emotional stress of the individual. Coping with emotional conflict within oneself. **Sp**

AH199A-F Health Care Issues

Variable class hrs/wk, variable cr.

Recent events, developments, practices, and techniques determine the focus of these seminars on current issues and topics in health care and related fields. **Offered as needed.**

AH205 Biomedical Ethics

3 class hrs/wk, 3 cr.

Focuses on ethics in medical and health care fields. Studies roles of patients and health care providers, highlights personal and professional issues, examines special areas, including case studies, life-death questions, and social attitudes. **Offered as needed.**

ANTH

Anthropology

ANTH101 Human Evolution

3 class hrs/wk, 3 cr.

The processes of the biocultural evolution of humans with emphasis on evolutionary theory, Mendelian and population genetics, the fossil record, classification of primates, and the nature of race. **F, W**

ANTH102 Archeology

3 class hrs/wk, 3 cr.

A study of unrecorded human history. Examines humans' prehistoric development, archeological method and theory, and techniques for dating the past. Emphasizes the agricultural revolution and the rise of such civilizations as the Sumerians, Egyptians, Harappans, Chinese, Mayans, Aztecs, and Incas. **W**

ANTH103 Introduction to Cultural Anthropology

3 class hrs/wk, 3 cr.

A survey of culture and how it shapes "human nature." Examines cross-cultural methodology and anthropological theory, language, economic systems, technology, social orientation, political systems, art, religion, warfare, the nature of play, and the problem of controlling culture and managing society. **Sp**

ANTH207 Cultural Anthropology

3 class hrs/wk, 3 cr.

An analysis of the significance of culture for humans, its diverse forms and degrees of elabo-

ration among different groups of people. Emphasizes the divisions of anthropology and the rise of anthropological theory, the structure of language and how it transmits culture, the varieties of human subsistence patterns and technologies, and interdependence of heredity, society, and environment. **Offered as needed.**

ANTH208 Cultural Anthropology

3 class hrs/wk, 3 cr.

A study of human social organizations, political structures, philosophy, religion, belief systems, art, and creativity. **Offered as needed.**

ANTH209 Cultural Anthropology

3 class hrs/wk, 3 cr.

Cultural growth and expansion, the nature of culture change, effects of technical assistance to developing nations, and ethics of applied anthropology. **Offered as needed.**

APR

Apprenticeship

APR040 Construction—Beginning

3 class hrs/wk, 3 cr.

Designed to familiarize students with the basic concepts of construction. These include city and regional planning, managing, contracting, designing, engineering, estimating, bidding, and inspecting, as well as the production work normally associated with construction. **Prerequisite:** Employment related to construction. **Offered as needed.**

APR041 Equity in Construction

2 class and 2 lab hrs/wk, 3 cr.

Designed to give the student an understanding of the construction industry and its basic tools and procedures. **Sp**

ART

Art

ART101 Understanding Art

3 class hrs/wk, 3 cr.

How art and artists reflect and have an impact on society. Investigates the nature, purpose, and meaning of art. **F, W, Sp, Su**

ART115, 116, 117 Basic Design

2 class and 2 lab hrs/wk, 3 cr.

An introduction to basic principles of design.

ART115: explores black and white two-dimensional design. **ART116:** color usage and two-dimensional exercise. **ART117:** three-dimensional design. **ART115: F; 116: Su,W; 117: Sp**

ART119 Design, Layout, and Pasteup

2 class and 2 lab hrs/wk, 3 cr.

Lettering and layout design including essential pasteup techniques, camera-ready requirements, and tools. **Prerequisite:** ART115 or consent of instructor. **F, W, Sp, Su**

ART154 Pottery I—Handbuilding

6 lab hrs/wk, 3 cr.

An introduction to ceramics through handbuilding. Includes basic form and design consideration as well as pinch, coil, slab construction, press mold, and glazing techniques. Class fee \$9. **F, W, Sp**

ART155 Pottery II—Beginning Wheel Throwing

6 lab hrs/wk, 3 cr.

Basic techniques for producing pottery on the potter's wheel. Emphasis includes forming, trimming, glazing, and firing of projects, as well as visual and functional form considerations. Class fee \$9. **W, Sp, Su**

ART156 Pottery III—Intermediate Techniques

6 lab hrs/wk, 3 cr.

A continuation of ART155. Projects encourage student experimentation as well as glaze testing, kiln firing, and secondary design considerations. **Prerequisite:** ART155 or consent of instructor. Class fee \$9. **Sp**

ART197 Gallery Design and Management

2 class and 2 lab hrs/wk, 3 cr.

Offers practice in the organization and management of exhibits. Includes publicity, communications, and use of equipment and supplies. Students will execute art exhibit. **Sp**

ART198A-E Independent Studies

Variable 1-5 credits

Faculty-supervised independent study in an area of student interest. **Offered as needed.**

ART204 Introduction to Art History

3 class hrs/wk, 3 cr.

Surveys visual arts, painting, sculpture, architecture, and minor arts of Western civilization from prehistoric times through early Christian period. **F**

ART205 Introduction to Art History

3 class hrs/wk, 3 cr.

Surveys visual arts, painting, sculpture, architecture, and minor arts of Western civilization from Early Middle Ages through 1500. **W**

ART206 Introduction to Art History

3 class hrs/wk, 3 cr.

Surveys visual arts, painting, sculpture, architecture, and minor arts of Western civilization from 1500 through the present. **Sp**

ART221 Graphic Design

2 class and 2 lab hrs/wk, 3 cr.

Study and practice in the principles and processes of graphic communication and production from concept design to camera-ready copy. Emphasizes the aesthetic foundation of good design. **Prerequisite:** ART115, ART119 or consent of instructor. ART231 recommended. **W**

ART225 Applied Design

2 class and 2 lab hrs/wk, 3 cr.

Principles and concepts of design applied to selected projects. Includes planning, design sketches, and functional and aesthetic considerations. **Prerequisite:** ART119 and ART221. **W**

ART231 Beginning Drawing

6 lab hrs/wk, 3 cr.

Basic principles of drawing, seeing, observing, and developing traditional skills with a variety of drawing media. Subject matter ranges from still life to photographic imagery. Includes brief introduction to figure drawing. **F, W, Sp, Su**

ART232 Life Drawing

6 lab hrs/wk, 3 cr.

Continuation of ART231, drawing from the human figure. **Prerequisite:** ART231 or consent of instructor. Class fee \$9. **F, W, Sp**

ART233 Contemporary Drawing Media

6 lab hrs/wk, 3 cr.

Continuation of ART232 emphasizing development of personal style and expression, personal imagery, and mixed media approaches. **Prerequisite:** ART231, or consent of instructor. ART232 recommended. **Sp**

ART244 Stained Glass

6 hrs/wk, 3 cr.

Basics of designing and crafting stained glass. Techniques include copper foil, leading, cutting, assembling, and soldering. **F, W, Su**

ART245 Intermediate Stained Glass

6 lab hrs/wk, 3 cr.

Builds upon skills gained in ART244. Focuses on more elaborate uses of glass as an art medium, including sandblasting and fusing. **Prerequisite:** ART244. **F, W, Su**

ART246 Advanced Stained Glass

6 lab hrs/wk, 3 cr.

Brings together all previous experience with glass for the purposes of making an artistic statement with contemporary results. **Prerequisite:** ART245. **F, W, Sp, Su**

ART254 Pottery IV—Low-Fire Ceramics

2 class and 4 lab hrs/wk, 3 cr.

An introduction to low-fire ceramic materials. Emphasizes both creative and functional elements. **Prerequisite:** ART155 or ART156. Class fee \$9. **Offered as needed.**

ART260 General Photography

2 class and 4 lab hrs/wk, 3 cr.

Fundamental and technical aspects of photography. No previous courses in photography required. Students supply camera, film, paper, tripod, and flash. Costs of film, paper, and supplies run between \$35 and \$75. Chemeketa provides enlargers, chemicals, and other incidental darkroom equipment. Class fee \$8. **W, Sp, Su**

ART261 Intermediate Photography

2 class and 4 lab hrs/wk, 3 cr.

Covers varied materials and processing techniques, such as light measuring, gamma, densitometry, interpretation of and uses of technical data, improving design, and aesthetic approaches to photography. Incorporates use of darkroom techniques, densitometers, special films, and special developers into project-oriented assignments. **Prerequisite:** Satisfactory completion of ART260 or consent of instructor. Class fee \$8. **W, Sp, Su**

ART271 Beginning Silkscreen Printing

6 lab hrs/wk, 3 cr.

An introduction to techniques of silkscreen printing. **Prerequisite:** ART231 or consent of instructor. Class fee \$9. **F, W, Sp**

ART272 Intermediate Silkscreen Printing

6 lab hrs/wk, 3 cr.

Mastery of the techniques of silkscreen printing introduced in ART271. **Prerequisite:** ART271. Class fee \$9. **F, W, Sp**

ART273 Advanced Silkscreen Printing

6 lab hrs/wk, 3 cr.

Continuation of ART272. Mastery of the techniques of silkscreen printing. **Prerequisite:** ART272. Class fee \$9. **F, W, Sp**

ART281 Painting

6 lab hrs/wk, 3 cr.

Introduces traditional approaches to and techniques of painting. Includes introduction to materials, color theory, and historical perspectives. For beginning painters who have strong fundamental drawing skills. **Prerequisite:** ART231. ART115 and ART116 recommended. Course may be repeated for a maximum of 9 credits. **W, Sp**

ART284 Watercolor

6 lab hrs/wk, 3 cr.

An introduction to problems and techniques of watercolor painting. Fundamental skills and approaches to traditional subject matter, characteristics of watercolor, compositional problems, color problems, observation of detail, and personal expression. **Prerequisite:** ART231 or consent of instructor. **F, W, Sp**

ART285 Intermediate Watercolor

6 lab hrs/wk, 3 cr.

Continuation of ART284 to develop technical control and acquire formal knowledge of art in general. **Prerequisite:** ART284 or consent of instructor. **F, W, Sp**

ART286 Advanced Watercolor

6 lab hrs/wk, 3 cr.

A continuation of problems and explorations begun in ART284 and ART285. A self-motivated contract class. **Prerequisite:** ART284 and ART285 or consent of instructor. **F, W, Sp**

ART291 Sculpture

6 lab hrs/wk, 3 cr.

Covers tools, materials, and processes of sculpture and explores three-dimensional form. Involves technical and compositional exercises. Class fee \$9. **F**

ART292 Ceramic Sculpture

6 lab hrs/wk, 3 cr.

An introduction to the potential and characteristics of clay as a creative sculptural medium. Class fee \$9. **W**

ART293 Sculpture/Lost Wax Casting

6 lab hrs/wk, 3 cr.

Covers wax modeling, investment, burnout, casting, and finishing processes involved in metal sculpture casting. **Prerequisite:** One of the following: ART117, 155, 291, 292 or consent of instructor. Class fee \$9. **Sp**

ART299 Art as a Profession

3 class hrs/wk, 3 cr.

For art students and practicing visual artists. Deals with professional skills and concerns in business, marketing, promotion, presentation, employment, and education opportunities. **Prerequisite:** Complete a studio art class, or have studio art experience, or consent of instructor. Class fee \$9. **F, W, Sp**

Astronomy, see Physics**AUM****Automotive Technology****AUM050 Introduction to Automotive**

4 class and 8 lab hrs/wk, 3 cr.

An in-depth look at automotive mechanics' duties and job opportunities, including present and future employment needs. Discusses complex and rapidly changing expectations of auto mechanics. **Su**

AUM051 Basic Automotive Engines

3 class and 6 lab hrs/wk, 5 cr.

Construction, working principles, and methods of servicing a gasoline internal combustion engine. Stresses proper use of tools, torque wrenches, micrometers, and other equipment. Class fee \$15. **F**

AUM052 Automotive Machine Shop

2 class and 5 lab hrs/wk, 4 cr.

Designed to familiarize the student with the methods, technical aspects, theory, checks, and procedures used to recondition internal combustion engines and related components. Classroom theory along with hands on laboratory experiences using precision measuring tools, torque wrenches, and machining equipment will introduce the student to the duties of an automotive machinist. Discusses procedures, precision measuring devices, and special tools as well as theories of leverage, pressure/volume, expansion, momentum, inertia,

and work related to engines. **Prerequisite:** AUM051 or consent of program chair. Class fee \$15. **W**

AUM056 Automotive Shop Safety

1 class hr/wk, 1 cr.

Guidelines for safety in the automotive industry. Rules, regulations, and methods for the safe use of automotive shop equipment and work areas will be studied through class discussion and the use of filmstrips. **F**

AUM057 Automotive Brake Systems

2 class and 6 lab hrs/wk, 4 cr.

Covers the principles of automotive brake systems including theory, service, and repair of disc and drum brakes, manual power brakes, and brake system control and indicating devices. Class fee \$15. **F**

AUM058 Auto Steering and Suspension

2 class and 8 lab hrs/wk, 5 cr.

Principles of automotive wheel, steering, and suspension systems. Includes study of front and rear suspension alignment; theory of suspension operation, wheel service and balance; and application of accepted repair procedures on automotive suspension. Class fee \$18. **W**

AUM061 Manual Drive Trains and Axles I

3 class and 6 lab hrs/wk, 5 cr.

Theory and service of automotive power trains. Covers clutches and clutch linkage, drive shafts and universal joints, front wheel drive axles, manual transmissions, manual transaxles, rear axles, and differentials (including open and limited slip). Friction, gear reduction, and torque multiplication through use of gearsets, inertia, and momentum as they apply to power train components. Class fee \$10. **Sp**

AUM062 Manual Drive Trains and Axles II

1 class and 6 lab hrs/wk, 3 cr.

A continuation of AUM061 concentrating on diagnosis and service of automotive power train components on vehicles in the lab. Practical application of diagnosis, service, and repair on clutches, drive shafts, universal joints, front wheel drive axles, manual transmissions, manual transaxles, rear axles, differentials, and four-wheel drive transfer cases. **Prerequisite:** AUM061. Class fee \$10. **F**

AUM063 Automatic Transmissions and Transaxle

3 class and 4 lab hrs/wk, 4 cr.

Fundamentals of automatic transmission operation, including methods of gear change, power flows, and basic hydraulic principles used in automatic transmissions. Emphasizes servicing and proper overhaul of automatic transmissions. Class fee \$15. **F**

AUM066 Basic Fuel Systems

3 class and 3 lab hrs/wk, 4 cr.

Principles of carburetion and carburetor circuits. Covers the basics of pressure differential, the venturi principle, fuel systems, gasoline, and engine variables pertinent to gasoline. Basic one-, two-, and four-barrel carburetor overhaul, service and adjustment, and fuel pump testing and inspection. **F**

AUM067 Advanced Carburetion and Fuel Injection

3 class and 4 lab hrs/wk, 4 cr.

Covers advanced carburetor systems; the diagnosis of problems in the systems; operating principles of electro-mechanical (feedback) carburetors; theory and principles of carburetor-accessory special feature devices; and carburetor computer control input, operation, and adjustments. (Students become involved with

the actual units in the laboratory.) Covers in-depth analysis of today's fuel injection systems, including computer functions, input, output, and some system diagnosis, study of emission, causes, testing, and instrumentation. **Prerequisite:** AUM066 or consent of program chair. **W**

AUM068 Automotive Electrical Systems I

3 class and 3 lab hrs/wk, 4 cr.
An introduction to automotive electricity and electronics. Also included will be an introduction to automotive accessory systems and circuits. **Sp**

AUM073 Automotive Repair

1 class and 6 lab hrs/wk, 3 cr.
Work experience on prescribed automobile repairs using acquired skills. Speed and accuracy are stressed. Laboratory time will be dedicated to automatic transmission, automatic transaxle, and engine repair and service. **Prerequisite:** Sixth term standing or consent of program chair. Class fee \$15. **Sp**

AUM076 Automotive Electrical Systems II

3 class and 3 lab hrs/wk, 4 cr.
Designed to familiarize the student with fundamentals of DC electricity pertaining to the automotive trade. Course includes instruction in basic electrical fundamentals, storage batteries, starters, charging systems, and ignition systems. **F**

AUM077 Automotive Electrical III

3 class and 4 lab hrs/wk, 4 cr.
A continuation of AUM076. Covers testing, diagnosis, and theory of operations of advanced ignition, charging, and cranking systems; electronic ignitions; oscilloscope testing and meter usage; and vehicle computer systems and testing. Basic electrical principles, laws, and forces are discussed and reviewed. **Prerequisite:** AUM076 or consent of program chair. Class fee \$5. **W**

AUM078 Automotive Workplace Procedures and Ethics

3 class hrs/wk, 3 cr.
Outlines duties and responsibilities of parts and service department personnel and their interaction with automotive technicians. Covers the legal aspects and responsibilities of the technician as they pertain to Environmental Protection Agency regulations, safety regulations, and OSHA regulations. Stresses work habits, ethical practices, and interaction with employers, potential employers, and other employees. **Sp**

AUM081 Tune-up and Diagnosis

3 class and 9 lab hrs/wk, 6 cr.
Tune-up and diagnosis procedures of gasoline internal combustion engines. Includes use of diagnostic equipment on vehicles during laboratory practices, repair and diagnosis of electrical and fuel systems in relation to tune-up. Keyed to experience on components and vehicles during lab periods. **Prerequisite:** AUM067 and AUM077 or consent of program chair. Class fee \$15. **Sp**

AUM082 New Automotive Developments

3 class and 3 lab hrs/wk, 4 cr.
Designed to familiarize the student with the theory, operation, and testing of automotive electronic engine control systems. Includes emission control systems, automotive computer systems, and turbo-charging and fuel-injection systems as they relate to engine control systems. **Prerequisite:** AUM066 and

AUM067, AUM076 and AUM077. Class fee \$5. **Sp**

AUM086 Automotive Heating and Air Conditioning

3 class and 7 lab hrs/wk, 5 cr.
Theory and operation of automotive heating and air conditioning systems, methods for service and repair of heating and air conditioning, and troubleshooting techniques. Class fee \$10. **W**

AUM088 Automotive Machine Shop-Upper Engine

1 class and 3 lab hrs/wk, 2 cr.
Instruction in the theory and practice of automotive machining. Includes precision measuring tools, torque wrenches, valve and seat grinding, valve guide and seat repairs, resurfacing, valve springs, and cylinder head assembly. Class fee \$10. **F**

AUM089 Automotive Machine Shop-Lower Engine

1 class and 3 lab hrs/wk, 2 cr.
Instruction in the theory and practice of automotive machining. Includes precision measuring tools, torque wrenches, cylinder block boring and honing, cylinder block resurfacing, mainline checks and repairs, and connecting rod reconditioning. Class fee \$10. **W**

AUM090 Automotive Machine Shop-Engine Assembly

1 class and 3 lab hrs/wk, 2 cr.
Instruction in the theory and practice of automotive machining. Includes precision measuring tools, torque wrenches, camshaft timing checks, clearancing, blueprint measurement, and engine assembly and sealing techniques. Class fee \$10. **Sp**

AUM091 Power Systems

3 class and 3 lab hrs/wk, 4 cr.
The operation, maintenance, and minor repair of two-cycle and four-cycle gasoline and diesel engines. Includes proper procedures in making minor service adjustments and repairs. Laboratory and classroom experience in the theory of operation and the component parts of these engines. Class fee \$5. **Sp**

AUM092 Automotive-Diesel Engines

3 class and 2 lab hrs/wk, 4 cr.
Construction, working principles, and methods of servicing automotive diesel engines. **Prerequisite:** AUM051. **Sp**

AUM280A-L Cooperative Work Experience

1-12 cr.
Places students in a business, industry or agency for on-the-job training and experience related to instruction. Field experience supervised by college instructors and work experience coordinators. **Offered as needed.**

AUP **Auto Parts Sales**

AUP081 Engine Theory

2 class and 3 lab hrs/wk, 3 cr.
Construction, working principles, and methods of servicing internal combustion engines. Emphasizes location and identification of various parts and components. Compares after-market parts with original equipment. Students take engines apart, study internal parts and reassemble engines. **F**

AUP082 Chassis Theory

2 class and 3 lab hrs/wk, 3 cr.
Fundamentals of automotive fluid power systems relating to brake systems. Covers locations and functions of various components of the automobile chassis. Compares after-market and original manufactured chassis parts. **F**

AUP083 Auto Parts I

2 class and 6 lab hrs/wk, 4 cr.
Studies the auto parts distribution network from manufacturers through vendors to customers. Realistic training includes following policies and procedures of a jobber outlet, studying different methods of parts catalog indexing and using various catalogs to fill parts orders. **F**

AUP086 Power Train Theory

2 class and 3 lab hrs/wk, 3 cr.
Covers the operation and some repair procedures of essential power train components of automobiles. Emphasizes location and identification of various parts and components. Compares after-market parts with original equipment. **W**

AUP087 Auto Electrical Theory

2 class and 3 lab hrs/wk, 3 cr.
Basic electrical terminology, fundamentals, and principles of operation applying to circuitry of automobiles. Covers theory of operation of ignition, charging, cranking, and lighting systems. Emphasizes location and identification of various parts and components. Compares after-market parts with original equipment. **W**

AUP088 Auto Parts II

2 class and 6 lab hrs/wk, 4 cr.
Instructions on automotive parts catalog and catalog indexing systems, inventory systems, and parts classification. Use of telephone, merchandise displays, and contacts with customers. Observations of automotive parts systems and methods of wholesale and retailing automotive parts at area dealerships and parts outlets. **W**

AUP091 Auxiliary Systems

2 class and 2 lab hrs/wk, 3 cr.
Operation and identification of parts and components in auxiliary systems including vacuum controls, power steering, and other assist units. Stresses new developments in areas of emission controls and electronic ignitions. **Sp**

AUP093 Fuel Systems

2 class and 3 lab hrs/wk, 3 cr.
An introduction to automotive fuel injection. Covers fundamental principles of carburetion and the basis of fuel systems with detailed instruction on basic carburetor circuits. Emphasizes location and identification of various parts and components of single barrel, two-barrel and four-barrel carburetors. **Sp**

AUP096 Auto Parts III

2 class and 6 lab hrs/wk, 4 cr.
An in-depth orientation on the use of acceptable sales techniques as they pertain to the parts industry. Introduces the student to the computer inventory control system. Includes verbal and written sales presentations. **Sp**

AUP280 Cooperative Work Experience

see AUM280.

BA**Business Administration****BA031 AMA Managing and Resolving Conflict**

2.5 class hrs/wk, for 5 weeks, 1 cr.
Designed for managers and supervisors. Presents skills to resolve conflicts effectively and develop productive working relationships among staff. Class fee \$89. **Offered as needed.**

BA032 AMA Communication Skills for Managers

2.5 class hrs/wk, for 5 weeks, 1 cr.
A step-by-step guide to effective oral, non-verbal, and written communication. For business, industry, and government supervisors, managers, and executives. Class fee \$89. **Offered as needed.**

BA033 AMA First-Line Management

2.5 class hrs/wk, for 5 weeks, 1 cr.
Concentrates on practical skills for new and prospective supervisors in business, industry, and government. Deals with leadership styles, decision making, rewards, productivity, conflict, grievances, and problem employees. Class fee \$89. **Offered as needed.**

BA034 AMA How to Implement Management Information Systems

2.5 class hrs/wk, for 5 weeks, 1 cr.
How data processing and non-data processing managers in business, industry, and government may increase productivity by requesting carefully targeted information. Covers minicomputers, microcomputers, and interactive processing. Class fee \$89. **Offered as needed.**

BA035 AMA Reading and Interpreting Financial Statements

2.5 class hrs/wk, for 5 weeks, 1 cr.
A practical course for managers in understanding three critical tools of financial analysis: comparison of statement of periods, use of horizontal and vertical percentage analysis, and computation of ratios. Class fee \$89. **Offered as needed.**

BA036 AMA Success Through Assertiveness

2.5 class hrs/wk for 5 weeks, 1 cr.
Helps students develop skills for improving responses to difficult situations and for communicating desires, interests, and feelings. Class fee \$89. **W**

BA043 AMA How to Delegate Effectively

2.5 class hrs/wk for 5 weeks, 1 cr.
For practicing and future managers in business and government who want to become more comfortable with delegating responsibilities. Class fee \$89. **Sp**

BA044 AMA A Manager's Guide to Human Behavior

2.5 class hrs/wk, for 5 weeks, 1 cr.
Emphasizes the importance to managers of communicating clearly, motivating employees, and understanding human needs to gain maximum results. Presents relevant examples for managers in personnel, marketing, sales, finance, or general operations. Class fee \$89. **Offered as needed.**

BA045 AMA How to Build Memory Skills

2.5 class hrs/wk, for 5 weeks, 1 cr.
How to organize your mind and accomplish tasks more quickly. Methods to help you recall people's names, facts about them, details about current events, and highlights of impor-

tant articles and meetings. Class fee \$89. **Offered as needed.**

BA046 AMA Effective Team Building

2.5 class hrs/wk for 5 weeks, 1 cr.
For managers and prospective managers in business and government who want practical, step-by-step team-building and employee involvement techniques. Class fee \$89. **W**

BA047 AMA Negotiating Skills for Managers

2.5 class hrs/wk for 5 weeks, 1 cr.
Proven techniques for management negotiators in business, industry, and government. Ranges from determining negotiation strategies to planning seating arrangements and selecting meeting sites. Class fee \$89. **W**

BA048 AMA Leadership Skills for Managers

2.5 class hrs/wk, for 5 weeks, 1 cr.
Suggests realistic guidelines for raising employees' levels of competence and motivation. Suggests ways to improve communication; set achievement targets; help subordinates develop by coaching and counseling, delegating responsibilities, and reviewing their performance; and cope with tensions. Includes discussion of practical business ethics. Class fee \$89. **W**

BA049A,B,C,D Supervisory Techniques and Procedures IA, IB, IC, ID

12 class hrs/wk, 1 cr. each
First of four skill-building courses designed for first-line supervisors in both the public and private business sectors. **W**

BA050 Supervisory Techniques and Procedures II

2.5 class hr/wk, for 5 weeks, 1 cr.
A continuation of BA049. Class fee \$49. **W**

BA051 Accounting Procedures I

4 class hrs/wk, 4 cr.
Business accounting, including basic procedures using the double-entry system and accounting cycles for service and merchandising businesses. For students who do not plan to attend a four-year college and/or who are not enrolled in Chemeketa's two-year accounting curriculum. **Prerequisite:** MTH061 or MTH070. **F, W, Sp, Su**

BA052 Accounting Procedures II

4 class hrs/wk, 4 cr.
Continuation of BA051. Covers basic procedures and theory of double-entry business accounting. For students who do not plan to enroll in Chemeketa's two-year accounting program or to attend a four-year college. **Prerequisite:** BA051. **W, Sp**

BA053 Accounting Procedures III

4 class hrs/wk, 4 cr.
Accounting for corporations, capital stock, corporate earning, corporate bonds, investments, analysis of financial statements, and manufacturing firms. For students who do not plan to attend a four-year college and/or who are not enrolled in Chemeketa's accounting curriculum. **Prerequisite:** BA052 and MTH062 or consent of instructor. **Sp**

BA054 Governmental/Non-Profit Accounting I

3 class hrs/wk, 3 cr.
Comprehensive study of accounting for governmental and non-profit entities. Considers budgets, revenue accounting, expenditure accounting, general funds, special revenue funds, capital projects funds, debt service funds, special assessment funds, enterprise funds, gen-

eral fixed asset group of accounts, and summary of funds and groups. **Prerequisite:** BA212 or consent of instructor. **F, Sp**

BA055 Governmental/Non-Profit Accounting II

3 class hrs/wk, 3 cr.
Compares and contrasts principles of accounting and reporting for state and local governmental units with those of state and local school systems, colleges and universities, hospitals, and the federal government. Familiarizes the student with budgeting, cost determination, and audits of governmental and nonprofit entities. **W**

BA056 Intermediate Financial Accounting I

4 class hrs/wk, 4 cr.
Comprehensive study of environment and development of accounting principles, basic theories, accounting processes, statements of income and retained earnings, statements of financial positions, present values, monetary assets, valuations of inventories, and current liabilities. **Prerequisite:** BA213 or concurrent enrollment or consent of instructor. **F**

BA057 Intermediate Financial Accounting II

4 class hrs/wk, 4 cr.
Comprehensive study of plant assets, depreciation, depletion, intangible assets, long-term liabilities, stockholders equity, earnings per share, and long-term investments. **Prerequisite:** BA056. **W**

BA058 Intermediate Financial Accounting III

4 class hrs/wk, 4 cr.
Comprehensive study of revenue recognition, accounting changes, error analysis, income taxes, pension plans, leases, statement of changes in financial position, financial statement analysis, full disclosure, and price level adjusted financial statements. **Prerequisite:** BA057 or consent of instructor. **Sp**

BA059 Auditing

3 class hrs/wk, 3 cr.
Outlines responsibilities and duties of independent, external auditors in applying acceptable auditing standards, assisting with financial audits, preparing audit work papers, and making crucial decisions. Emphasizes internal control and collection of sufficient evidence. **Prerequisite:** BA057 or consent of instructor. **Sp**

BA061 AMA Accounting for Managers

2.5 class hrs/wk, for 5 weeks, 1 cr.
Non-technical, basic accounting for managers. How to interpret financial information and incorporate it into decision making. For non-financial executives in general management, manufacturing, marketing, personnel, and research and development. Class fee \$89. **Offered as needed.**

BA062 AMA-EI Writing for Management Success

2.5 class hrs/wk, 5 weeks, 1 cr.
How business, government, and industry employees may communicate more effectively by improving their writing and grammar skills. An American Management Association Extension Institute certificate course. Class fee \$89. **F**

BA070 Merchandising

3 class and 2 lab hrs/wk, 4 cr.
Application of principles to merchandise display problems of space utilization, improvisations, seasonal display, lighting, and organization of merchandise on display. Expands on merchan-

dising concepts and practices covered in introductory course in marketing. **Prerequisite:** BA223. **Offered as needed.**

BA077 New Supervisor Orientation

2 class hrs/wk, 2 cr.

How first-line supervisors may guide and motivate employees toward greater productivity. Focuses on management styles, communication, performance appraisals, and personnel development. **Offered as needed.**

BA097 Supervisory Communication

1 class hr/wk, 1 cr.

How supervisors may work together to develop awareness skills so they may communicate responsibly and appropriately with each other and their staff members. **Offered as needed.**

BA101 Business Environment

4 class hrs/wk, 4 cr.

An introduction to the inter-relationships of business, government, and society; roles of businesses and members of the business community; ethics and social responsibility; employment opportunities in various business fields. **F, W, Sp, Su**

BA106ABC Business Leadership

2 class hrs/wk, 2 cr. each

How to develop leadership qualities and improve oneself by participating in community activities and student organizations. **Offered as needed.**

BA160 Purchasing I

3 class hrs/wk, 3 cr.

Discusses purchasing functions, policies, procedures, manuals, legal aspects, public relations, ethics, quality and sources of supplies, storekeeping, and personnel. **Offered as needed.**

BA173 Public Relations in Business

3 class hrs/wk, 3 cr.

Basic theories and principles of public relations. How to develop or implement public relations activities and become more aware of all-encompassing public relations activities in business. **W**

**BA199C Special Studies-
Entrepreneurship: Preparing to Start
Your Own Business**

3 class hrs/wk, 3 cr.

Designed for those who are considering going into business for themselves. Includes determining self-employment readiness; assessing personal strengths and weaknesses, understanding the small business concepts, analyzing the ambiguities and risks involved, and developing a preliminary small business plan. Class fee \$5. **F, W, Sp**

BA200K Conflict Resolution at Work

1 class hr/wk, 1 cr.

Office conflict can be an obstacle to achieving work goals or developing productive work relationships. A workshop on skills and methods which lead to conflict resolution. **Offered as needed.**

BA201 Community Leadership

1 class hr and 7 lab hrs/wk, 3 cr.

Motivation techniques to prepare persons to become effective community leaders. **Offered as needed.**

BA205 Human Relations in Business

3 class hrs/wk, 3 cr.

A practical exploration of fundamental human relations concepts in business settings via readings, lectures, discussions, and group processes. Discusses perspectives for supervi-

sory, subordinate, and peer relationships. **Offered as needed.**

BA206 Business Management Principles

3 class hrs/wk, 3 cr.

Analyzes and synthesizes historical and current theories in leadership, group processes, organizational structures, personnel policies, motivation, and training that allow an individual to plan, organize, control, staff, and direct subordinates in an organization. **F, W, Sp, Su**

**BA207 Collective Bargaining
and Labor Arbitration**

3 class hrs/wk, 3 cr.

An introduction to the history of collective bargaining in the United States. Covers labor agreements, management rights, conditions of employment, contract negotiation procedures, resolution of impasses, grievances, and arbitration. **Offered as needed.**

BA211 Financial Accounting I

4 class hrs/wk, 4 cr.

Accounting for service and merchandising firms. Includes recording transactions, adjustments, financial statements, worksheets, closing entries, cash and accounts receivable, notes and interest, and accounting for inventories. For accounting program students and students transferring to four-year institutions. **Prerequisite:** MTH070 or MTH061. **F, W, Sp, Su**

BA212 Financial Accounting II

4 class hrs/wk, 4 cr.

Covers payrolls, liabilities, partnerships and ownerships liquidation, capital acquisition and reporting, dividends, stock splits, donated capital, financial statements, earnings income tax reporting, corporate bonds, and corporation accounting principles. **Prerequisite:** BA211, MTH062, MTH070 or consent of instructor. **F, W, Sp, Su**

BA213 Managerial Accounting

4 class hrs/wk, 4 cr.

Covers the accountant's role in an organization, cost terms and purposes, cost-volume profit relationships, budgeting, systems design, standard costs, flexible budgets, and overhead control. Standard absorption costing, income effects of alternative product costing methods and relevant costs, and the contribution approach to decisions. **Prerequisite:** BA212. **F, W, Sp, Su**

BA214 Business Communications

3 class hrs/wk, 3 cr.

The purpose and effectiveness of business communications. How to analyze and write business letters, memorandums, and reports. **Prerequisite:** OA085 or WR122. **F, W, Sp, Su**

BA215 Cost Accounting

3 class hrs/wk, 3 cr.

Analysis of methods of detailed and specific identification of cost elements in business. Emphasizes job orders, processes, and standard cost accounting systems and their related theory; principles, techniques, and managerial use of cost accounting data; and use of budget and performance reports, as related to cost accounting. **Prerequisite:** BA211, BA212 and BA213. **F, W**

**BA221 Production and Operations
Management**

3 class hrs/wk, 3 cr.

Overview of the functions an organization must perform to produce goods or services. Emphasis on the role operational policy plays in the overall strategy of an organization and how that policy affects other areas such as marketing,

finance, accounting, personnel, and management information systems. **Offered as needed.**

BA222 Financial Management

3 class hrs/wk, 3 cr.

Managerial finance and how financial decisions affect society at large. Discusses the tax environment, ratio analysis, financial planning and control, current asset management, loans and leases. **Prerequisite:** BA212. **W, Sp**

BA223 Principles of Marketing

3 class hrs/wk, 3 cr.

Emphasizes marketing planning and strategy as dictated by the consumer through marketing research. Surveys marketing research, product development, sales and feedback on consumer acceptance. **Prerequisite:** BA101 or consent of instructor. **F, W, Sp**

BA224 Personnel Management

3 class hrs/wk, 3 cr.

Principles and functions of a personnel department relating to supervision. Includes policy formulation, employee selection and placement, interviewing and counseling, discipline, labor-management relations, wage and salary administration, human resource development, and employee health and safety. **F, Sp**

BA226 Business Law I

3 class hrs/wk, 3 cr.

An introduction to the nature and function of the law in society and a study of the rights and obligations of contract. **F, W, Sp, Su**

BA227 Business Law II

3 class hrs/wk, 3 cr.

Continuation of BA226. Covers legal aspects of personal property, sales, commercial paper, and bankruptcy. **Prerequisite:** BA226. **W, Sp**

**BA228 Computer Accounting
Applications**

3 class hrs/wk, 3 cr.

Study of computers in accounting. Software applications include general ledger, in-house tax system, and intermediate accounting. For students in the accounting curriculum. **Prerequisite:** BA056; BA256; CS103 or consent of instructor. Class fee \$12. **Offered as needed.**

BA229 Consumer Finance

3 class hrs/wk, 3 cr.

Principles and concepts of consumer economics. Covers consumer decision making, money management, consumer credit, food shopping, housing, family transportation, insurance, saving, and investment. **F, W, Sp**

**BA232 Introduction to Business
Statistics**

3 class hrs/wk, 3 cr.

Elementary statistical techniques to aid decision making in business. Includes populations and samples, estimating, hypothesis testing, analysis of variances, indexes, and time series. **Prerequisite:** MTH095. **W, Sp, Su**

BA233 Marketing Research

3 class hrs/wk, 3 cr.

Research design and the development of information gathering systems as applied to marketing. Use of secondary and primary data and the interpretation of information gathered. **Prerequisite:** One term of psychology or sociology. **Offered as needed**

BA234 International Marketing

3 class hrs/wk, 3 cr.

A managerial view of international marketing. Presents theories and trends in global marketing of goods and services. Analyzes cultural, legal, political, and monetary factors; develop-

ment of an appropriate marketing mix; import management; and trade promotion. **Prerequisite:** BA101, BA223 or equivalent business background. **Offered as needed.**

BA238 Sales and Persuasion

3 class hrs/wk, 3 cr.

Emphasizes behavioral sciences, sales psychology and techniques, and communication. How to sell ideas and attitudes within a firm, and products and services to customers. **F, Sp**

BA239 Principles of Advertising

3 class hrs/wk, 3 cr.

An examination of advertisements within each segment of media. Explores relative merits of several media. Practice in the planning and analysis of complete advertising campaigns and their coordination with other marketing strategies. **Prerequisite:** BA101. **W**

BA241 Risk and Insurance

3 class hrs/wk, 3 cr.

Concepts of risk, probability, and insurance, and the role of insurance in the management of risk. Examines underlying legal principles and common elements of most insurance contracts. Special emphasis on the role of insurance from consumer and business viewpoints. Personal applications of major types of property and liability, life, and health insurance, with emphasis on underlying economic needs each is designed to meet. **Offered as needed.**

BA242 Investments

3 class hrs/wk, 3 cr.

How investors may consolidate and coordinate previous experiences with basic information and data in order to survive in the marketplace. Explains the individual investment opportunities as part of an investor's portfolio. **Prerequisite:** BA101, BA211 or equivalent. **F, W, Sp**

BA243 Introduction to Consumer Behavior

3 class hrs/wk, 3 cr.

How behavioral science concepts, theories, and research observations apply to various aspects of consumer behavior. Discusses the influences of perception, personality, attitudes, culture, family life, and social class on how and why people buy and consume products. **F**

BA244 Records Management

3 class hrs/wk, 3 cr.

Principles and procedures for efficient organization and control of business records. Covers management of the creation, maintenance, storage, and disposition of records. Includes manual, mechanical, and auto-mated records systems and micrographics in this study of information resource management. **F, Sp**

BA250 Small Business Management

3 class hrs/wk, 3 cr.

General functions and procedures used in the operation of a small business. Introduces basic aspects of managing a small business and planning, organizing, staffing, actuating, and controlling. **Prerequisite:** Second year standing or consent of instructor. **Offered as needed.**

BA251 Office Management

3 class hrs/wk, 3 cr.

Covers the broad scope of responsibilities of an administrative manager. Including principles of organization; office environment and layout; employee selection, training, and appraisal; employee relations, supervision, motivation, and development; job analysis and evaluation; and productivity (includes budget and cost controls). **W, Sp**

BA255 Elements of Supervision

3 class hrs/wk, 3 cr.

Studies current supervisory processes, reviews supervisory responsibilities, provides practical instruction for new and current supervisors; and examines the role of supervision in business and industry. **Offered as needed.**

BA256 Income Tax Accounting I

4 class hrs/wk, 4 cr.

First of two courses in preparing federal and Oregon individual income tax returns. Completing both BA256 and BA257 meets the Board of Tax Service Examiners' educational requirements to take the Oregon tax preparer's licensing examination. **Prerequisite:** BA212 or BA052, or consent of instructor. **F, Sp**

BA257 Income Tax Accounting II

4 class hrs/wk, 4 cr.

Second of two introductory courses in preparing federal and Oregon individual income tax returns. See BA256. **Prerequisite:** BA256 or consent of instructor. **F**

BA260 Real Estate Principles

3 class hrs/wk, 3 cr.

The nature, importance, and character of real property, real estate business, markets, and brokerages; taxes and assessment; contracts; and ownership. **F, W, Sp**

BA261 Land Use Economics

3 class hrs/wk, 3 cr.

Land use, taxation, valuation, planning, zoning and development with emphasis on their relationships to economic and social problems. Examines the overall real estate community and its participants. **Prerequisite:** BA260. **Offered as needed.**

BA262 Real Estate Practices

3 class hrs/wk, 3 cr.

A sheltered insight into the workings of real estate transactions including contracts, deeds, mortgages, and other documents and forms commonly used in the transfer of ownership of real property. Discusses Oregon License Law, ethics and residential contraction techniques. **Prerequisite:** BA263 and BA264. **F, W, Sp, Su**

BA263 Real Estate Law

3 class hrs/wk, 3 cr.

Examines the complexities of Oregon real estate law to help identify problems in dealing with clients and to recognize the need for services of a competent attorney specializing in real property. Defines terminology, concepts of ownership and interest in real property, and an agent's role in agency relationships. **F, W, Sp, Su**

BA264 Real Estate Finance

3 class hrs/wk, 3 cr.

The real estate mortgage market and how it competes with other products purchased on credit. Forces that modify the operation of the mortgage market, the availability of funds, lending policies, and methods of financing real property. Explores loan instruments and introduction to appraising techniques. **F, W, Sp, Su**

BA269 Principles of Banking

3 class hrs/wk, 3 cr.

Fundamentals of bank functions to give beginning bankers a broad (and operational) perspective. Includes the role of banks in the community. Primary topics include teller functions, deposit functions, trust services, bank loans and investments. **F, W, Sp**

BA270 Money and Banking

3 class hrs/wk, 3 cr.

Basic economic principles most closely related to money and banking for present and prospective bank managers. Stresses practical application of the economics of money and banking to an individual bank. Includes structure of the commercial banking system, banks and the money supply, bank investments and loans, the federal reserve system and its policies, and the international monetary system. **W**

BA271 Analyzing Financial Statement

3 class hrs/wk, 3 cr.

Techniques necessary for evaluating financial conditions and the operation of business enterprises. Includes financial statement analysis and accounting, flow of business funds, and tools and techniques for analyzing financial statements. **Prerequisite:** BA212. **Offered as needed.**

BA273 Marketing for Bankers

3 class hrs/wk, 3 cr.

Covers marketing, advertising, and personal selling. Presents concepts, philosophies, information research, and targeting, and planning. **W**

BA277 Business Ethics

3 class hrs/wk, 3 cr.

A comparative study of ethical and economic systems designed to increase decision-making capabilities. Emphasizes issues and policy formation in varied business settings. **Offered as needed.**

BA278 Law and Banking—Principles

3 class hrs/wk, 3 cr.

Legal aspects of banking. Course presents a non-technical understanding of all aspects of the legal system that directly affect banking. **W**

BA280 Cooperative Work Experience

see AUM280.

BA281 Consumer Lending

3 class hrs/wk, 3 cr.

A survey of various types of credit arrangements in which a borrower pays a charge for repaying debts in delayed payments. Includes credit evaluation, consumer credit evaluation, consumer credit policy, requirements of making credit decisions, and loan documentation and closing. **Prerequisite:** BA269 and current employment in a financial institution or enrollment in the Banking and Finance program. **Offered as needed.**

BA282 The Trust Business

3 class hrs/wk, 3 cr.

The changing role of a trust department, the services it provides, and how it fits into the overall banking business. **Prerequisite:** BA269 or on-the-job banking experience. **F**

BA284 Law and Banking—Applications

3 class hrs/wk, 3 cr.

An introduction to laws pertaining to secured transactions, letters of credit, and bank collection processes. Discusses check losses and a broad range of legal issues related to processing checks. Includes up-to-date summaries of laws related to collateral, perfection, and default. Case studies illustrate important legal points related to banking practices. **Prerequisite:** BA269. **Sp**

BA299 Business Policy

3 class hrs/wk, 3 cr.

Analysis of management decisions, executive responsibilities, and company objectives within the framework of today's society. Policy development is studied through business cases and

field study. Emphasis on written communication of decisions, policies, and plans. **Prerequisite:** Second year standing or consent of instructor. **Offered as needed.**

BAN

Banking and Finance, see also Business Administration

BAN052 Home Equity Lending—AIB 3 class hrs/wk for 5 weeks, 1 cr.

An introduction to the major characteristics of the home equity loan, focusing mainly on the loan's features and benefits. Covers the basics of pricing, marketing and underwriting. **Prerequisite:** BA269 or on-the-job banking experience. **F**

BAN054 English the Easy Way

3 class hrs/wk for 5 weeks, 1 cr.
Includes grammar, punctuation, and word study. **Offered as needed.**

BAN055 Spanish for Bankers

3 class hrs for 5 weeks/1 cr.
Basics of Spanish as related to specific banking/business terminology. **Offered as needed.**

BAN056 Introduction to Commercial Lending

3 class hrs/wk, 3 cr.
A survey of a bank's commercial lending division and its functions. Includes aspects of commercial lending: economic, lending, management of loan portfolios, and influence of regulation and business development. **Prerequisite:** Employment in banking or enrollment in Banking and Finance program. **Offered as needed.**

BAN057 Loan and Discount Series—AIB 3 class hrs/wk, 3 cr.

Covers promissory notes, supporting documents, and concepts of secure transactions; how to calculate interest and discount commercial paper; guaranties; general collateral agreements; examination and processing of documents accompanying notes secured by bonds, stocks, and savings accounts; and concepts of attachment, perfection, priority, defaults, and foreclosure. Specifically useful for notetellers and commercial lending clerks. **Prerequisite:** Employment in banking or enrollment in Banking and Finance program. **Offered as needed.**

BAN058 Real Estate Documentation

3 class hrs/wk for 5 weeks, 1 cr.
Concentrates on lending practices for family residences. Emphasizes basics of processing loans and underwriting. Covers loan programs, interviews, applications, underwriting property borrower's credit, and closing and servicing mortgages. **Prerequisite:** BA269 or on-the-job banking experience. **W**

BAN059 Small Business Financing

3 class hrs/wk, for 5 weeks, 1 cr.
Focuses on the importance of bank financing to small businesses and to the community as a whole. **Prerequisite:** BA269 or on-the-job banking experience. **F**

BAN059A Financial Planning

3 class hrs/wk, 3 cr.
Examines the financial planning process and its applications. **Offered as needed.**

BAN060 Investment Basics for Bankers—AIB

3 class hrs/wk, 3 cr.
Discusses theory and practice of trust department investment services. Covers securities market, alternatives to securities investments,

trust department investment operations, techniques and practical applications, and investment policies and portfolio management. **Offered as needed.**

BAN062 New Accounts Procedures

3 class hrs for 5 weeks/1 cr.
Customer service procedures in opening new bank accounts. **Offered as needed.**

BAN063 Product Knowledge

3 class hrs/wk for 5 weeks, 1 cr.
Includes three separate modules: consumer products, corporate products and trust products. Emphasizes the range of services banks offer to meet customer needs and increase sales opportunities. **Prerequisite:** Current enrollment in the Banking and Finance program or current employment in a financial institution. **Offered as needed.**

BAN064 Personnel and the Law

3 class hrs/wk for 5 weeks, 1 cr.
Concentrates on numerous laws that shape banking's personnel policies and procedures. Includes Civil Rights Act, Equal Pay Act, equal employment opportunity, and laws and legislation affecting Vietnam era veterans. **Offered as needed.**

BAN064A Selling Bank Services

3 class hrs/wk for 5 weeks, 1 cr.
How to sell bank services and meet customer needs. Cultivates positive attitudes towards selling and develops specific selling techniques. **Prerequisite:** BAN063. **Offered as needed.**

BAN066 Supervisory Training—AIB

3 class hrs/wk, 3 cr.
Theoretical and practical skills for supervisors. Covers management roles and responsibilities, management teamwork, task analysis, job performance techniques, employee orientation, and delegation of responsibilities. **Prerequisite:** Current or previous bank employee experience preferable. **Offered as needed.**

BAN067 Teller Training and Development

3 class hrs/wk for 5 weeks, 1 cr.
Helps bank tellers develop and improve abilities and knowledge essential in performance of their duties. Emphasizes dealing with customers and following normal banking procedures. **F**

BAN069 Contemporary Issues in Banking

3 class hrs/wk, 3 cr.
Investigates contemporary problems and issues that confront the banking industry. Focuses on the latest competitive, regulatory, technological, and market-related developments that continue to alter the nature of commercial banking. **Prerequisite:** BA269. **Offered as needed.**

BAN070 Economics for Bankers

3 class hrs/wk, 3 cr.
An introduction to the principles of economics as they pertain to banking. Special emphasis in macroeconomics. **Offered as needed.**

BAN072 Consumer Compliance

3 class hrs/wk for 5 weeks, 1 cr.
Deals with consumer protection regulations regarding credit and civil rights. Recommends policies and procedures which avoid common violations. **Prerequisite:** BA269 or on-the-job banking experience. **W**

BAN072A Consumer Variable Rate Lending

3 class hrs/wk for 5 weeks, 1 cr.
The background, functions, and marketing of consumer variable rate loans. **Prerequisite:** BA269. **W, Offered as needed.**

BAN074 Consumer Bankruptcy

3 class hrs/wk for 5 weeks, 1 cr.
The relationship of the Bankruptcy Reform Act to consumer bankruptcy. Includes strategies for avoiding bankruptcy, a bank's responsibility during bankruptcy proceedings, internal control systems, and strategies to decrease bankruptcy losses. **Prerequisite:** BA269 and current affiliation with a commercial banking institution involved in consumer lending and collection activities or enrollment in Chemeke's Banking and Finance program. **Offered as needed.**

BAN075 Problem Loans

3 class hrs/wk for 5 weeks, 1 cr.
Problem loan prevention using case studies. Students examine common mistakes which cause problem loans and how to minimize losses and deal effectively with problem loans. **Offered as needed.**

BAN077 Bank Management Fundamentals

3 class hrs/wk, 3 cr.
Introduces a variety of modern management theories and approaches. Studies good management skills including basic functions of planning, staffing, leading, and controlling. **Offered as needed.**

BAN078 Bank Customer Service

3 class hrs/wk for 5 weeks, 1 cr.
How to develop better communications skills in working with bank customers. Covers effective ways of establishing contact, determining needs, defining and resolving problems, and closing transactions. **Prerequisite:** BA269 or on-the-job banking experience. **W**

BAN080 Deposit Operations

3 class hrs/wk, 3 cr.
Examines deposit operations of banks in the context of the U.S. payments system. Explores how banks operate their deposit-taking activities and manage deposited funds. Emphasis is on system rather than product. **Prerequisite:** BA269. **Offered as needed.**

BAN085 Fundamentals of Analyzing Financial Statements

3 class hrs/wk, 1 cr.
Promotes basic understanding of financial statements and their use in lending. Uses financial statement analysis techniques employed in making commercial loan decisions. **Prerequisite:** BA212, BA269 or on-the-job banking experience. **F**

BAN093 International Banking

3 class hrs/wk, 3 cr.
An overview of fundamentals of international banking. Discusses how money is transferred among countries, how trade is financed, what international financing agencies do, what instruments are used in international financial markets, and how the Eurodollar market operates. Emphasizes the fast-moving field of international banking with discussions on such topics as country risk assessment, Edge Act corporations, and foreign exchange activities. **Prerequisite:** BA269.

BAN280 Cooperative Work Experience
see AUM280.

BI**Biology****BI060 Basic Science Principles**

2 class and 2 lab hrs/wk, 3 cr.

Designed for dental assisting students. Presents introductory concepts of chemistry, physics, cell biology, and microbiology. Includes practical application of problem solving, scientific observation and measurement, use of equipment, and basic laboratory techniques. Class fee \$8. **F**

BI071 Body Structure and Function I

2 class and 2 lab hrs/wk, 3 cr.

Normal structure and function of the human body, chemical principles, characteristics of the cell as a basis for life, organization of tissues, organs and systems; structure and function of body systems. Class fee \$8. **F**

BI072 Body Structure and Function II

2 class and 2 lab hrs/wk, 3 cr.

A continuation of BI071. **Prerequisite:** BI071. Class fee \$8. **W**

BI101 General Biology

3 class and 3 lab hrs/wk, 4 cr.

Investigates the diversity of organisms, basic principles of ecology, and effects and consequences of ecosystem alteration by human beings. **Prerequisite:** None. This sequence need not be taken in order, although some carryover from one term to the next does occur. Class fee \$12. **F, W, Sp**

BI102 General Biology

3 class and 3 lab hrs/wk, 4 cr.

Covers basic principles of genetics, natural selection, evolution, origin of species, population genetics, and animal behavior. Class fee \$12. **F, W, Sp**

BI103 General Biology

3 class and 3 lab hrs/wk, 4 cr.

Covers principles of animal physiology. Emphasizes human reproductive, nervous, circulatory, immune, and respiratory systems. Also covers plant structure and function. Class fee \$12. **F, W, Sp, offered Summer as needed.**

BI103A Introduction to Plant Propagation

3 class and 3 lab hrs/wk, 4 cr.

Deals with the propagation of ornamental and fruit-bearing crops of the commercial nursery and agriculture industries. Includes seed, cutting, and tissue culture propagation methods. Lab fee, \$12. **W**

BI200 Principles of Ecology—Field Biology

3 class and 3 lab hrs/wk, 4 cr.

Emphasizes the broad concepts of ecology using Western Oregon coniferous forests as a model. Concepts are first introduced in the classroom and then examined in detail using student-collected field data. **Prerequisite:** BI101, 102 or equivalent, or consent of instructor. Class fee \$12. **Su**

BI231 Human Anatomy and Physiology

3 class and 3 lab hrs/wk, 4 cr.

In-depth examination of the structure and function of the human body. First of a three-term sequence. Includes a short review of chemical principles and cell characteristics as a basis for structure and function, as well as a study of tissues and the integumentary, skeletal, and nervous systems. **Prerequisite:** CH101 or equivalent, or consent of instructor. Class fee \$12. **F, W, Sp, offered summer as needed.**

BI232 Human Anatomy and Physiology

3 class and 3 lab hrs/wk, 4 cr.

Second of a three-term sequence. Studies muscle, blood, circulatory, immune, and respiratory systems. **Prerequisite:** BI231 or consent of instructor. Class fee \$12. **F, W, Sp, offered summer as needed.**

BI233 Human Anatomy and Physiology

3 class and 3 lab hrs/wk, 4 cr.

Third of a three-term sequence. Study of endocrine, digestive, urinary, and reproductive systems. Includes an examination of body fluids, electrolytes, Ph balance and medical genetics. Introduces human genetics. **Prerequisite:** BI232 or consent of instructor. Class fee \$12. **F, W, Sp, offered summer as needed.**

BI234 Microbiology

3 class and 3 lab hrs/wk, 4 cr.

A survey of bacteria and other microorganisms emphasizing their impact upon human health. Includes discussion of infection, immunity, common pathogens, and methods and mechanisms of control. **Prerequisite:** CH101 or equivalent. Class fee \$12. **F, W, Sp, offered summer as needed.**

BLD**Building Inspection****BLD050 Introduction to Building Inspection**

3 class hrs/wk, 3 cr.

Provides background information and legal basis of building codes. Explores and compares performance versus specification standards. Discusses Uniform Building Code, Uniform Plumbing Code, Uniform Housing Code, and National Electrical Code. **F**

BLD051 Building Codes I

3 class hrs/wk, 3 cr.

Explores nonstructural standards of the Uniform Building Code. Includes occupancy classifications, building area, height and location limitations; types of construction; exit and fire resistive standards. **F**

BLD052 Building Codes II

3 class hrs/wk, 3 cr.

Continues BLD051. Concerns building construction hazards such as vertical shafts, treatment of exterior and interior surfaces, exit requirements, fire protection systems, public property, and weather protection. **Prerequisite:** BLD051. **W**

BLD053 Building Codes III

3 class hrs/wk, 3 cr.

Continuation of BLD052. Covers pedestrian protection during construction, permanent occupancy of public property, prefabricated construction, fire extinguishing systems, fire detection systems, energy conservation, and architectural barriers. **Prerequisites:** BLD051 and BLD052. **Sp**

BLD054 Dwelling Construction under the UBC

3 class hrs/wk, 3 cr.

Relates the Uniform Building Code to residential buildings and miscellaneous structures. Includes administration, definitions, foundations, occupancy standards, wood framing systems, roof coverings, and wall coverings. **Sp**

BLD055 Building Department Administration

3 class hrs/wk, 3 cr.

A study of building department administration including the laws and principles that affecting personnel and code compliance. **Sp**

BLD059 Materials of Construction

2 class hrs/wk, 2 cr.

Materials and processes regulated by the building code. Testing standards as a quality control of traditional and nontraditional building materials. Class fee \$10. **W**

BLD060 Fire Protection for Buildings

3 class hrs/wk, 3 cr.

Installation, functions, and requirements of sprinkler systems. **W**

BLD061 Structural Inspection—Wood

3 class hrs/wk, 3 cr.

Introduces basic methods of wood framing. Deals with allowable stresses, loads, and fundamental design of wood products and construction systems. Class fee \$10. **W**

BLD062 Structural Inspection—Masonry

3 class hrs/wk, 3 cr.

Specific code requirements for all types of masonry construction, both structural and non-structural. Includes an introduction to fireplace construction. Class fee \$10. **Sp**

BLD063 Structural Inspection—Concrete

3 class hrs/wk, 3 cr.

Concrete as a construction material, as identified by the building code. Covers physical properties including mix design, handling, storage, delivery, proper placement, and fire resistive qualities. Class fee \$10. **F**

BLD064 Structural Inspection—Steel

3 class hrs/wk, 3 cr.

Steel as a construction material and its identity as a construction type in light, medium, and heavy steel frame construction; methods of connections; fire resistive qualities; and manufacturing and fabrication processes. **Prerequisite:** BLD051 or consent of program chair. Class fee \$10. **W**

BLD066 Structural Plan Review

2 class and 3 lab hrs/wk, 3 cr.

The fundamentals of structural plan review including the analysis and design of beams, columns, and connections. **Prerequisite:** CVL054. **W**

BLD067 Nonstructural Plan Review

2 class and 3 lab hrs/wk, 3 cr.

Introduces techniques of examining nonstructural plans by becoming familiar with plan and construction documents and specifications. Covers applications of code requirements. **Prerequisite:** BLD051 and BLD052. **Sp**

BLD071 Plumbing Codes I

3 class hrs/wk, 3 cr.

Investigates certain standards of the Uniform Plumbing Code. Covers principles of plumbing design, materials, and installation standards related to dwelling construction. **F**

BLD072 Plumbing Codes II

3 class hrs/wk, 3 cr.

Plumbing code requirements relating to water and gas distribution systems, storm and sanitary sewer systems, water heater installations, mobile home connections, and swimming pool standards for one- and two-family dwellings. **Prerequisite:** BLD071 or consent of instructor. **W**

BLD081 Mechanical Codes I

3 class hrs/wk, 3 cr.

Covers basic thermodynamics. Helps students gain a working knowledge of the Uniform Mechanical Code relative to size, location, and proper installation of heating and ventilation systems. **W**

BLD082 Mechanical Codes II

3 class hrs/wk, 3 cr.

Provides a working knowledge of Uniform Mechanical Code commercial kitchen equipment, fuel gas piping, and related testing standards.

Prerequisite: BLD081. **Sp****BLD091 One and Two Family Electrical Code**

3 class hrs/wk, 3 cr.

Helps students understand wiring design, methods, and equipment for general use. **W****BLD092 CABO One and Two Family Dwelling Code**

3 class hrs/wk, 3 cr.

A study of the CABO One and Two Family Dwelling Code as it relates to residential construction and applicable codes. Topics include administrative, structural, mechanical, plumbing, and electrical requirements. **Sp****BLD093A-F Building Inspection Lab**

4 lab hrs/wk, 1 cr. each

Examines working conditions typical to building inspection. Students will have an opportunity to apply knowledge gained in the classroom to actual field conditions. Class fee \$10. **F, W, Sp****BLD280 Cooperative Work Experience**
see AUM280.**BOT****Botany****BOT201 General Botany**

3 class and 3 lab hrs/wk, 4 cr.

Introductory study of plant life emphasizing principles, theories, and applications of plant biology. Includes the study of plant ecology, generalized plant cells, photosynthesis, and respiration. **Prerequisite:** High school biology and chemistry are recommended. Class fee \$12. **F****BOT202 General Botany**

3 class and 3 lab hrs/wk, 4 cr.

Introductory study of plant life emphasizing principles, theories, and applications of plant biology. Includes the study of genetics, evolution of plant diversity, and the biology of non-vascular plants. Class fee \$12. **W****BOT203 General Botany**

3 class and 3 lab hrs/wk, 4 cr.

Introductory study of plant life emphasizing principles, theories, and applications of plant biology. Includes the growth, development, and structure of vascular plants including the effects of light, hormones, water, and nutrients. Laboratory emphasizes the classification of flowering plants. **Prerequisite:** High school biology and chemistry are recommended. Class fee \$12. **Sp****CH****Chemistry****CH101 Chemistry for Allied Health**

3 class and 2 lab hrs/wk, 4 cr.

First course in a three-term sequence for nursing and allied health students. Applies chemical principles to the life sciences. Includes matter, atomic structure, chemical bonds, reactions, molecules, and the solutions. **Prerequisite:** MTH065 or MTH070. Class fee \$8. **F, W, Sp, Su****CH102 Chemistry for Allied Health**

3 class and 2 lab hrs/wk, 4 cr.

Continuation of CH101. Introduces and investigates organic reactions. Topics include energy, radiation, acids, gases, and organic com-

pounds. **Prerequisite:** CH101. Class fee \$8. **W****CH103 Chemistry for Allied Health**

3 class and 2 lab hrs/wk, 4 cr.

Continuation of CH102. Covers the chemistry and metabolism of carbohydrates, lipids, proteins, and nucleic acids. **Prerequisite:** CH101, CH102 or equivalent. Class fee \$8. **Sp****CH104 General Chemistry**

4 class and 3 lab hrs/wk, 5 cr.

First of a three-term sequence. Introduction to the fundamentals of chemistry. A transfer course for students majoring in fields other than chemistry. Examines the interrelationships of chemistry to all disciplines of science. Topics include scientific method; atomic theory, stoichiometry, energy, periodicity, atomic structure, and bonding. **Prerequisite:** MTH070 or equivalent. Class fee \$12. **F, W****CH105 General Chemistry**

4 class and 3 lab hrs/wk, 5 cr.

Second course in a three-term sequence. Provides basic understanding of molecular compound formations, changes of state, solutions, and reaction rates. Covers quantitative composition, stoichiometry, the gaseous state, acids, bases, and salts. Introduces chemical equilibrium and reinforces the interrelations of chemistry to all science disciplines. **Prerequisite:** CH104. Class fee \$12. **W, Sp****CH106 General Chemistry**

4 class and 3 lab hrs/wk, 5 cr.

Continues with acid/base theory, oxidation-reduction reactions, nuclear chemistry, chemical equilibrium, and organic chemistry including aliphatics, aromatics and function groups and organic reactions. **Prerequisite:** CH105. Class fee \$12. **F, Sp****CH115 Consumer Chemistry**

3 class and 2 lab hrs/wk, 4 cr.

First of a three-term sequence. Introduces non-scientists to chemistry. Explores the meaning of science and chemistry and how they are connected to other disciplines and to the students' lives. Covers science vs. technology, scientific method, atomic structure and theory, nuclear chemistry, chemical bonding, nomenclature, chemical reactions, acids and bases, oxidation and reduction, and chemistry of the earth. Class fee \$8. **F****CH116 Consumer Chemistry**

3 class and 2 lab hrs/wk, 4 cr.

Second course of a three-term sequence for the non-science major. Covers organic chemistry, polymers, energy and the future, air and its pollution, water and its pollution, agricultural chemistry, and food production in the third world. **Prerequisite:** CH115. Class fee \$8. **W****CH117 Consumer Chemistry**

3 class and 2 lab hrs/wk, 4 cr.

Third course of a three-term sequence for the non-science student. Covers carbohydrates, fats, proteins, vitamins, brewing, baking, food additives, household chemicals, cosmetics, chemotherapy, drugs, sports medicine, and chemical toxicology. **Prerequisite:** CH116. Class fee \$8. **Sp****CH201 Chemistry for Engineers**

3 class and 3 lab hrs/wk, 4 cr.

First course of a three-term sequence. Covers definitions, measurements, atomic nucleus, elements, compounds, binary nomenclature, gas laws, and chemical thermodynamics: heat, work, and energy. **Prerequisite:** MTH095. Class fee \$12. **F****CH202 Chemistry for Engineers**

3 class and 3 lab hrs/wk, 4 cr.

Second course of a three-term sequence. Covers liquids, phase changes, solutions, colloids, water pollution, distillation, chemical equilibrium, spontaneous changes, free energy, heat engines, acids and bases, atomic structure, quantum theory, stimulated emission and laser light. **Prerequisite:** CH201. Class fee \$12. **W****CH203 Chemistry for Engineers**

3 class hrs and 3 lab hrs/wk, 4 cr.

Third course of a three-term sequence. Covers chemical bonds, polar molecules, the periodic table, conductivity, bonding theories, molecular shapes, crystals, nonconductors, semiconductors, liquid crystals, metals, alloys, ceramic materials, polymers, electrochemistry, oxidation and reduction, electrochemical cells, galvanic cells, electrolysis and electrolytic processes. **Prerequisite:** CH202. Class fee \$12. **Sp****CH204 General Chemistry**

4 class and 3 lab hrs/wk, 5 cr.

First course of a three-term sequence for students majoring in science and related professional field. Includes matter and measurement; atoms, molecules and ions; chemical formulas and equations; atomic structure; periodic table; the gas laws; metals; and thermochemistry. **Prerequisite:** MTH095. Class fee \$12. **F****CH205 General Chemistry**

4 class and 3 lab hrs/wk, 5 cr.

Continuation of CH204. Emphasizes crystal theory, changes of state, properties of solutions, thermodynamics, kinetics, chemical equilibrium, and acid-base theory. **Prerequisite:** CH204. Class fee \$12. **W****CH206 General Chemistry**

4 class and 3 lab hrs/wk, 5 cr.

Continuation of CH205. Includes in-depth study of acids and bases, equilibria, ionic reactions, complexions, oxidation and reduction, electrochemistry, quantitative analysis, transition-metal chemistry, organic chemistry, and nuclear chemistry. **Prerequisite:** CH205 or CH106. Class fee \$12. **Sp****CH226 Organic Chemistry**

3 class and 4 lab hrs/wk, 5 cr.

Principles of organic chemistry for students majoring in the health, biological and environmental sciences. Emphasizes structure, nomenclature, physical properties, and chemical reactivities of organic molecules. Stresses bonding, functional groups, alkanes and cycloalkanes, conformational analysis, stereochemistry, and alkenes and alkynes. Microscale laboratory will reinforce concepts. **Prerequisite:** CH106 or CH206. Class fee \$12. **F****CH227 Organic Chemistry**

3 class and 4 lab hrs/wk, 5 cr.

Stresses alcohols, ethers, free-radical reactions, aromatic compounds, spectroscopy, oxidation-reduction, aldehyde, and ketones. **Prerequisite:** CH226. Class fee \$12. **W****CH228 Organic Chemistry**

3 class and 4 lab hrs/wk, 5 cr.

Stress carboxylic acids and their derivatives, amines, condensation reactions, carbohydrates, lipids, amino acids, proteins, and nucleic acids. **Prerequisite:** CH227 or consent of instructor. Class fee \$12. **Sp**

CJ**Criminal Justice****CJ100 Survey of the Criminal Justice System**

3 class hrs/wk, 3 cr.

A review of court systems and procedures from criminal violation to final disposition. Covers six primary functional areas of administration of justice and reviews principles of federal, state, criminal, and civil laws as they apply to and affect law enforcement. **Offered as needed.**

CJ101 Criminology

3 class hrs/wk, 3 cr.

How factual materials pertaining to the causes and control of crime are related to biological, sociological, and psychological theories of punishment and treatment. Identifies imprisonment, probation, parole, etc., as society's reactions to crime. Variations of these reactions are studied. **Offered as needed.**

CJ110 Introduction to Law Enforcement

3 class hrs/wk, 3 cr.

The history and philosophy of law enforcement and the administration of justice. Preview of a professional career in law enforcement. How agencies function in relation to public relations and professional and political ethics. **Offered as needed.**

CJ131 Introduction to Penology

3 class hrs/wk, 3 cr.

The current role of imprisonment as a correctional tool and a survey of some of the more significant activities involved in the treatment of prisoners. **Offered as needed.**

CJ132 Introduction to Parole and Probation

3 class hrs/wk, 3 cr.

Basic principles and techniques involved in correctional programs of probation and parole and a critical analysis of their individual roles in the administration of criminal justice. **Offered as needed.**

CJ198A-E Independent Study in Criminal Justice

Variable credit

Research project to be selected by the student and a criminal justice instructor/sponsor. The project proposal shall be presented in writing to the criminal justice staff for a recommendation. Upon completion the project shall be presented to the criminal justice staff for evaluation. **Prerequisite:** 45 credits. 3.0 GPA. **Offered as needed.**

CJ200 Police and Public Policy

3 class hrs/wk, 3 cr.

Discusses the role of criminal justice practitioners in maintaining community relations. Examines the interrelationships and role expectations of agencies and public, police and community tension, minority group, social forces, and police image. **Offered as needed.**

CJ206 Crime and Delinquency

3 class hrs/wk, 3 cr.

Study of crime and delinquency data using age, sex, race, poverty, educational status, urbanization, and other variables. Makes an in-depth inquiry into victimological studies together with collective and political criminality. Discusses class culture and its relationship with gang delinquency. **Offered as needed.**

CJ207 Seminar in Criminal Justice

3 class hrs/wk, 3 cr.

Analysis of current and temporary issues in criminal justice. Creative thinking and problem

olving. **Prerequisite:** Consent of instructor. **Offered as needed.**

CJ210 Introduction to Criminal Investigation

3 class hrs/wk, 3 cr.

Covers the fundamentals of crime scene investigation which aid in the detection and apprehension of law violators. **Offered as needed.**

CJ215 Criminal Justice Administration

3 class hrs/wk, 3 cr.

A survey of the administrative practices of criminal justice agencies with special emphasis on law enforcement. Covers administration in the public services area including organizational theory and management, personnel management, and policy and procedures formulation. **Offered as needed.**

CJ220 Introduction to Substantive Law and Oregon Criminal Code

3 class hrs/wk, 3 cr.

Origin and structure of common-law crimes and procedures and statutory crimes. Definitions and distinctions between criminal and civil law, criminal court procedures, criminal law case reading, federal and state law, and Oregon criminal code sections. **Offered as needed.**

CJ226 Introduction to Constitutional Law

3 class hrs/wk, 3 cr.

An intensive study and analysis of the U. S. Constitution, and court decisions which determine the admissibility of evidence in criminal cases and which affect the role of law enforcement in police procedures. Criminal procedures processes. **Offered as needed.**

CJ230 Introduction to Juvenile Corrections

3 class hrs/wk, 3 cr.

Historical and contemporary aspects of juvenile offenders. Examines juvenile court philosophies and current treatment programs. **Offered as needed.**

CJ231 Introduction to Corrections Process

3 class hrs/wk, 3 cr.

Analyzes historical and contemporary backgrounds of adult offenders emphasizing current prevention, control, and rehabilitative programs. **Offered as needed.**

CJ232 Introduction to Corrections Casework

3 class hrs/wk, 3 cr.

Approaches to behavior modification through interviewing and counseling. Techniques in counseling and interviewing for entry-level practitioners in corrections. Traces development of positive relationships between the client and corrections personnel. **Offered as needed.**

CJ280 Cooperative Work Experience

see AUM280.

COM

Communication Skills, see also Human Development, Reading, Skills Development, Writing

COM051 Communication Skills I

3 class hrs/wk, 3 cr.

How to improve reading, listening and writing skills. Emphasizes research and writing. Covers taking notes, gathering information, writing reports, and using mechanics and grammar. Class fee \$2. **F, W, Sp, Su**

COM052 Communication Skills II

3 class hrs/wk, 3 cr.

Practical applications of effective habits of communicating by speaking and listening. Includes group discussions, speeches, and job search skills. **Prerequisite:** COM051 or equivalent. **F, W, Sp, Su**

COM053 Technical Report Writing

3 class hrs/wk, 3 cr.

Promotes clear, coherent, concise, and accurate writing. **Prerequisite:** COM051, OA085 or consent of instructor. Class fee \$2. **F, W, Sp**

CPL**Credit for Prior Learning****CPL120 Prior Learning Resume**

3 class hrs/wk, 3 cr.

How to obtain credit hours for prior learning. Focuses on identifying career and educational goals, defining college level learning, identifying, documenting and describing prior learning, writing competency statements, and preparing a resume for credit evaluation. Class fee \$5. **Offered as needed.**

CIS**Computer Information Science****CIS120 Computer Information Science I**

3 class and 3 lab hrs/wk, 4 cr.

First in a three-course sequence. Introduction to terminology and overview of the historical development of computer and information science. Focuses on the basic concepts of computer hardware and software systems, the science of information representation, and the fundamental elements of program design and computer language. Concepts are reinforced in a laboratory environment. Class fee \$12. **F**

CIS121 Computer Information Science II

3 class and 3 lab hrs/wk, 4 cr.

Second in a three-course sequence. Introduction to the fundamental logic in designing typical algorithms for processing information typified by management information systems. Concepts are reinforced in a laboratory environment. **Prerequisite:** CIS120. Class fee \$12. **W**

CIS122 Computer Information Science III

3 class and 3 lab hrs/wk, 4 cr.

Third in a three-course sequence. Introduction to integrated information application systems; analysis and comparison of flat file information systems in relation to those of database management systems; study of basic spreadsheet concepts, and considerations necessary for the interchange of information among spreadsheets, word processing, database files, and flat file systems; discussion of network fundamentals and communication packages. Concepts are reinforced in a laboratory environment. **Prerequisite:** CIS121. Class fee \$12. **Sp**

CS**Computer Science****CS050 Computer Center Operations**

3 class and 6 lab hrs/wk, 5 cr.

Study of computer center operations, while providing computer services. Comprehensive instruction and work experience as data center supervisors, console operators, librarians, peripheral equipment operators, schedulers-dispatchers, and control clerks. Covers technical duties, skills, and responsibilities for each job as they relate to the operation and maintenance.

nance of a data center use of an IBM 4381 computer. **W, Sp**

CS060 Techniques of User Training

2 class hrs/wk, 2 cr.

Introduces teaching methods, materials and instructional design as related to training computer users. **Prerequisite:** CS131 or consent of instructor. **Sp**

CS061A Computer Lab Assistant I

3 lab hrs/wk, 1 cr.

Experience in working with microcomputer equipment and assisting instructional assistants and lab tutors. **Prerequisite:** CS104, CS140, CS145. **W**

CS061B Computer Lab Assistant II

3 lab hrs/wk, 1 cr.

Experience in working with students in a microcomputer lab. **Prerequisite:** CS060, CS061 or concurrent registration. **Sp**

CS068 Microcomputer Graphics

3 class and 3 lab hrs/wk, 4 cr.

How to code a microcomputer to produce lines, graphics, and charts. Includes stationary and changing shapes. **Prerequisite:** CS133B or equivalent. Class fee \$12. **F, Sp**

CS075 OS Concepts and Facilities

3 class hrs/wk, 3 cr.

Concepts and facilities of the IBM's OS/VS1 operating system. Introduces IBM OS job control language. Students run exercises on the college's IBM system. **Prerequisite:** CS133C and CS171. Class fee \$12. **Sp**

CS086 EASYTRIEVE PLUS

3 class hrs/wk, 3 cr.

How to code simple business-oriented programs. Emphasizes language structure and rules, file management, and retrieval. **Prerequisite:** CS131 or equivalent. Class fee \$12. **Sp**

CS090 Program Logic and Testing

3 class and 3 lab hrs/wk, 4 cr.

Program design and testing techniques which may improve a programmer's debugging skills. **Prerequisite:** CS233C. Class fee \$12. **F, W**

CS100 Beginning Microcomputer Use

1 class hr/wk, 1 cr.

A brief survey of hardware and software. How to plan proper utilization of equipment and use purchased programs. **F, W, Sp, Su**

CS103 Introduction to Microcomputer Applications

3 class hrs/wk, 3 cr.

Introduces the basic microcomputer hardware/software system. Covers operating system concepts and beginning commands, word processing, spreadsheet, and database applications; and other applications as they become available. **Prerequisite:** Keyboard familiarity. Class fee \$12. **F, W, Sp, Su**

CS104 LOTUS I—Worksheets

3 class and 3 lab hr/wk, 4 cr.

Uses of electronic spread sheets. Spreadsheet packages may vary from term to term. **Prerequisite:** CS103. Class fee \$12. **F, W, Sp**

CS104Q Worksheets—Quattro

3 class and 3 lab hrs/wk, 4 cr.

Includes concepts associated with data type (labels and values), arithmetic formulas, and internal functions. Covers financial and statistical applications, as well as the use of commands to perform data distribution and to manipulate worksheet appearance. **Prerequisite:** CS103. Class fee \$12. **F, W, Sp, Su**

CS106 dBase III

3 class hrs/wk, 3 cr.

Uses of microcomputer relational data base (dBase III) in government and business offices. **Prerequisite:** CS103. Class fee \$12. **Offered as needed.**

CS107 LOTUS II—Macros

3 class hrs/wk, 3 cr.

Uses of LOTUS 1-2-3. Emphasizes writing and use of LOTUS macros. **Prerequisite:** CS103. Class fee \$12. **Offered as needed.**

CS113 Understanding Computers

3 class hrs/wk, 3 cr.

An up-to-date survey of electronic data processing, computer hardware and software systems, and developments that provides a basis for further advancements in information processing. **F, W, Sp**

CS121 Computer Environment

3 class hrs/wk, 3 cr.

What a computer system is and how computers affect our lives. Includes an introduction to word processing, database, spreadsheets, and computer languages. **F, W, Sp, Su**

CS131 Introduction to Data Processing

3 class hrs/wk, 3 cr.

Concepts, elements, and structure of business data processing systems. Includes classifying, calculating and reporting functions, programming, BASIC, and computer fundamentals. Class fee \$12. **F, W, Sp, Su**

CS133A Assembler I

4 class hrs/wk, 4 cr.

Introduces IBM System Assembler language, using standard and decimal instruction sets. **Prerequisite:** CS131 or equivalent. Class fee \$12. **W**

CS133B Introduction to Programming BASIC

4 class and 1 lab hrs/wk, 4 cr.

Covers introductory level computer programming. Emphasizes program design using structured problem solving and programming techniques. How to analyze problems and solve them by designing, coding, debugging, and running programs in BASIC language. Purpose of the course is to explain the structure and logic of programs and what they are, and to help students understand the usefulness and limitations of computers, rather than to train professional programmers. Class fee \$12. **F, W, Sp, Su**

CS133C COBOL I

4 class hrs/wk, 4 cr.

An introduction to ANS COBOL programming. Coding, debugging, and documenting simple business-oriented programs. Emphasizes language structure and problem solving by applying top-down structured programming techniques. **Prerequisite:** CIS120 or equivalent. Class fee \$12. **W**

CS133F FORTRAN IV

4 class hrs/wk, 4 cr.

An introduction to language structure, manipulation of arrays, input and output formats, coding techniques, function, subroutines, disk files and memory dump debugging. Program assignments involve simple management and science problems. **Prerequisite:** CS131 or CS161 or equivalent. Class fee \$12. **Offered as needed.**

CS133R RPG for Operators

4 class hrs/wk, 4 cr.

Basic features of RPG II language. Students write several RPG programs that print various

reports and build and update a sequential disk file. **Prerequisite:** CS131. Class fee \$12. **Offered as needed.**

CS133U C Language

3 class and 3 lab hrs/wk, 4 cr.

An introduction to C programming language. Covers the structure of the language, the manipulation of data and arrays, and how to handle input and output functions. **Prerequisite:** CS103 or CS131 and CS171 or CS271. Class fee \$12. **W**

CS140 Microcomputer Operating Systems

3 class hrs/wk, 3 cr.

Studies operating systems currently used on large and small minicomputers. How to use these operating systems to access files and communicate with other microcomputers. **Prerequisite:** CS103, CS131. Class fee \$12. **Offered as needed.**

CS145 Microcomputer Hardware/Software Installation

2 class hrs/wk, 2 cr.

Initializing and maintaining the hardware in a network and stand-alone microcomputer environment, including printers, plotters, and hard disk drives. Also a study of installation and maintenance of microcomputer software such as LOTUS, dBase, and PageMaker. **Prerequisite:** CS140. **Sp**

CS160 Advanced MS/DOS and Utilities

3 class hrs/wk, 3 cr.

Study of advanced MS/DOS capabilities and commands. Incorporates the use of third-party utility programs, hard disk management concepts, MS/DOS in a network environment, and MS/DOS-OS-AIX migration considerations. **Prerequisite:** CS140 or consent of instructor. Class fee \$6. **F**

CS161 Computer Science I—PASCAL

4 class hrs/wk, 4 cr.

Provides a foundation in PASCAL of programming concepts for computer science majors and other students. Emphasizes the program structure of sequence, selection, iteration, and modularity. **Prerequisite:** Grade of C or higher in MTH095 or equivalent. **F**

CS162 Computer Science II—PASCAL

4 class hrs/wk, 4 cr.

Continuation of CS161 emphasizing the appropriate use of arrays, records, files, and linear linked structures. Applications include stacks, queues, and lists. **Prerequisite:** Grade of C or higher in CS161 or equivalent. **W**

CS171 Principles of Computer Organization

3 class and 3 lab hrs/wk, 4 cr.

Introduces the organization of a digital computer. Covers number systems, encoding of data, Boolean and digital logic fundamentals, processor components, instruction execution, Assembler language programming, and the Assembler process. **Prerequisite:** CS162 or equivalent. **W**

CS233A Assembler II

3 class and 6 lab hrs/wk, 5 cr.

A programming option for students interested in becoming systems programmers. Subprogram modules and macros are written, linked and tested. Class fee \$12. **Prerequisite:** CS133A. **Offered as needed.**

CS233B BASIC for Programmers

3 class and 3 lab hrs/wk, 4 cr.

Features and instructions of BASIC language. How to write computer programs using BASIC

that print reports, and build and maintain files. Students develop reports and file contents. **Prerequisite:** CS244 (or concurrently) and at least one CS133 course. Class fee \$12. **Sp**

CS233C COBOL II

4 class hrs/wk, 4 cr.

Continuation of CS133C. Business-oriented programs are coded, debugged, and documented using top-down structured programming techniques. Emphasizes coding techniques to make program coding, debugging, and documentation, as well as program maintenance, easier. **Prerequisite:** CS133C. Class fee \$12. **Sp**

CS233I Prolog

3 class and 3 lab hrs/wk, 4 cr.

How to use a computer program to search files and synthesize concepts and relationships from the file information. Covers storing facts in files and extracting new facts from given facts. Class fee \$12. **Sp**

CS233M Modula-2

3 class and 3 lab hrs/wk, 4 cr.

An introduction to computer programming using Modula-2 language. Includes programming techniques, basic concepts, and principles. Class fee \$12. **Sp**

CS233R RPG for Programmers

3 class and 3 lab hrs/wk, 4 cr.

RPG II language. How to write computer programs using RPG II that print reports and build and maintain files. **Prerequisite:** CS131 and at least one term of some other programming language course. Class fee \$12. **Sp**

CS233U Advanced C

3 class and 3 lab hrs/wk, 4 cr.

A continuation of CS133U. Studies features and instructions of the C language. Emphasizes business-oriented programs that produce printed reports, maintain files, and modify an operating system. Class fee \$12. **Prerequisite:** CS133U. **Sp**

CS234C COBOL III

4 class hrs/wk, 4 cr.

Advanced course in ANS COBOL. Complete business application packages are coded and documented. Emphasis on efficiency coding, file backup and restore procedures, systems planning, modular programming, VSAM files, systems documentation, data management techniques, independent research, and problem solving. **Prerequisite:** CS233C and CS274. Class fee \$12. **Sp**

CS234L On-Line Programming Techniques

4 class hrs/wk, 4 cr.

Study of CICS on-line application programming using the COBOL language. **Prerequisite:** CS233C or consent of instructor. Class fee \$12. **F**

CS236 Advanced Languages for Microcomputers

2 class and 3 lab hrs/wk, 3 cr.

Covers structured programming and the effects different high-level programming languages have on microcomputer operating systems. **Prerequisite:** CS131 and one of the following: CS133B, CS233B, or a course in any other programming language. Class fee \$12. **Sp**

CS237 Software Design

3 class and 3 lab hrs/wk, 4 cr.

Coding and documentation of microcomputer programs and special considerations and requirements of interactive programs. **Prerequisite:**

CS233B and CS271. Class fee \$12. **Offered as needed.**

CS238 Advanced dBASE

3 class and 3 lab hrs/wk, 4 cr.

Development of an application system which includes a menu program, update program, and inquiry and reporting programs. **Prerequisite:** CS106. Class fee \$12. **Offered as needed.**

CS244 Systems Analysis I

3 class hrs/wk, 3 cr.

Basic administrative procedures. Principles of organizing, planning, and administering procedure programs. Methods of carrying out individual systems and procedure studies. **Prerequisite:** CS131 or equivalent. **Sp**

CS252B Advanced Programming—BASIC

3 class and 3 lab hrs/wk, 4 cr.

An advanced course in Microsoft BASIC. Complete business application packages are coded and documented. Includes efficiency coding, file backup and restore procedures, system planning, modular programming, indexed files, systems documentation, data management techniques, independent research, and problem solving. **Prerequisite:** CS233B. Class fee \$12. **W**

CS260 Computer Science III: Data Structures

4 class hrs/wk, 4 cr.

Third term of computer science concepts. Emphasizes the implementation and analysis of algorithms for searching and sorting, using linear and recursive data structures. **Prerequisite:** Grade of C or higher in CS162 or equivalent. **Sp**

CS270 Information Systems Administration

4 class hrs/wk, 4 cr.

Studies file and control structures involved in data retrieval and updating, backup procedures, and security considerations. Examines requirements necessary for meeting an organization's objectives. **Prerequisite:** CS274 and CS276. **Sp**

CS271 Computer Organization and Assembler Language

3 class and 3 lab hrs/wk, 4 cr.

Computer peripheral devices and the necessary instruction sets. An introduction to use of loaders and macros, programming of interrupt handlers and device drivers, and interfacing to higher level languages. **Prerequisite:** CS171. Class fee \$12. **F**

CS274 Systems Analysis II

3 class hrs/wk, 3 cr.

Fundamentals of automated data systems and procedures. Techniques and principles of systems analysis, forms, design and control, systems economics, feasibility studies, and installation of electronic data processing systems. **Prerequisite:** CS244. **F**

CS275 Data Base Program Development

4 class hrs/wk, 4 cr.

Fundamentals of database management systems (DBMS). Examines physical and logical data representation between hierarchical, network, and relational databases. Explores internal and external data dictionaries and concepts. A fourth generation language, Structured Query Language (SQL), is used to demonstrate and reinforce the above concepts in a relational database environment. **Prerequisite:** CS233C, CS244. **W**

CS276 Data Base Management

3 class hrs/wk, 3 cr.

Introduction to developing application programs in a database environment with emphasis on loading, modifying, and querying the database using fourth generation languages. Discussion of storage devices, data administration, and data analysis. **Prerequisite:** CS131. Class fee \$6. **W**

CS278 Data Communications

4 class hrs/wk, 4 cr.

Fundamental concepts in data communication including definition of terms, communication of concepts, comparison of voice and data communication (analog vs. digital signals), medium access, elementary data link protocols, topologies, servers and operating system standards implemented in Local Area Networks (LAN). **Prerequisite:** CS131, CS244. **Sp**

CS280 Cooperative Work Experience

see AUM280.

CT

Clothing/Textiles

CT199 Basic Clothing for the Consumer

1 class and 2 lab hrs/wk, 2 cr.

An overview of basic clothing construction techniques, garment selection, and the purchase of ready-to-wear apparel. **Sp**

CT210 Clothing Construction

6 lab hrs/wk, 3 cr.

Applies principles and techniques of construction to individual projects. **Offered as needed.**

CT212 Clothing Construction II

6 lab hrs/wk, 3 cr.

How to create clothes from fit to finish. Includes altering and adapting patterns, creating a basic fitting garment, sewing new fabrics, tailoring, fabric care. **Offered as needed.**

CVL

Civil Technology

CVL040 Introduction

to Civil-Structural Engineering

3 class and 9 lab hrs/wk, 1 cr.

Introductory skills, knowledge, and practical experience for students with little experience in civil engineering and surveying. A 12-hour pre-entry level course. **Su**

CVL045 Engineering Orientation for the Office Professional

1 class hr/wk, 1 cr.

An introduction to the engineering profession for a secretary-receptionist-bookkeeper. Covers disciplines, principles, ethics, and practices. Discusses possible duties of an engineering secretary-receptionist-bookkeeper which may differ from more traditional job requirements. **Offered as needed.**

CVL053 Calculator Proficiency

2 class hrs/wk, 2 cr.

Operation of the HP41CV hand-held engineering calculator. Includes simple and complex mathematical operations, including trigonometry. Introduces the use of modules and printers. **Prerequisite:** An introduction to trigonometry and two years of high school algebra. **F**

CVL054 Engineering Fundamentals

3 class hrs/wk, 3 cr.

Static forces and their effect upon rigid bodies at rest. Includes stresses and strains caused by

tensile, compressive, and shearing forces. **Prerequisite:** MTH053 or equivalent. **F**

CVL059 Soil Mechanics Fundamentals

3 class hrs/wk, 3 cr.

Includes soil classifications, the problems of soil, and use of soil in construction. Soil classification systems will be studied and compared. Study of subsurface soils investigation reports and comparisons to values given in the Uniform Building Code, 1988. **Prerequisite:** MTH052 or MTH081. Class fee \$5. **F**

CVL060 Plane Surveying I

3 class and 6 lab hrs/wk, 5 cr.

A beginning study of surveying techniques. Includes fundamentals of taping and leveling, care and handling of surveying instruments, and office procedures. Field work provides practical application of the techniques. Class fee \$10. **F**

CVL061 Plane Surveying II

3 class and 6 lab hrs/wk, 5 cr.

Continuation of CVL060. Studies distance and direction measurement, employing transits, theodolites, steel tapes, traversing, and associated office computations, areas, stadia, circular curves, and brief outline of public land surveys. **Prerequisite:** MTH052 and CVL060. Class fee \$10. **W**

CVL064 Construction and Route Surveying

3 class and 6 lab hrs/wk, 5 cr.

Reviews survey practices learned prior to this term. Using survey instruments, students practice staking rights-of-way, grades, curbs, waterlines, and buildings. **Prerequisite:** CVL061 and MTH053. Class fee \$10. **Sp**

CVL066 Surveying for Drafters

2 class and 6 lab hrs/wk, 4 cr.

How to measure land with levels, compasses, and rods. Measuring distance and direction with transit, stadia, and steel tape, making calculations to balance a traverse and determine area. **Prerequisite:** MTH052. Class fee \$10. **Sp**

CVL074 Contracts, Specifications and Construction Estimating

3 class and 3 lab hrs/wk, 4 cr.

A study of construction contracts, specifications, and estimates. Instruction in determining how much material will be required to build a specific project. **W**

CVL076 Soils Testing Laboratory

3 lab hrs/wk, 1 cr.

Designed to acquaint the entry-level soils technician with the tests and test procedures used most often. **Prerequisite:** MTH052. Class fee \$10. **Sp**

CVL078 Concrete and Concrete Testing

2 class and 3 lab hrs/wk, 3 cr.

Includes concrete mix design and testing practices. Designed to enable the student to take the American Concrete Institute Concrete Field Technician Certification Exam. Class includes construction site visits and field testing of concrete in order to relate structural design to field inspection for quality control. **Prerequisite:** MTH082 and CVL082. Class fee \$10. **Sp**

CVL080 Applied Mechanics

3 class hrs/wk, 3 cr.

Static forces and their effect upon rigid bodies at rest. Includes resolution of forces, equilibrium, and resultants of force system. **Prerequisite:** MTH082. **Sp**

CVL082 Strength of Materials

4 class hrs/wk, 4 cr.

A study of the stresses and strains which affect materials subjected to tensile, compressive, and shearing forces. Covers stress and deformation, engineering materials and their properties, thin-wall pressure vessels, torsion, centroids and moment of inertia of areas, shear and moment in beams, and combined stresses and columns. **Prerequisite:** MTH082 and CVL080. **F**

CVL084 Soil Mechanics and Foundations

3 class hrs/wk, 3 cr.

Covers soil classification and acquaints students with many problems concerning soil and use of soil in construction. Includes soil classification systems, soil characteristics, and soil reports. Various types of foundations and their requirements will also be studied. **Prerequisite:** CVL082, MTH081 and CVL087 or concurrent enrollment advised. Class fee \$5. **W**

CVL087 Hydraulics

4 class hrs/wk, 4 cr.

Application of principles of fluid mechanics related to static and dynamic forces of liquids. Covers pipe and open channel flow, including siphons, weirs, flumes, and dams. **Prerequisite:** CVL080 and MTH082 or consent of instructor. **F**

CVL088 Environmental and Sanitary Engineering

3 class and 3 lab hrs/wk, 4 cr.

Study of major aspects of air, water, and land pollution; their causes; effects on the environment; methods of prevention; and treatment and cure. Includes domestic and industrial water supply storage, treatment, distribution; and waste collection, storage, treatment, and disposal. **Prerequisite:** MTH082, CVL087. **W**

CVL090 Timber Construction and Design

3 class hrs/wk, 3 cr.

Fundamentals of wood and construction. Beams, columns, and connections are analyzed and designed using parameters of the Uniform Building Code, the National Design Specifications, and the Recommended Practice for Structural Design by National Forest Products Association. **Prerequisite:** MTH082 or equivalent, and CVL082. **W**

CVL091 Steel Construction and Design

3 class hrs/wk, 3 cr.

Fundamentals of steel design and construction. Beams, columns, and connections are analyzed and designed using parameters of the Uniform Building Code and the American Institute of Steel Construction. **Prerequisite:** MTH082 or equivalent, and CVL082. **W**

CVL092 Reinforced Concrete Design and Construction

3 class hrs/wk, 3 cr.

Covers reinforced concrete design and construction practices. Structural design calculations emphasize the Ultimate Strength Design Method and will include the fundamental concepts for rectangular beams, T-beams, slabs, columns, footings, and foundations. **Prerequisite:** MTH082 or equivalent, and CVL082. Class fee \$10. **Sp**

CVL094 Timber and Steel Design and Construction

4 class hrs/wk, 4 cr.

Focuses on the fundamentals of design and construction practices of steel and wood/timber. Students analyze and design beams, columns, and connections using the parameters of the UBC, AISC, *National Design Specifica-*

tions and the Recommended Practice for Structural Design by the National Forest Products Association (NFPA). **Prerequisite:** MTH082 or equivalent, and CVL082. No fee. **W**

CVL280 Cooperative Work Experience
see AUM280.

Dance, see Physical Education

DEN

Dental Assisting

DEN050 Dental Sciences I

3 class hrs/wk, 3 cr.

Sciences associated with the practice of dentistry. Includes oral microbiology, oral pathology, sterilization, anesthesiology, dental office emergencies, pharmacology, and nutrition. **Prerequisite:** Current enrollment in Dental Assisting program or consent of instructor. **F**

DEN051 Introductory Concepts in Dental Assisting

2 class and 2 lab hrs/wk, 3 cr.

Examines the dental assistant's role with emphasis on terminology, instruments and equipment, personal regimen, chairside techniques, and patient communication. Emphasizes the qualifications necessary for success in the dental assistant field. **Prerequisite:** Current enrollment in Dental Assisting program or consent of instructor. **F**

DEN052 Dental Anatomy and Physiology

3 class and 3 lab hrs/wk, 4 cr.

An introduction to basic general and oral anatomy. Emphasizes the bodily physiological process, the oral cavity and associated structures, and anatomical terminology. Discusses the skeletal system; organ systems; head and neck anatomy; musculature, nervous, and circulatory systems and their innervation; and the oral cavity's anatomical and functional structures. **Prerequisite:** Current enrollment in the Dental Assisting program or consent of instructor. Class fee \$5. **F**

DEN053 Dental Materials I

2 class and 4 lab hrs/wk, 4 cr.

Introduces materials and laboratory equipment used in dental offices such as chemical and physical properties; manipulation; and uses of restorative materials, medications, impression materials, gypsum, and dental cements. Includes restorative and crown preparation procedures, demonstrations and practice in using materials and instruments. **Prerequisite:** Current enrollment in the Dental Assisting program. Class fee \$15. **F**

DEN060 Dental Sciences II

3 class and 3 lab hrs/wk, 4 cr.

Various fields of specialized dentistry recognized by the American Dental Association and the sciences associated with them. Includes operative dentistry, oral surgery, oral pathology, periodontics, pedodontics, endodontics, orthodontics, and public health dentistry. Role playing in simulated clinical situations. **Prerequisite:** Successful completion of term one of Dental Assisting program. **W**

DEN061 Dental Assisting Practicum I

1 class and 7 lab hrs/wk, 3 cr.

Provides supervised clinical experience in basic chairside assisting procedures at the Oregon Health Sciences University School of Dentistry. Includes material manipulation, oral evacuation, instrument transfer, charting, and patient management. **Prerequisite:** Successful completion of term one of Dental Assisting program and proof of current Level-C CPR card. Class fee \$5. **W**

DEN062 Expanded Functions I

2 class and 3 lab hrs/wk, 3 cr.

Theory and practice of new procedural responsibilities delegated to dental auxiliary personnel. Includes discussion, demonstration, and practical application of preventive dentistry; oral hygiene instruction; diet analysis and nutrition; inspection of the oral cavity; coronal polishing; fluoride application and oral hygiene instruction; and rubber dam placement and removal. **Prerequisite:** Successful completion of Term One of the Dental Assisting program. Class fee \$15. **W**

DEN063 Dental Materials II

2 class and 4 lab hrs/wk, 4 cr.

Introduces principles of laboratory procedures related to fixed and removable prosthetics. Includes working with laboratory equipment and demonstrations of additional laboratory techniques and materials. **Prerequisite:** Successful completion of Term One of the Dental Assisting program. Class fee \$15. **W**

DEN064 Dental Radiology I

2 class and 3 lab hrs/wk, 4 cr.

Presents principles of dental radiology and legal aspects regarding use of radiation; terminology; radiation physics; machine operation and equipment use; biological effects of x-rays; principles of radiation; health, safety, and protection; anatomical landmarks; dental films; and darkroom processing techniques. Students practice film placement and exposure techniques on manikins. Exposed films are processed and evaluated. **Prerequisite:** Successful completion of term one of the Dental Assisting program. Class fee \$15. **W**

DEN070 Dental Office Management

2 class and 3 lab hrs/wk, 3 cr.

Includes business office procedures and techniques, written communications, typing, bookkeeping and banking, inventory control, office maintenance, equipment, and rapport with patients and other personnel. **Prerequisite:** Successful completion of terms one and two of the Dental Assisting Program. **Sp**

DEN071 Dental Office Practicum II

1 class and 16 lab hrs/wk, 6 cr.

Students practice and observe in an ethical dental office to help develop rapport with dental team members and patients. Students perform specified chairside procedures and reception tasks, apply skills in laboratory procedures, and expose and process patient x-rays as directed by dentist. **Prerequisite:** Successful completion of terms one and two of the Dental Assisting program. Class fee \$5. **Sp**

DEN072 Expanded Functions II

2 class and 3 lab hrs/wk, 3 cr.

Continues DEN062. Includes discussion, demonstration, and practice in polishing amalgam restorations, placing and removing restorative matrices, placing and removing periodontal dressings, and taking alginate impressions on simulated and real patients. Students apply topical anesthetics, remove cement, remove

sutures and perform minor orthodontic procedures on simulated patients. **Prerequisite:** Successful completion of terms one and two of the Dental Assisting program. Class fee \$15. **Sp**

DEN074 Dental Radiology II

1 class and 3 lab hrs/wk, 2 cr.

Continues DEN064. Students take x-rays and process and evaluate exposed films. Students may take the state's x-ray examination upon successful completion of DEN064 and DEN074. **Prerequisite:** DEN064. Class fee \$15. **Sp**

DEN080 Dental Assistant Seminar

2 class hrs/wk, 2 cr.

Prepares students for Dental Assisting National Board Certification Examination. Also incorporates information on writing resumes, completing job applications, and interviewing for jobs. **Prerequisite:** Successful completion of terms one, two and three of the Dental Assisting program. **Su**

DEN081 Dental Office Practicum III

1 class and 8 lab hrs/wk, 5 cr.

Provides observation, advanced clinical and laboratory practice, and business office management in an ethical general or specialty dental office. **Prerequisite:** Successful completion of terms one, two and three of the Dental Assisting program. Class fee \$5. **Su**

DEN199A Review for Dental Assistants

2 class hrs/wk, 2 cr.

Designed to prepare dental assistants for the written EFDA examination administered by the Dental Assisting National Board. Includes discussion, demonstration and practice in amalgam and coronal polishing, placating restorative matrices, fabricating temporary crowns taking alginate impressions, cement, and placing and removing rubber dams. **Prerequisite:** Current employment as a dental assistant, or consent of instructor. Class fee \$14. **Offered as needed.**

DRF**Drafting Technology****DRF049 Introduction to Drafting**

3 lab hrs/wk, 1 cr.

Covers basic drawing techniques and applications, standard orthographic projection, and layout procedures. Includes use of drafting instruments and media. **Offered as needed.**

DRF050 Sketching

3 labs/wk, 1 cr.

Development of basic freehand technical sketching skills and techniques used in drafting and practical pictorial communication. **F, W**

DRF051 Machine Drafting I

1 class and 6 lab hrs/wk, 3 cr.

Covers the fundamentals of mechanical drafting including geometric construction, multiview projection, isometric drawing, application of welding symbols, section views, auxiliary views, and dimensioning. Class fee \$5. **F, W, Su**

DRF052 Machine Drafting II

1 class and 6 lab hrs/wk, 3 cr.

Continues machine drafting applications. Covers drawing of sectional, auxiliary, assembly, and orthographic views on a CAD system. Includes dimensioning, use of technical pens, tolerancing, and screw threads. **Prerequisite:**

DRF051 or equivalent and DRF072. Class fee \$5. **W, Sp, Su**

DRF054 Drafting I

1 class and 3 lab hrs/wk, 2 cr.

Fundamentals of drafting and basic drawing techniques. Emphasizes use of drafting instruments, standard orthographic projections, layout procedures, ASA approved lettering techniques, geometric construction, selection of views, sectional auxiliary views, and standard dimensioning practices including metrics. Class fee \$5. **F**

DRF055 Architectural Design

1 class and 6 lab hrs/wk, 3 cr.

Elements and principles of aesthetic design are studied and applied to assigned laboratory projects. **Prerequisite:** DRF051 or DRF054, DRF072 or consent of program chair. Class fee \$5. **W**

DRF056 Architectural Drafting

1 class and 6 lab hrs/wk, 3 cr.

Basic architectural drafting techniques and methods. Covers architectural lettering, layout, arrangements, symbols, and conventional construction methods used in residential or light commercial buildings. Incorporates some CAD. **Prerequisite:** DRF051, DRF054, or consent of instructor. Class fee \$5. **W**

DRF056A Architectural Drafting—A

3 lab hrs/wk, 1 cr.

Basic architectural drafting techniques and methods. Includes architectural lettering, layout, arrangement, symbols, and conventional construction methods used in residential or light commercial buildings. Covers the first one-third of DRF056. **Prerequisite:** DRF051, DRF054 or consent of instructor. **W**

DRF056B Architectural Drafting—B

3 lab hrs/wk, 1 cr.

Basic architectural drafting techniques and methods. Includes architectural lettering, layout, arrangement, symbols, and conventional construction methods used in residential or light commercial buildings. Covers the second one-third of DRF056. **Prerequisite:** DRF056A. **W**

DRF056C Architectural Drafting—C

1 class and 3 lab hrs/wk, 2 cr.

Basic architectural drafting techniques and methods. Includes architectural lettering, layout, arrangement, symbols, and conventional construction methods used in residential or light commercial buildings. Covers the third one-third of DRF056. **Prerequisite:** DRF056B. **W**

DRF059 Print Reading

1 class and 3 lab hrs/wk, 2 cr.

Students study various drawings of residential and commercial construction. Includes symbol designations used in construction. Students are graded on answers to questions on each drawing. Emphasizes construction methods, terminology, and reference courses. **F**

DRF060 Advanced Print Reading

1 class and 3 lab hrs/wk, 2 cr.

Reading and interpreting architectural plans and specifications of complex building construction. **Prerequisite:** DRF059 or consent of instructor. **W**

DRF061 Technical Illustration I

1 class and 6 lab hrs/wk, 3 cr.

Methods of pictorial drawing, exploded view drawings with pencil and ink shading, freehand and template drawings. Introduces color and rendering techniques. **Prerequisite:** DRF051 and DRF052 or consent of instructor. Class fee \$5. **Sp**

DRF063 Pattern Development

8 lab hrs/wk, 3 cr.

Development of patterns for sheet metal and similar applications. Using principles of descriptive geometry by parallel line, radial line, triangulation, and simplified triangulation methods. **Prerequisite:** DRF052 and DRF074 or consent of instructor. Class fee \$5. **Offered as needed.**

DRF065 Drafting Room Computation

2 class hrs/wk, 2 cr.

Computation and presentation of technical data using engineering calculators to solve typical problems in mechanical, civil, tool design and related areas. **F, W**

DRF066 Tool Design

1 class and 6 lab hrs/wk, 3 cr.

Introduction to modern principles of tool design including gauging, locating, clamping, and fixture design. Covers modern high production techniques and tooling, limit dimensioning, and tolerancing. **Prerequisite:** DRF052 and MFG057 or consent of instructor. Class fee \$5. **W**

DRF068 Geometric Tolerancing

1 class hr/wk, 1 cr.

Studies geometric tolerancing related to product design, machine drafting, and production. Emphasizes the close relationship between geometric tolerancing, gauging, and quality control. **Prerequisite:** DRF052 or consent of program chair. **W**

DRF069 Pipe and Flow Systems

3 lab hrs/wk, 1 cr.

Covers the detailing of a variety of standard pipe fittings and their connections. Also includes pictorial drawings, construction of bill of material, research in industrial catalogs, and development of an orthographic projectional drawing using ink on film. **Co-requisite:** DRF052 or consent of instructor. Class fee \$5. **Offered as needed.**

DRF070 CAD Pipe Systems

1 class and 3 lab hrs/wk, 2 cr.

Detailing of a variety of piping and industrial flow systems. Covers schematic diagrams and pictorial layouts, normal pipe and flow system drawings, and elements of flow systems design. **Prerequisite:** DRF052 and DRF073 or consent of program chair. Class fee \$5. **Sp, Su**

DRF071 Machine Design

1 class and 6 lab hrs/wk, 3 cr.

Practical design situations related to the drafting room. Selected design project(s) demonstrate a comprehensive study of parts relationships, materials application, and product design. Includes duo dimensioning (English-metric), geometric tolerancing, and welding applications. **Prerequisite:** DRF052 and MFG053. Class fee \$5. **W**

DRF072 Introduction to Computer Drawing

2 class and 3 lab hrs/wk, 3 cr.

Introduces computer aided drawing and incorporates hands-on experience with the AutoCAD PC-based program. Includes standard graphics commands and basic DOS commands. Class fee \$5. **F, W, Sp, Su**

DRF073 Computer Aided Design

2 class and 3 lab hrs/wk, 3 cr.

Advanced drafting applications using covers, multiview, auxiliary, AutoCAD, and section drawings. **Prerequisite:** DRF072 or equivalent. Class fee \$5. **F, W, Sp, Su**

DRF074 Descriptive Geometry

1 class and 6 lab hrs/wk, 3 cr.

Graphic solutions to mathematical and space relationship problems for design/drafting majors. Includes auxiliary views, point line plane problems, and revolutions. Introduces geometric solution of vectors. **Prerequisite:** DRF052, MTH081 or consent of instructor. Class fee \$5. **Sp**

DRF075 3D CAD

1 class and 3 lab hrs/wk, 2 cr.

Applies microcomputer-based CAD software to the generation of three-dimensional models of mechanical parts. Includes viewpoints, coordinate systems, associative dimensioning, projection of views from a 3D model and surface generation. **Prerequisite:** DRF051 or DRF073 or consent of instructor. Class fee \$5. **Sp**

DRF076 CAD Programming

2 class and 3 lab hrs/wk, 3 cr.

Features and instructions of the AutoLISP language. Development of custom functions for AutoCAD. Emphasizes program design using structured problem solving and programming techniques. Includes coverage of DOS commands. **Prerequisite:** DRF073, MTH053 or MTH082. **F**

DRF079 CADD Electronics

2 class and 3 lab hrs/wk, 3 cr.

How computer-aided drafting/design relates to electronics industries. Emphasizes schematics, wiring diagrams, block and flow diagrams, PC board layout, I.C. applications, and graphic drawings. **Prerequisite:** DRF090, ELE060 or DRF091 and ELT053 or approval of the program chair. Class fee \$5. **Sp**

DRF081 Mapping and Platting

1 class and 6 lab hrs/wk, 3 cr.

Introduces the basic components of maps, subdivisions, and plats. Includes an introduction to aerial photo interpretation. **Prerequisite:** DRF052 or consent of instructor. Class fee \$5. **Sp**

DRF082 Civil Engineering Drafting

1 class and 6 lab hrs/wk, 3 cr.

Introduces the student to typical projects that would be drawn in a civil engineering office using computers, software, drafting board, and standard drafting equipment. Stresses mathematics, survey skills, and the use of a calculator. **Prerequisite:** DRF052 or DRF054, DRF073 or consent of instructor. Class fee \$5. **F**

DRF083 Project Development

1 class and 6 lab hrs/wk, 3 cr.

Brings together methods of applying mathematics, survey knowledge, and drafting skills. Covers subdivision designing, location of structures on plots, construction of contour lines, and building set-back lines. Students obtain data from the field and relate that data to the design of the project. **Prerequisite:** DRF054 and DRF082 or consent of instructor. **Sp**

DRF085 Cartography/GIS

1 class and 6 lab hrs/wk, 3 cr.

Incorporates aerial photo interpretation and Geographic Information Systems (G.I.S.). Ties land-use information to maps in a computer data base. **Prerequisite:** DRF081 or consent of instructor. Class fee \$5. **F**

DRF086 Power Transmission Design

3 class hrs/wk, 3 cr.

Covers power transmission systems. Includes hydraulics, pneumatics, electric motors, chains, sprockets, V-belts, bearings, and

speed reducers. Emphasizes analysis of system requirements, sizing of machine elements, and selection of components from industrial catalogs. **Prerequisite:** MTH082, CVL080 or consent of instructor. **F**

DRF087 Flexible Manufacturing Systems

2 class and 3 lab hrs/wk, 3 cr.

An introduction to industrial control circuits, their use and design. Hydraulic, pneumatic, and electronic circuits will be designed to control direction, speed, and sequence of operations. Covers digital design, fluid components, Boolean algebra, combinational logic, sequential logic and electronic components. Applies theories by using an industrial robot and programmable controllers. **Prerequisite:** DRF086, ELE061M or consent of instructor. **Sp**

DRF089 Structural Drafting

1 class and 6 lab hrs/wk, 3 cr.

Practice in producing working drawings using computers, software, board drafting and standard drafting equipment. Builds on an already-established knowledge of Auto-CAD software. The steel manual will be used as a reference. Class fee \$5. **W**

DRF090 Electronic Drafting

1 class and 6 lab hrs/wk, 3 cr.

Stresses schematics and wiring diagrams. Includes block and flow diagrams, microcomputer board layout, charts, and graphs. **Prerequisite:** Second year standing in the design/drafting area or consent of instructor. Class fee \$5. **W, Su**

DRF091 Basic CAD for Electronics

1 class and 3 lab hrs/wk, 2 cr.

Introduces the Electronic Technology program. Presents proper uses of computer hardware and software for students to use computer and peripheral equipment. Also includes schematic drawings, wiring, diagrams, and packaging drawings, in addition to basic computer-aided design (CAD) operations. Class fee \$5. **F, W, Su**

DRF093 Technical Software Applications

2 class and 3 lab hrs/wk, 3 cr.

Engineering applications of purchased software packages. How to use spreadsheets to design structural members and aid in generating contours and graphs. **Prerequisite:** CVL054 or CVL080. **Sp**

DRF095A,B,C Special Projects in Drafting and Design

Variable hours/credits

Student and instructor identify drafting project or problem and jointly draw up a contract. The contract sets forth a proposal to complete the project or solve the problem. Identifies objectives, procedures, and equipment needed, together with key checkpoints for student-instructor conferences. This course is intended for, but not limited to, second year drafting or mechanical design students as an elective. Potential areas of consideration include community development projects, computer programming and applications, machine design, mapping, civil engineering drafting, or any drafting-related field. Provides consideration and encouragement to an interdisciplinary team of students working on a common problem. **Prerequisite:** Second-year standing and/or consent of instructor. **F, W, Sp**

DRF280 Cooperative Work Experience

see AUM280.

EC**Economics****EC115 Outline of Economics**

3 class hrs/wk, 3 cr.

Concepts and theories relating to small and large economic problems of the world. **Offered as needed.**

EC201 Principles of Economics

3 class hrs/wk, 3 cr.

Basic economics and a study of macroeconomics theory. Covers the public sector, unemployment, inflation, taxation, national income accounting and income distribution, money, banking, and fiscal and monetary policy. It is suggested that students have an introductory knowledge of algebra before registering. **F, W**

EC202 Principles of Economics

3 class hrs/wk, 3 cr.

Microeconomic concepts including markets, firms' resource allocation, derived demand, income distribution, price systems, monopoly, and allocation of resources. **Prerequisite:** EC201 or consent of instructor. **W, Sp**

EC203 Principles of Economics

3 class hrs/wk, 3 cr.

Emphasizes economic issues such as underdeveloped countries, economic growth, pollution, and comparative economic systems. **Prerequisite:** EC201 or consent of instructor. **Sp**

ECE**Early Childhood Education, see also Human Development and Family Studies****ECE061 The Nanny: An Overview**

1 class hr/wk, 1 cr.

An introduction to the basic requirements of becoming a professional nanny. Includes an historical overview, and an exploration of domestic and international job opportunities. **Offered as needed.**

ECE062 Child Development in the Preschool Years

3 class hrs/wk, 3 cr.

Covers the principles of development as they apply to the young child, primarily ages 2-1/2 through seven. Emphasizes physical, intellectual, emotional, and social growth in children. Consideration of growth and development of children ages seven through 11 is also included. **W**

ECE064 Professional Nanny I

2 class hrs/wk, 2 cr.

Covers the development of a nanny resource file and examines daily routines, time management, and special coping skills for dealing with isolation and homesickness. **Prerequisite:** ECE061. **Offered as needed.**

ECE065 Professional Nanny II

3 class hrs/wk, 3 cr.

Covers the special requirements of being a nanny including dress, etiquette, travel management, job search preparation, and contract negotiations. Prepares students to handle home emergencies and security, parent communications and family relations, and life after being a nanny. **Prerequisite:** ECE061 and ECE064. **Offered as needed.**

ECE066 Introduction and Observation in Early Childhood Education

3 class hrs/wk, 3 cr.

Focuses on the history of early childhood education and the value and use of objective ob-

servations as a teaching tool. Includes lecture-discussions and observations. **F**

ECE067 Observing and Guiding Behavior

3 class hrs/wk, 3 cr.

Continuation of ECE066. Emphasizes the role of the teacher, and techniques of guiding, recording, and reporting. **W**

ECE068A Observing Preschool Experiences

1 class hr/wk, 1 cr.

Students observe various aspects of a preschool with emphasis on child development. **Prerequisite:** ECE066 or ECE067 or ECE072. **F**

ECE068B Observing Preschool Experiences

1 class hr/wk, 1 cr.

Students observe various aspects of a preschool with emphasis on child guidance. **Prerequisite:** ECE066 or ECE067 or ECE072. **W**

ECE068C Observing Preschool Experiences

1 class hr/wk, 1 cr.

Students observe various aspects of a preschool with emphasis on the classroom environment and curriculum. **Prerequisite:** ECE066 or ECE067 or ECE072. **Sp**

ECE070 Environments for Young Children

3 class hrs/wk, 3 cr.

Planning, implementing, and evaluating environments for preschool children. Includes selecting children's equipment and furniture and arranging rooms and outdoor areas to facilitate play, as well as "scrounging" for materials usable in the preschool environment. **Prerequisite:** Second year standing in program or consent of instructor. **F**

ECE071 Creative Activities

3 class and 2 lab hrs/wk, 4 cr.

Focuses on understanding and implementing a developmental approach to creative activities for the young child. Involves hands-on experience with a wide variety of activities and discussion of presentation and methods of evaluation. Includes art activities, use of natural materials, cooking experiences, puppet-making and the development of new art. Class fee \$10. **W**

ECE072 Learning Experiences for Young Children

4 class hrs/wk, 4 cr.

Focuses on planning and implementing preschool curriculum based on development theory. Involves weekly lectures and experiences covering presentation, development, analysis, and evaluation of materials and concepts which facilitate development of the whole child. **Prerequisite:** HDFS225 and ECE062, or consent of instructor. Class fee \$5. **Sp**

ECE074 Children's Literature and Literacy

3 class hrs/wk, 3 cr.

Surveys children's literature along with presenting methods for using and evaluating such literature. Students will read children's books, evaluate these, and have story groups with children. Explores how children develop literacy. **Sp**

ECE075 Music and Movement for Young Children

3 class hrs/wk, 3 cr.

How to make music a pleasurable medium of expression. Why and how to provide music and movement activities for young children. Covers the value of music for preschool children, sim-

ple music theory and terminology, roles of teachers, and use of spontaneous and planned activities. **Prerequisite:** Second year standing or consent of instructor. Class fee \$5. **W**

ECE079 Child Nutrition

2 class hrs/wk, 2 cr.

Introductory course in human nutrition and health with emphasis on the nutritional needs of the young child. Includes practical application in the day care setting and planning snacks and meals for preschool children. **W**

ECE080 Home, School, Community Relations

3 class hrs/wk, 3 cr.

Designed to help teachers appreciate and understand the unique contribution they make in the lives of children and families. Investigates the teacher's role as an advocate and the role of children in the community and in the family. Explores the many aspects of parenting, and how teachers may help and communicate with parents and conduct parent conferences. Examines ways to recognize child abuse and help families deal with this problem. **Prerequisite:** Second-year standing in early childhood education, or consent of instructor. **F**

ECE084 Professional Issues in Early Childhood Education

3 class hrs/wk, 3 cr.

Prepares early childhood educators to meet the many professional roles that require knowledge of ethics, conflict resolution, and advocacy. Also covers how to influence governmental processes and develop an anti-biased professional attitude. Includes historical perspectives relating to early childhood education. **Prerequisite:** Second-year standing or consent of instructor. **F**

ECE085 Administration of Early Childhood Programs

3 class hrs/wk, 3 cr.

Covers finances and budget, sources of income, selection and purchase of materials and equipment, and standards (local, state, federal) and regulatory agencies in regard to health, nutrition and safety. Computer simulations and software will be used to handle administrative functions. **Prerequisite:** Second year standing in program. **Sp**

ECE086 Family Day Care I (Basic)

1 class hr/wk, 1 cr.

Provides the caregiver with basic information on managing a family day care home. Includes practical suggestions for working with parents, keeping business records, providing healthy and safe environments for children, and establishing a home business. **F, W, Sp, Su**

ECE087 Family Day Care II (Advanced)

1 class hr/wk, 1 cr.

Continues information on managing a family day care home. Focuses on environments and activities and how children grow and learn. Covers children of different ages, cultures, and abilities. **Prerequisite:** ECE086. **Offered as needed.**

ECE091 Supervised Field Experience: Infant and Toddler

2 class and 6 lab hrs/wk, 4 cr.

Experience in working with infants and toddlers in a laboratory and seminar setting and assisting with supervision of the various daily activities. **Prerequisite:** HDFS249. Class fee \$3. **F, W, Sp**

ECE092 Supervised Field Experience: Preschool

2 class and 9 lab hrs/wk, 5 cr.

Continuation of ECE091. Provides more experience in working with young children in a laboratory preschool setting and assisting with supervision of the various activities in a preschool program. Includes some planning, executing, and evaluating of curriculum materials appropriate for young children. **Prerequisite:** ECE091 and enrolled in ECE067. Class fee \$5. **Sp**

ECE096 Directed Participation I

2 class and 12 lab hrs/wk, 6 cr.

Supervised teaching of young children in a laboratory setting. **Prerequisite:** ECE092 and second year standing. Class fee \$5. **Sp**

ECE097 Directed Participation II

2 class and 15 lab hrs/wk, 7 cr.

Supervised teaching of young children in a laboratory preschool and in a community setting. **Prerequisite:** ECE096, ECE280, and consent of instructor. Class fee \$10. **Sp**

ECE280 Cooperative Work Experience

see AUM280.

ED**Education****ED051 Teaching Basic Reading and Writing to Older Non-Readers**

1 class and 2 lab hrs/wk, 2 cr.

Designed to train volunteer tutors in the Laubach method of basic language instruction. Introduces writing simple stories using a controlled vocabulary. Develops skill in conducting tutored teaching sequences using Laubach method. **Offered as needed.**

ED110 Psychology of Learning

3 class hrs/wk, 3 cr.

Teaching techniques based on modern theories of behavior, motivation, and human development. **W**

ED111 Contemporary Education

3 class hrs/wk, 3 cr.

Public education in the United States today. Examines contemporary purposes and practices in relation to historical trends and philosophical issues. Discusses organization, financing, and operation of local school districts. **Sp**

ED113, B,C Discrimination: The Law and the Oregon Educator

1-3 class hrs/wk, 1-3 cr.

Ramifications, requirements, and impact of state and federal laws prohibiting discrimination in the educational system on the basis of sex, race, religion, handicap, national origin, marital status or age. Designed to inform the interested public and to fulfill teacher certification requirements under ORS 342.123. **Offered as needed.**

ED123 Classroom Techniques in Reading and Language

3 class hrs/wk, 3 cr.

Tutoring theory and techniques in reading and the language arts. How to implement reading programs, tutor individuals and groups, assess progress, and maintain records under the direction of the teacher. **W**

ED124 Classroom Techniques in Mathematics and Science

3 class hrs/wk, 3 cr.

Second of two courses on basic tutoring theory and techniques. Covers tutoring in mathematics and science. **Sp**

ED125 Techniques for Tutoring Adults

1 class and 6 lab hrs/wk, 3 cr.

Individualized instruction in teaching required skills and opportunities to practice these skills in order to become an effective tutor of adult learners. Topics include, but are not limited to, reading, writing, spelling, mathematics, and English as a Second Language (ESL). **Offered as needed.**

ED131 Teaching Techniques

3 class hrs/wk, 3 cr.

Instructional and evaluative techniques commonly used by instructional assistants. **F**

ED132 Evaluation Techniques

3 class hrs/wk, 3 cr.

An introduction to methods and tools of measurement and evaluation. **Offered as needed.**

ED133 Instructional Media and Equipment

3 class hrs/wk, 3 cr.

Purpose and use of instructional media and equipment commonly used in schools and school media centers. Class fee \$5. **F, Offered as needed.**

ED134 The Mexican-American and the Schools

3 class hrs/wk, 3 cr.

For persons working, or planning to work, with Mexican-American students. Focuses on learning problems some students may have because of conflicts between their ethnic-based values and those of other students. **Offered as needed.**

ED136 Computers and Advanced Media in Education

3 class hrs/wk, 3 cr.

An introduction to the role and use of computers in the schools. Introduces and provides practice tutoring techniques for computer-assisted instruction (CAI). Reviews and provides practice in VCR operation and techniques. **Sp**

ED179 Literature for Preschool Children—Jump Over the Moon

3 class hrs/wk, 3 cr.

A telecourse about the history and diversity of children's literature. Each program includes a variety of recommended works to be read and suggests criteria for selecting and evaluating other books. In addition to viewing the television programs, students will read pertinent articles and complete related assignments, with guidance from an instructor. **F, W, Sp**

ED199A Spanish Language Development for the Spanish Speaker

3 class hrs/wk, 3 cr.

First of three courses to help Spanish-speaking teacher aides improve their communications skills. **Offered as needed.**

ED199B Spanish Reading for the Spanish Speaker

3 class hrs/wk, 3 cr.

Continuation of ED199A to develop reading skills. **Offered as needed.**

ED199C Spanish Composition for the Spanish Speaker

3 class hrs/wk, 3 cr.

Continuation of ED199A and B and to develop composition skills. **Offered as needed.**

ED201 American Sign Language—Beginning I

3 class hrs/wk, 3 cr.

An introduction to American Sign Language and the culture of deaf people. Emphasizes receptive skills and some expressive skills. **F, W, Sp, Su**

ED202 American Sign Language—Beginning II

3 class hrs/wk, 3 cr.

A continuation of ED201. Emphasizes improving receptive and expressive skills. **Prerequisite:** ED201 or equivalent. **F, W, Sp, Su**

ED204 American Sign Language—Beginning III

3 class hrs/wk, 3 cr.

Continuation of ED202. Stresses increased understanding of the American Sign Language and deaf culture. Emphasizes receptive and expressive skills. **Prerequisite:** ED201, ED202 or equivalent. **Sp**

ED205A Tutoring Principles and Practices

1 class and 2 lab hrs/wk, 2 cr.

Principles and practices of tutoring basic reading, writing, and English as a Second Language skills to adult learners. Following completion of course basics, additional options provide instruction in tutoring basic math, advanced grammar, conversation, pronunciation. Also considers learning styles and tutoring with the aid of a computer. **Offered as needed.**

ED205B Tutoring Principles and Practices

1 class and 4 lab hrs/wk, 3 cr.

Principles and practices of tutoring basic reading, writing, and English as a Second Language skills to adult learners. Following completion of course basics, additional options provide instruction in tutoring basic math, advanced grammar, conversation, pronunciation. Also considers learning styles and tutoring with the aid of a computer. **Offered as needed.**

ED208 Tutoring Techniques for Elementary Physical Education

3 class hrs/wk, 3 cr.

Presents physical education goals and objectives, tutoring and assessment of physical skills, class organization and management, working with students with special needs, and equipment repair and maintenance. **Offered as needed.**

ED209A Practicum: Introductory Observation and Experience

3 class hrs/wk, 3 cr.

An introduction to the role and work of instructional assistants. Covers occupational opportunities, career ladders, and other training models. Provides students experience with educational settings and opportunities to examine the attitudes and work habits which influence job effectiveness and satisfaction. **F**

ED209B Practicum: Introductory Observation and Experience (LDC)

3 class hrs/wk, 3 cr.

A one-term introduction to education for students exploring education as a career. **W, Sp**

ED210 Practicum

1 class and 15 lab hrs/wk, 6 cr.

Field experience in a variety of classroom activities directly related to assisting and supervising children in school settings. Allows students to apply knowledge, methods, and skills gained from education courses. Seminars cover classroom experience, problem-solving techniques, and materials. **F, W, Sp**

ED211 Advanced Practicum

1 class and 15 lab hrs/wk, 6 cr.

Field experience in a variety of classroom settings closely paralleling duties regularly assigned to instructional assistants in a school. Allows students to apply in-depth knowledge, methods, and skills gained from education courses. Seminars cover classroom experience and problem-solving techniques. **Prerequisite:** ED210. **F, W, Sp**

ED212 Practicum: Specialized Education

1 class and 15 lab hrs/wk, 6 cr.

Classroom experience for second year students with children of specialized populations. Seminars on classroom experiences, problem solving, and special teaching techniques. **Prerequisite:** ED211. **F, W, Sp**

ED217 Comprehensive Classroom Management

3 class hrs/wk, 3 cr.

Comprehensive classroom management theory and its application to emotional education, management techniques, and problem solving for unproductive student behaviors. **W, Offered as needed.**

ED251 Overview of Handicapping Conditions

3 class hrs/wk, 3 cr.

An introduction to a variety of handicapping conditions of students in public schools and institutions. Identification and definition of severely emotionally disturbed, mentally retarded, learning disabled, speech and language disabled, vision and hearing impaired, physically handicapped persons, and persons with other health impairments. **F**

ED252 Applied Behavior Modification

3 class hrs/wk, 3 cr.

Introduction and survey of behaviorism theory, and application of behavior modification techniques in working with students and institutionalized persons. **F, Sp, Su**

ED257 Second Language Teaching Techniques for Paraprofessionals

3 class hrs/wk, 3 cr.

First of three courses. Covers philosophy, activities, materials, and various techniques used in bilingual/bicultural educational programs. **F, W**

ED258 Multicultural Education and the Paraprofessional

3 class hrs/wk, 3 cr.

Continuation of ED257. Covers philosophy, techniques, activities, and materials used in bilingual and bicultural education programs. How to incorporate multicultural education into classrooms. **W, Offered as needed.**

ED259 Bilingual Methodology

3 class hrs/wk, 3 cr.

Continuation of ED257 and ED258. Examines the philosophy, rationale, and legal implications of bilingual/bicultural programs and the management and use of English and Spanish reading in a bilingual classroom. **Sp, Su**

ED267 Introduction to Legislation, History, and Certification Process for Special Education

3 class hrs/wk 3 cr.

First of three courses. Covers legislation, history, certification for special education, services available and current rules and regulations affecting persons with disabilities. **Prerequisite:** ED251 or consent of instructor. **Offered as needed.**

ED268 Educating the Mildly and Severely Handicapped

3 class hrs/wk, 3 cr.

Covers theories and techniques for working with students with disabilities. Studies services and funding provided for students with mild and severe disabilities. **Prerequisite:** ED251 or consent of instructor. **W**

ED269 Classroom Management of the Learning Disabled Student

3 class hrs/wk, 3 cr.

Identifies specific learning disabilities. Discusses eligibility criteria, assessment techniques, and learning strategies. **Prerequisite:** ED251 or consent of instructor. **Sp**

ED281 Introduction to Vocational-Technical Education

3 class hrs/wk, 3 cr.

A study of goals, development, organization, education practices, and futures in vocational-technical education. **Offered as needed.**

ED282 Teaching Techniques for Vocational Trainers

3 class hrs/wk, 3 cr.

Introductory class for vocational trainers of persons with disabilities in schools and in local communities. Explores career awareness, job exploration, supported work, and funding sources. Discusses employability and marketing skills. **Prerequisite:** ED251 or consent of instructor. **W, Offered as needed.**

**ELE and ELT
Electronics****ELE050 Electronic Concepts I**

3 class and 4 lab hrs/wk, 4 cr.

First course in a three-term sequence. Covers electrical and atomic theory applicable to the field of electronics. Introduces DC and AC theory, test equipment usage, schematic reading and circuit construction. **Prerequisite:** MTH065 or MTH070, high school algebra or consent of instructor. Class fee \$16. **F, W**

ELE051 Electronic Concepts II

3 class and 4 lab hrs/wk, 4 cr.

Second course in a three-term sequence. Covers electrical and atomic theory applicable to the field of electronics. Stresses reactive circuit theory and the theorems used for circuit analysis. **Prerequisite:** ELE050, and concurrent enrollment in Trigonometry, or consent of instructor. Class fee \$16. **W, Sp**

ELE052 Electronic Concepts III

3 class and 3 lab hrs/wk, 4 cr.

Continuation of ELE050 and ELE051. Covers electric circuit analysis and atomic theory applicable to passive circuits. Expands the concepts covered in ELE050 and ELE051. **Prerequisite:** ELE051 and Trigonometry. Class fee \$12. **F, Sp**

ELE056 Electronics Advancement

3 lab hrs/wk, 1 cr.

Laboratory-based lecture-demonstration course designed to smooth the transition between first and second year courses. Intended for those students who begin the electronics program at the start of winter term, out of step with the regular fall program sequence. **Prerequisite:** Concurrent enrollment in third term of the electronics program, and consent of instructor. **F**

ELE060 Electronics Fundamentals for Nonmajors

3 class and 2 lab hrs/wk, 4 cr.

Introduces the fundamental theories, circuits and devices used in electronics. Covers direct and alternating current theory, test equipment, semiconductor devices, motors, and generators. Emphasizes practical concepts in both lectures and laboratories. Suitable for those desiring a general knowledge of electronics or exploring electronics as a career. Class fee \$8. **F, Offered winter as needed.**

ELE061/ELE061M Electric Circuits

3 class and 4 lab hrs/wk, 4 cr.

Covers electrical and atomic theory applicable to the field of electronics. Introduces DC and AC theory, test equipment usage, schematic reading and circuit construction. ELE061 and ELE061M are equivalent courses. **Prerequisite:** MTH065 or MTH070 or high school algebra or consent of instructor. Class fee \$16. **F**

ELE062/ELE062M Industrial Electronics

3 class and 3 lab hrs/wk, 4 cr.

Introduces and explains semiconductor devices, common transducers, direct and alternating current motor and generator theory, single and three-phase power, and commonly used control circuits. ELE062 and ELE062M are equivalent courses. **Prerequisite:** ELE061 or ELE061M or consent of instructor. Class fee \$12 each course. **W**

ELE063/ELE063M Industrial Computer Concepts

3 class and 3 lab hrs/wk, 4 cr.

Explains computer system theory and its application to industrial control, data acquisition and data communications. Studies both hardware and software concepts. ELE063 and ELE063M are equivalent courses. **Prerequisite:** ELE061 or ELE061M or consent of instructor. Class fee \$12 each course. **Sp**

ELT054 Transistor Fundamentals

3 class and 6 lab hrs/wk, 5 cr.

Provides an introduction to semiconductor physics and covers the fundamental principles of diodes and bipolar transistors. Analyzes the diode in clipper and clamper circuits. Introduces the transistor both as a switching device and as a linear amplifier. **Prerequisite:** Concurrent enrollment in ELE051. Class fee \$16. **W, Sp**

ELT055 Semiconductor Devices

2 class and 3 lab hrs/wk, 3 cr.

Survey of operating principles of solid-state devices such as unijunction transistor, special diodes, thyristors (triacs, SCRs, etc.) and photoelectric devices. **Prerequisite:** ELT054 or consent of instructor. Class fee \$12. **F, Sp**

ELT058 Electronics Orientation

2 lab hrs/wk, 1 cr.

Introductory course in the field of electronics. Covers career opportunities, basic vocabulary, soldering, static awareness, tool identification, safety, first aid, hardware, and chemicals used in electronics. Class fee \$4. **F, W**

ELT061 Electronic Problems I

2 lab hrs/wk, 1 cr.

Introduction to electronic problem solving. Emphasizes engineering calculations, scientific notation, formula manipulation, and use of calculators in solving electronics problems. **Prerequisite:** Registration in the electronic curriculum and concurrent enrollment in MTH081 or consent of instructor. **F, W**

ELT062 Electronic Problems II

2 lab hrs/wk, 1 cr.

Covers the presentation of technical data and computations. Includes procedures for dimensional analysis, recognition and use of unit systems, preparation and use of graphs, vectors and logarithms/dB. Covers problems that are representative and applicable throughout the electronic curriculum. **Prerequisite:** ELT061. **W, Sp**

ELT064 Pulse Circuit Fundamentals

2 class and 3 lab hrs/wk, 3 cr.

Introduces pulse techniques. Includes theory and operation of discrete switching circuits. **Prerequisite:** ELT054 or consent of instructor. Class fee \$12. **F, Sp**

ELT065 Electronic Circuit Analysis

2 class and 6 lab hrs/wk, 4 cr.

Covers solid state amplifiers, oscillators, power supplies, circuit design and troubleshooting. **Prerequisite:** ELT054. Class fee \$16. **F**

ELT066 Digital Fundamentals

3 class and 2 lab hrs/wk, 4 cr.

Introduces digital logic theories. Includes number systems and conversions, Boolean algebra, simplification theorems, combinational logic, and an introduction into sequential circuits. **Prerequisite:** ELE050 or consent of instructor. Class fee \$8. **W, Sp**

ELT067 Digital Circuit Applications

2 class and 3 lab hrs/wk, 3 cr.

Continuation of ELT066. Covers principles of Boolean algebra and digital ICs and their application. Laboratory oriented to give students experience with sequential logic elements such as flip-flops, counters, registers, and arithmetic logic units. **Prerequisite:** ELT066. Class fee \$12. **F**

ELT068 Microcomputer Systems

3 class and 6 lab hrs/wk, 5 cr.

Basics of microcomputer hardware and software. Covers interfacing techniques and protocols. **Prerequisite:** ELT066, ELT067, and a high-level programming language or consent of instructor. Class fee \$24. **W**

ELT070 Video Display Systems

3 class and 6 lab hrs/wk, 5 cr.

Theories of operation and the purpose of various components in video systems are studied. Covers trouble shooting of analog systems. **Prerequisite:** ELT065 and ELT072 or equivalent with consent of instructor. Class fee \$24. **Sp**

ELT071 Linear IC Fundamentals

3 class and 3 lab hrs/wk, 4 cr.

Introduces linear integrated circuit amplifiers. Emphasizes device parameters and basic circuit operating characteristics. Various linear integrated circuit amplifying devices are compared and evaluated through laboratory experiments. **Prerequisite:** ELE051 and ELT054. Class fee \$12. **F, Sp**

ELT072 Linear IC Applications

2 class and 3 lab hrs/wk, 3 cr.

A design and applications course using the integrated circuit amplifier and special function IC devices to study circuits related to industrial applications. Applies and evaluates selected circuit designs in the laboratory. **Prerequisite:** ELT065 and ELT071. Class fee \$12. **W; offered spring as needed.**

ELT074 FCC License Preparation

3 class hrs/wk, 3 cr.

A review of electronic circuits and discussion of FCC rules and regulations. Preparation for

FCC examination. **Prerequisite:** Fifth term standing or consent of instructor. **Offered as needed.**

ELT075 Advanced Industrial Electronics

3 class and 3 lab hrs/wk, 4 cr.

Principles and concepts of electronic and electrical control and sensing devices used in industry. Covers electric motors, control circuits, servos, and measurement transducers. **Prerequisite:** ELT054, ELT055, ELT072 or consent of instructor. Class fee \$12. **Sp**

ELT076 Antennas and Transmission Lines

2 class hrs/wk, 2 cr.

Covers the practical and theoretical aspects of basic transmission lines and antennas. Covers the characteristics and properties of open-wire, coaxial, and special purpose transmission lines, plus those of vertical and horizontal antennas. Also covers the coupling of source, transmission lines, and antennas. **Prerequisite:** ELE051. **W**

ELT077 Telecommunications

2 class and 3 lab hrs/wk, 3 cr.

Studies communications theory and systems. Laboratory experiments help develop practical knowledge and reinforce theoretical concepts. **Prerequisite:** Concurrent enrollment in ELT076. Class fee \$12. **W**

ELT090 Computer Peripherals

3 class and 3 lab hrs/wk, 4 cr.

A study of computer peripherals including disks, printers, plotters, etc. Covers the theories of operation and concepts of interfacing software and hardware. Lab sessions emphasize installation and troubleshooting techniques. **Prerequisite:** Electronics experience required. Class fee \$12. **W**

ELT091 Programming Concepts I

3 class and 2 lab hrs/wk, 4 cr.

An introduction to computer programming and computer operating systems using the C language. Emphasizes documentation and structure. **Prerequisite:** MTH081 or consent of instructor. Class fee \$8. **F**

ELT092 Programming Concepts II

3 class and 2 lab hrs/wk, 4 cr.

A continuation of ELT091. Refines structured programming techniques and applies them to more complex data structures. Emphasizes system analysis, programming techniques and documentation. **Prerequisite:** ELT091. Class fee \$8. **Sp**

ELT093 Data Communication

3 class and 3 lab hrs/wk, 4 cr.

Covers theories and concepts of information exchange between computers. Lab sessions emphasize installation, maintenance, and theory of operation of data communication networks. **Prerequisite:** ELT090. Class fee \$12. **Sp**

ELT097 Advanced Computer Architecture

3 class and 6 lab hrs/wk, 5 cr.

For students with a solid foundation in digital logic, microprocessors, and programming. Explains advanced computer system theory. Lab sessions emphasize system installation and troubleshooting of both hardware and software. **Prerequisite:** Enrollment in second year of the Computer Electronics Technology program or consent of instructor. Class fee \$24. **Sp**

ELT098 Microcomputer Hardware Concepts

3 class and 2 lab hrs/wk, 4 cr.

Covers the basics of microcomputer hardware, including how software interfaces with hardware. Stresses system troubleshooting and maintenance. No past experience in electronics is required. **Prerequisite:** Experience with microcomputer software. Class fee \$8. **Offered as needed.**

ELT280 Cooperative Work Experience

see AUM280.

EMT**Emergency Medical Technology****EMT050 Emergency Medical Technology I**

5 class and 5 lab hrs/wk, 8 cr.

Development of skills in recognizing symptoms of illnesses and injuries and following proper procedures of emergency care. For persons currently active in services which demand response to emergency care situations, such as ambulance attendants, firefighters, emergency rescuers, police, mountain rescuers, and industrial emergency care persons. **Prerequisite:** No history of diabetes, epilepsy or narcotic addiction or past history of alcohol addiction. If history of any of these conditions exists, students should not have lost consciousness for the past six months and be currently undergoing medical care. Class fee \$10. **F, W, Sp**

EMT051 EMT Basic Emergency Medical Technology I, Part A

2 class and 2 lab hrs/wk, 3 cr.

Skill development in recognizing symptoms of illnesses and injuries and in proper emergency care procedures. Includes proficiency tests and evaluation sessions. **Prerequisite:** No history of diabetes, epilepsy or narcotic addiction or past history of alcohol addiction. If history of any of these conditions exists, students should not have lost consciousness for the past six months and be currently undergoing medical care. Class fee \$7. **F**

EMT052 Emergency Medical Technology I, Part B

2 class and 2 lab hrs/wk, 3 cr.

Continuation of EMT051. **Prerequisite:** EMT051. Class fee \$5. **W**

EMT053 Emergency Medical Technology I, Part C

2 lab hrs/wk, 1 cr.

Observation and practice of emergency skills in selected emergency settings. **Prerequisite:** EMT052. Class fee \$5. **Sp**

EMT055 Malpractice Issues

1 class hr/wk, 1 cr.

Basic concepts of malpractice in health care. Includes case studies, applications to practical situations; claims prevention, and insurance. **F, W, Sp, Su**

EMT059 Survey of Human Disease

3 class hrs/wk, 3 cr.

An overview of human pathology. Includes etiology, injury, and illness. **Offered as needed.**

EMT060 Emergency Medical Technician II

5 class and 3 lab hrs/wk, 6 cr.

Role and responsibilities of EMT personnel, patient assessment, shock management, fluid therapy, and introduction to pharmacology. **Prerequisite:** Acceptance into EMT program; EMT I certification or GED or high school

graduate preferred and meet current state requirements. Class fee \$20. W

EMT061 Emergency Medical Technician III, Part A

3 class and 5 lab hrs/wk, 5 cr.

Continuation of EMT060. Includes drug administration, anatomy and physiology of the respiratory system, assessment, pathophysiology and management of respiratory problems, anatomy and physiology of cardiovascular system and assessment of arrhythmias. **Prerequisite:** EMT060; current EMT I or EMT II certification in Oregon; meet current state requirements. Class fee \$15. Sp

EMT062 Emergency Medical Technician III, Part B

3 class and 11 lab hrs/wk, 6 cr.

Continuation of EMT061. Includes clinical experience in the following areas: emergency room, intensive care unit, operating room, mobile intensive care unit, coronary care unit. **Prerequisite:** EMT061; current EMT I or EMT II certification in Oregon; concurrent enrollment in EMT280B; meet current state requirements. Class fee \$15. F

EMT063 Emergency Medical Technician III, Part C

2 class and 11 lab hrs/wk, 5 cr.

Continuation of EMT062. **Prerequisite:** EMT062; current EMT I or EMT II certification; concurrent enrollment in EMT280B; concurrent enrollment or successful prior completion of EMT055; meet current state requirements. Class fee \$15. W

EMT064 Emergency Medical Technician IV (Paramedic)

4 class and 11 lab hrs/wk, 8 cr.

Continuation of EMT063. Management of CNS disorders, soft tissue injuries, muscular and skeletal problems, fractures, medical emergencies, emotional disturbances, emergency childbirth, gynecological problems, and care of neonatal and pediatric patients. **Prerequisite:** EMT063; current EMT I or EMT II certification; concurrent enrollment in EMT280B; concurrent enrollment or successful prior completion of EMT068 and EMT055 Class fee \$15. Sp

EMT068 Extrication for EMTs

1 class and 1 lab hr/wk, 1 cr.

Introduces techniques and tools of patient extrication, emphasizing application to traffic accidents, as required for paramedic certification. **Prerequisite:** Current EMT I certification or consent of instructor. Class fee \$5. W, Sp, Su

EMT069 EMT Rescue

2 class and 4 lab hrs/wk, 3 cr.

Elementary procedures of rescue practices, systems, components, support, and control of rescue operations including ladder procedures and basic rescue tools. Introduction to techniques and tools of patient extrication, emphasizing application to traffic accidents, as required for paramedic certification. **Prerequisite:** EMT050 or EMT I certification. Sp

EMT070 Emergency Communication and Patient Transportation

2 class and 3 lab hrs/wk, 3 cr.

Ambulance operation, laws, maintenance, and safety; emergency response driving and route planning; communication systems, radio types, HEAR system, codes, and correct techniques. Class fee \$5. W

EMT074 Dispatching and Radio Communications

1 class and 2 lab hrs/wk, 2 cr.

Federal Communications Commission rules and regulations, radio frequency utilization, radio procedures, codes, voice and telemetry, transmission site selection and net composition, standard communication operating procedures, utilization coordination and systems design; patient medical reports. W

EMT075 Introduction to Emergency Medical Service

4 class hrs/wk, 4 cr.

Organization, funding, and role of ambulance and rescue service in medical care. Covers personnel, history and trends, evaluation, planning, disaster response, training, leadership, and career development. F

EMT079 Disaster Planning and Management

2 class and 2 lab hrs/wk, 3 cr.

Introduction to disaster planning including triage, management, human behavior, simulations, and mobilization of resources. W

EMT080 Emergency Medical Technology III, Part 1

4 class and 3 lab hrs/wk, 5 cr.

Designed to meet EMT III certification competencies including handling emergencies of a cardiovascular and/or respiratory nature. Through application of patient assessment, airway management, electrocardiogram interpretation, intravenous fluid and drugs, and electric counter-shock, patients are assessed and managed according to currently accepted protocols. **Prerequisite:** Associate degree students only, completion of a C or better grade in EMT060, and Oregon EMT I or II certification. Co-requisite: EMT081, EMT280B, BI233. Class fee \$15. Sp

EMT081 Emergency Medical Technology III, Part 1 Clinical

6 lab hrs/wk, 2 cr.

Clinical experience in direct patient care. The patients to whom the students are exposed have disease and injury conditions comparable to those the student will experience in the pre-hospital care situation. **Prerequisite:** Completion of a C or better in EMT060 and Oregon EMT I or 2 certification. Co-requisite: EMT080, EMT280B. Class fee \$15. Sp

EMT082 Emergency Medical Technology III, Part 2

4 class and 3 lab hrs/wk, 5 cr.

Continuation of EMT080. Designed to meet EMT III certification competencies including handling emergencies of a cardiovascular, respiratory, or general medical nature. Through application of patient assessment, airway management, EKG interpretation, electric counter-shock, and intravenous fluids and drugs, patients are assessed and managed according to currently accepted protocols. **Prerequisite:** EMT080, EMT081 with a C grade or better. Co-requisite: EMT083, EMT280B. Class fee \$15. F

EMT083 Emergency Medical Technology III, Part 2 Clinical

9 lab hrs/wk, 3 cr.

Clinical experience in direct patient care. The patients to whom the students are exposed have disease and injury conditions comparable to those the student will experience in the pre-hospital care situation. **Prerequisite:** Completion of a C or better in EMT080, EMT081, Oregon EMT I or II certification. Co-requisite: EMT082, EMT280B. Class fee \$15. F

EMT084 Emergency Medical Technology IV, Part 1

4 class and 3 lab hrs/wk, 5 cr.

Designed to meet EMT IV certification competencies including handling emergencies of a pediatric, geriatric, obstetric, and gynecologic nature. Currently accepted protocols and procedures are applied to patients presenting signs and symptoms consistent with emergencies in the above categories. **Prerequisite:** EMT082, EMT083 with grade C or better; EMT085, EMT280B. Class fee \$15. W

EMT085 Emergency Medical Technology IV, Part 1 Clinical

9 lab hrs/wk, 3 cr.

Clinical experience in direct patient care. The patients to whom the students are exposed have disease and injury conditions comparable to those the student will experience in the pre-hospital care situation. **Prerequisite:** Completion of a C or better in EMT082, EMT083, Oregon EMT I, II or III certification. Co-requisite: EMT084, EMT280B. Class fees, \$15. W

EMT086 Emergency Medical Technology IV, Part 2

4 class and 3 lab hrs/wk, 5 cr.

Designed to meet EMT 4 certification competencies including neurological, psychiatric and traumatic emergency procedures. Students apply principles of assessment and management to a variety of ill or injured patients. **Prerequisite:** EMT084, EMT085. Co-requisite: EMT087, EMT280B. Class fee \$15. Sp

EMT087 Emergency Medical Technology IV, Part 2 Clinical

6 lab hrs/wk, 2 cr.

Clinical experience in direct patient care. The patients to whom the students are exposed have disease and injury conditions comparable to those the student will experience in the pre-hospital care situation. **Prerequisite:** Completion of a C or better in EMT085, EMT086, Oregon EMT I, II or III certification. Co-requisite: EMT086, EMT280B. Class fee \$15. Sp

EMT280 Cooperative Work Experience

see AUM280.

ENG

English

ENG101, 102, 103 Introduction to English Literature

3 class hrs/wk, 3 cr.

Major literary documents and authors. Lecture-discussion and individual study on relation of authors and genres to their historical, cultural, intellectual, and aesthetic contexts. ENG101 covers Beowulf to the Renaissance in England, ENG102 from Shakespeare to the Romantic movement, and ENG103 from the last half of the Romantics to modern British fiction. **ENG101:F; ENG102:W; ENG103:Sp**

ENG104 Introduction to Fiction

3 class hrs/wk, 3 cr.

Analysis of fiction literature by reading works in English and in translation. Introduces the short story and novel, basic literary concepts, and terminology. **F, W, Sp, Su**

ENG105 Introduction to Dramatic Literature

3 class hrs/wk, 3 cr.

Dramatic literature by an international range of authors. Emphasizes students' perception of literary issues through discussion of basic dramatic conventions, characterization, theme, lit-

erary uses of language, and setting. **F, W, Sp, Su**

ENG106 Introduction to Poetry

3 class hrs/wk, 3 cr.

Analysis of poetry by reading works in English and in translation. Introduces literary concepts and terminology for poetry, and explores types, elements, and structures of poetry. **F, W, Sp, Su**

ENG107 Introduction to World Literature

3 class hrs/wk, 3 cr.

The Ancient World through the Middle Ages. Analyzes literary masterpieces to study literary and cultural foundations of the Western world. **F**

ENG108 Introduction to World Literature

3 class hrs/wk, 3 cr.

The Renaissance through the Romantic Revolt, 1450-1850. Analyzes literary masterpieces to study the literary and cultural foundations of the Western world. **W**

ENG109 Introduction to World Literature

3 class hrs/wk, 3 cr.

1850 - present. Analyzes literary masterpieces to study the literary and cultural foundations of the Western world. **Sp**

ENG116 College Vocabulary

3 class hrs/wk, 3 cr.

A study of affixes, root words, derived forms, loan words, etymologies, and word definitions to increase basic English vocabulary. **Prerequisite:** Score of eighth-grade level vocabulary or above on diagnostic test. **Offered as needed.**

ENG201, 202, 203 Introduction to Shakespeare

3 class hrs/wk, 3 cr.

Formal elements of Shakespeare's work, structure, characterization, setting, movement, and imagery, as well as more elusive elements of the plays. An analysis of Shakespeare's work in relation to the larger mode of tragedy, comedy, and genre of drama. Discussion of plays and critical essays on them. **ENG201:** Tragedies; **ENG202:** Comedies; and **ENG203:** Histories and late Romances. **ENG201: F; ENG202: W; ENG203: Sp**

ENG253 Introduction to American Literature

3 class hrs/wk, 3 cr.

Colonial, New Republic, and Romantic literature from 1607 to 1850. Literary devices and styles in the writings of Anne Bradstreet, Jonathan Edwards, Thomas Paine, Washington Irving, Nathaniel Hawthorne, Edgar Allan Poe, and Herman Melville. Promotes appreciation of literature. **F**

ENG254 Introduction to American Literature

3 class hrs/wk, 3 cr.

Transcendental, Realistic, and Naturalistic literature from 1850 to 1914. Includes writings of Ralph Waldo Emerson, Henry Thoreau, Walt Whitman, Emily Dickenson, Sarah Jewett, Henry James and Hamlin Garland. Promotes appreciation of literature. **W**

ENG255 Introduction to American Literature

3 class hrs/wk, 3 cr.

Discusses the relevancy of literature to the human condition from 1914 to the present. Includes writings of F. Scott Fitzgerald, Ernest Hemingway, Robert Frost, T.S. Eliot, Katherine Porter, Flannery O'Connor, Ralph Ellison, and

Sylvia Plath. Promotes appreciation of literature. **Sp**

ENG260 Introduction to Women Writers

3 class hrs/wk, 3 cr.

Focuses on achievements and perspectives of women writers through analysis of their literary works. **W**

ENG261 Introduction to Science Fiction

3 class hrs/wk, 3 cr.

Oral and written discussion of ideas, implications, and artistic devices found in various works dealing with the future, social engineering, adventure, and fantasy. **Sp**

ENG262 The American Western

3 class hrs/wk, 3 cr.

Emphasizes appreciation of classic and modern cowboy short stories and novels and myths about the West, nature, and heroic human potential. **Offered as needed.**

ENG263 Introduction to Detective Fiction

3 class hrs/wk, 3 cr.

An historical study from early stories by Poe and Doyle through various schools of American and British writings. **F**

ENG298A-C Independent Study: English

1-3 credits

Faculty-supervised independent study in an area of student interest. **Offered as needed.**

ENGR

Engineering, see also General Engineering

ENGR201 Electrical Fundamentals I

3 class and 2 lab hrs/wk, 4 cr.

Studies basic electrical circuit theory. Covers voltage and current relationships and fundamental methods of circuit analysis. Defines electrical circuit parameters such as resistance, inductance, and capacitance. Studies basic DC, AC, and natural responses of circuits. **Prerequisite:** MTH252. Class fee \$10. **F**

ENGR202 Electrical Fundamentals II

3 class and 2 lab hrs/wk, 4 cr.

Studies the Fourier-Series representation of periodic time-varying functions, sinusoidal steady-state analysis, basic operation of three-phase circuits, electric circuits which contain mutually coupled coils, functions of transformers in circuits, characteristics of resonant circuits, and use of operational amplifiers to perform various functions in circuits with periodic inputs. **Prerequisite:** MTH252, ENGR201, and concurrent enrollment in MTH256. Class fee \$10. **W**

ENGR203 Electric Control Fundamentals

3 class and 2 lab hrs/wk, 4 cr.

Studies LaPlace Transform and its use in electrical control theory including the bode diagram. Includes analysis of two-port circuits, Boolean algebra, and basic logic gates. **Prerequisite:** MTH252, MTH256, ENGR201. Class fee \$10. **Sp**

ENGR211 Statics

3 class and 2 lab hrs/wk, 4 cr.

Analysis of forces induced in structures and machines by various types of loading. **Prerequisite:** MTH251. **F**

ENGR212 Dynamics

3 class and 2 lab hrs/wk, 4 cr.

Kinematics, Newton's laws of motion, work energy, and impulse-momentum relationships applied to engineering systems. **Prerequisite:** ENGR211, MTH252 and PH211. **Sp**

ENGR213 Strength of Materials

3 class and 2 lab hrs/wk, 4 cr.

Covers properties of structural materials and analysis of stress and deformation in axially loaded members, circular shafts, and beams, and in statically indeterminate systems containing these components. **Prerequisite:** ENGR211 and MTH252. **W**

ENL

English as a Non-Native Language

ENL010 English as a Second Language—Speaking IV

4 class hrs/wk, 4 cr.

Designed for advanced non-native speakers of English. Focuses on improvement of conversation and listening skills and cultural understanding. Students may have hours in the language lab in addition to scheduled classes. **Prerequisite:** STEL test or consent of instructor. Class fee \$2. **Offered as needed.**

ENL015 English as a Second Language—Writing IV

4 class hrs/wk, 4 cr.

A writing course for non-native English speakers with emphasis on the written skills needed for communication including sentence structure, punctuation, and paragraph organization. Students have hours in the language lab in addition to scheduled classes. **Prerequisite:** STEL test or consent of instructor. Class fee \$2. **Offered as needed.**

ENL110 English as a Non-Native Language: Speaking and U.S. Culture

4 class hrs/wk, 4 cr.

Designed for non-native speakers of English. Focuses on improving English oral skills and knowledge of current U.S. culture. **Prerequisite:** A score of 33 or above on the STEL test or consent of instructor. Class fee \$2. **F, Sp**

ENL111 English as a Non-Native Language II

3 class and 2 lab hrs/wk, 4 cr.

For students whose first language is not English. Emphasizes using complex English structure and advanced written and oral grammar with a contextual focus on American culture and current topics of interest. **Prerequisite:** A score of 38-42 on the STEL test or consent of instructor. Class fee \$2. **F, W**

ENL112 English Non-Native Language: Writing

4 class hrs/wk, 4 cr.

Comprehensive introductory writing course designed for non-native speakers of English. Introduces the writing process, organization, a variety of expository writing techniques and styles, and the development of the research paper. **Prerequisite:** Successful completion of ENL111 or a score of 42 or above on the STEL or consent of instructor. Class fee \$2. **W, Sp**

ES

Emergency Services

ES071 Work Place Safety Skills

4 class and 12 lab hrs/wk, 1 cr.

Combines first aid, CPR, and hazardous materials awareness to meet minimum federal and state occupational safety requirements. Students completing the course will receive American Red Cross first aid certification. Meets OSHA requirements. Class fee \$7. **F, W, Sp, Su**

FA**Film Arts****FA251 Film Production**

3 class hrs/wk, 3 cr.

Use of the camera, equipment, and lighting to capture proper image, action, and illusions of motion. **F, W, Sp**

FA255 Understanding Movies

2 class and 3 lab hrs/wk, 3 cr.

History, technique, and art of film. In-class film viewing and discussion. How to evaluate a variety of stylistic approaches. Class fee \$18. **F**

FA256 Understanding Movies: The Great Film Directors

2 class and 3 lab hrs/wk, 3 cr.

An analysis of films from the standpoint of the director-creator. Studies works of one or two directors in an effort to understand and critique individual films as the works of artists, especially within the context of a body of work expressing a particular and unique view of the world. Class fee \$18. **W**

FA257 Understanding Movies: Themes and Genres

2 class and 3 lab hrs/wk, 3 cr.

An examination of a number of films representing a single genre (Westerns, comedies, etc.) or expressing common themes. Focuses on various directors and their diverse styles, techniques, and personal expressions. Class fee \$18. **Sp**

FE**Field Experiences****FE205 Job Search Techniques**

1 class hr/wk, 1 cr.

How to find and apply for a job, prepare and write resumes, gather job information, prepare for interviews, learn job requirements and what employers look for in an employee. **F, W, Sp**

FE280 Cooperative Work Experience

see AUM280.

FN**Foods/Nutrition, see also Hospitality Systems****FN199 Nutrition Basics**

2 class hrs/wk, 2 cr.

Application of basic concepts of nutrition and health to menu planning, food purchasing, food preparation, and food consumption. **Sp**

FN225 Nutrition

4 class hrs/wk, 4 cr.

The study of nutrients and their ingestion, digestion, absorption, transport, metabolism, interaction, storage, and excretion. Course includes the study of the environment and of human behavior as it relates to these processes. **F, W, Sp**

FOR**Forestry****FOR051 General Forestry**

3 class hrs/wk, 3 cr.

An orientation and overall picture of forestry in the United States. Includes how forests and man are inter-dependent, the role of forests in the building of the country, the distribution and character of forests, what forests and forestry are, silvicultural systems, reforestation, and the history of forest protection as related to fire, insects, animals, and disease. **F**

FOR052 Tools and Equipment

1 class and 2 lab hrs/wk, 2 cr.

Proper use and care of hand tools and power tools commonly used in forestry work. Includes fundamentals of falling and bucking, sharpening edged tools, and safety in the woods. Tools include files, axes, pulaskis, hazel hoes, shovels, peevies, wedges, mauls, and crosscut and chain saws. Includes practical work for cooperating individuals and agencies. Discussion and practice of foremanship. Class fee \$5. **F**

FOR053 Introduction to Engineering Computers and Calculators

3 lab hrs/wk, 1 cr.

Hands-on experience using calculators to solve forestry and surveying problems. Hands-on experience using a word processor. **F**

FOR057 Forestry Plane Surveying I

2 class and 6 lab hrs/wk, 4 cr.

A beginning study of surveying techniques including fundamentals of taping and leveling, care and handling of surveying instruments, and office procedures. Field work provides practical application of the techniques. Class fee \$5. **Sp**

FOR058 Forestry Plane Surveying II

3 class hrs and 6 lab hrs/wk, 5 cr.

A continuation of FOR057. Studies distance and direction measurement, employing transits, theodolites, electronic distance measurer (EDM), and steel tapes; traversing and associated office computations; areas; stadia; circular curves; and brief review of public land surveys. **Prerequisite:** MTH053 or concurrent enrollment. Class fee \$5. **F**

FOR061 Tree Identification I

1 class and 2 lab hrs/wk, 2 cr.

How to identify conifer tree species by common and scientific names. **W**

FOR062 Tree Identification II

1 class and 2 lab hrs/wk, 2 cr.

Identification of native hardwoods of Oregon. Includes common forest shrubs. Covers use of dichotomous genus key and of terms. Features field recognition labs and use of scientific names. **Sp**

FOR066 Forest Products

3 class and 3 lab hrs/wk, 4 cr.

Major non-chemical wood products industries and a brief introduction to the pulp and paper industry. Emphasizes economic importance, properties, uses, and manufacturing processes. Class fee \$5. **W**

FOR067 Forest Sciences

3 class hrs/wk, 3 cr.

A study of important forest diseases, forest insects, and animal influences on trees and forests. Covers descriptions, damage assessment, damage control techniques, and operational control projects. **Sp**

FOR068 Forest Photogrammetry

2 class and 2 lab hrs/wk, 3 cr.

Basic principles of photogrammetry and photo interpretation emphasizing uses of vertical aerial photographs in forest industries. **Prerequisite:** MTH052. Class fee \$5. **Sp**

FOR071 Fire Protection and Control

3 class and 2 lab hrs/wk, 4 cr.

Studies the causes, nature, and behavior of wildfires, primarily of field and forest. Covers the importance and effects of the combination of weather, fuels, and topography in relation to wildfire ignition and dynamics. Techniques and strategies of intervention by fire fighters to prevent and suppress the wildfires by breaking up

the basic fire triangle using hand tools, water, air and land machines. **F**

FOR073 Forestry Seminar I

1 class hr/wk, 1 cr.

Group and individual research and sharing of information valuable to the student desiring summer employment in forestry-related work. Topics include (but are not limited to) employment applications, resumes, job search, interviewing, working conditions, success on a job, and current opportunities. Explores technical progress in forestry and related fields. **W**

FOR076 Timber Cruising I

3 class and 4 lab hrs/wk, 4 cr.

Care and use of forestry instruments and measurement and appraisal of trees, stands, and forest sites. Emphasizes mapping, fixed-plot and cruising in field labs. Includes regeneration surveys, growth and yield, stumpage valuation, and metric conversion. **Prerequisite:** FOR057, FOR061, MTH052. Class fee \$5. **Sp**

FOR077 Timber Cruising II

3 class and 4 lab hrs/wk, 4 cr.

Continuation of FOR076. Covers variable-plot and 3-P cruising methods in detail. Introduces regeneration surveys, stand inventory methods, growth and yield, stumpage valuation, and metric conversion. **Prerequisite:** FOR076, MTH053 (or concurrent enrollment), FOR058 (or concurrent enrollment). Class fee \$5. **Sp**

FOR078 Scaling Practices

2 class and 6 lab hrs/wk, 4 cr.

Theory and principles of log scaling. Includes field scaling of logs for net scale. Discusses types of defects and corresponding deductions for each in field observations. **Prerequisite:** FOR061. Class fee \$5. **W**

FOR081 Timber Harvesting Practices

2 class and 6 lab hrs/wk, 4 cr.

An introduction to log harvesting. Covers recognition and uses of tools, equipment, and cable systems; safety, terminology, customs and management. Class fee \$5. **F**

FOR083 Forestry Reports

3 class hrs/wk, 3 cr.

Principles of writing memos, letters, and technical forestry reports and preparing maps. Particularly for forest technicians working in forestry field operations. **Prerequisite:** COM051 or equivalent and FOR076. **W**

FOR085 Forestry Contracts

3 class hrs/wk, 3 cr.

How to read a bid prospectus, prepare a formal bid document, and complete a contract successfully. **W**

FOR088 Methods of Supervision

3 class hrs/wk, 3 cr.

Introduces techniques of supervision. Covers important aspects of supervision such as leadership, planning, communication, motivation, organization, problem solving, work methods, training, and problem areas. Examines managerial practices which promote an understanding of the work environment. **Sp**

FOR091 Silviculture

3 class hrs/wk, 3 cr.

Tree habits, forest ecology, and silvicultural practices in the management of Pacific Northwest forest lands and timber. **Prerequisite:** FOR051, FOR061, FOR062, FOR067 and FOR076. **W**

FOR093 Forestry Seminar II

1 class hr/wk, 1 cr.

A continuation of FOR073. **Prerequisite:** Consent of program chair. **W****FOR096 Forest Road Surveying**

2 class and 6 lab hrs/wk, 4 cr.

Principles and practices of forest road surveying, design, and layout, including locations in field, grades, profiles, drainage, curves, cross-sections, earthwork computations, slope-staking, and referencing. **Prerequisite:** Student must have knowledge of basic math, trigonometry, leveling, and directions. Training with the surveying equipment used in leveling and with transit or compass and tape surveys is also required. * MTH053, FOR057, and FOR058.Class fee \$5. **Sp****FOR280 Cooperative Work Experience**

see AUM280.

FR**French****FR101, 102, 103 First Year French, Terms I, II, III**

4 class hrs/wk, 4 cr.

An introduction to the grammar and vocabulary of the French language. Emphasizes use of common French expressions with a basic understanding of grammatical principles. Covers some French history and culture. **Prerequisite:** FR102: FR101 or one year of high school level-French, or consent of instructor. FR103: FR101, 102, or one year of high school level-French, or consent of instructor. Class fee \$2 each. **FR101: F; 102: W; 103: Sp****FR201, 202, 203 Second Year French, Terms I, II, III**

4 class hrs/wk, 4 cr.

A continuation of study and application of grammar, vocabulary, and syntax. Emphasizes self-expression. Includes some study of French literature and culture. **Prerequisite:** FR201: one year of college French or two years of high school level-French or consent of instructor. FR202: FR201 or three years of high school-level French or consent of instructor. FR203: FR202, or three years of high school-level French, or consent of instructor. Class fee \$2 each. **FR201: F; 202: W; 203: Sp****FRP****Fire Protection****FRP050 Introduction to Fire Protection**

3 class hrs/wk, 3 cr.

Philosophy and history of fire protection. History of loss of life and property by fire, responsibility of fire departments in a community, organization and function of fire protection agencies and allied organizations, sources of professional literature, survey of professional career opportunities and requirements, and development of resume. **F****FRP051, 052, 053; 061, 062, 063 Fire Incident Related Experience**

9 lab hrs/wk, 3 cr.

Orientation to fire incident related experience courses, engine company organization, engine configuration, small tools and minor equipment, basic hose practices and lays, use of protective breathing apparatus, response, district maps, phantom box areas, communication procedures, and fire apparatus driving practices. **Prerequisite:** Completion of FRP051, 052, 053, 061, 062, and 063 meets OregonFire Standards and Accreditation Board requirements for Firefighter I. Class fee \$15 each. **F, W, Sp****FRP054 Water Supply Operations**

3 class hrs/wk, 3 cr.

Covers water supply operations in fire service, including pre-fire planning operations, water quantity calculations, water source options, delivery systems and options, and hydraulic calculations. Designed to meet the competencies as set forth by the Fire Standards and Accreditation Board in Firefighter II, Apparatus Operator I and II. **Prerequisite:** MTH070, FRP052, or consent of instructor. **Sp****FRP055 Elementary Science for Firefighters**

3 class and 2 lab hrs/wk, 4 cr.

Practical general science. Covers matter, laws of motion and force, work and machines, mechanics of liquids, magnets and magnetism, electricity, atomic energy, and radiation. Laboratory time provides help in clarifying the principles and procedures covered in class. **Prerequisite:** MTH065 or equivalent or consent of instructor. Class fee \$5. **W****FRP056 Fire Service Rescue Practices**

2 class and 4 lab hrs/wk, 4 cr.

Use of rescue tools and related equipment, common rescue carries, search and rescue procedures, handling nets and lines, care of victims and transportation, excavation, and electrical rescue procedures. **Prerequisite:** FRP051 and FRP052 or EMT069. Class fee \$5. **W****FRP057 Fire Science**

3 class and 2 lab hrs/wk, 4 cr.

Physical and chemical properties of substances, acids and bases, salts and solutions, weights and measurements, metals, application of chemistry to fire problems. Laboratory time provides clarifying demonstrations and experiments. **Prerequisite:** FRP055 or consent of instructor. Class fee \$5. **W****FRP058 Fire Pump Construction and Operation**

2 class and 2 lab hrs/wk, 3 cr.

Theory of pump operation, types and features of various pumps, practical operation of fire pumps and accessories. Includes drafting, hydrant and tanker operations, and rule of thumb fire ground hydraulic calculations. **Prerequisite:** FRP054 or consent of instructor. **Sp****FRP059 Major Emergency Strategy and Tactics**

3 class hrs/wk, 3 cr.

Studies several types of major emergencies and principles relating to incident priorities, resource management, and tactical operations. **Prerequisite:** FRP050, FRP053, FRP070, or consent of instructor. **W****FRP060 Fundamentals of Fire Prevention**

3 class hrs/wk, 3 cr.

Philosophy and history of fire protection; review of life and property loss statistics; fire protection agencies; current and future fire protection problems; fire prevention programs; general public education; development and enforcement of fire prevention laws and regulations; responsibility of state fire marshals, local fire departments, and property owners; fire safety; reporting fire prevention activities; drills; policies; public relations; and DEQ regulations. Emphasizes "company inspections." **W****FRP061, 062, 063. See FRP051, etc.****FRP061H, 062H, 063H Fire Incident Related Experience Honors**

9 lab hrs/wk, 3 cr.

Provides the student officer with practice in supervision of a shift of firefighters during a 24-hour shift period. Covers assisting staff with training cadet firefighters and apparatus operators during drill sessions and supervising and directing cadet crews during emergency responses and operations. Students taking this course will act as a liaison to staff in regard to F.I.R.E. and complete special projects and assignments given by staff. **Prerequisite:** FRP053 and consent of instructor. Class fee \$15. **F, W, Sp****FRP064 Hazardous Materials Operations**

3 class hrs/wk, 3 cr.

Provides knowledge and skills necessary to safely respond to and manage the defensive operations involved in a chemical emergency. **Prerequisite:** Concurrent enrollment in FRP050. **F****FRP065 Hazardous Materials Technician II (Part A)**

3 class and 4 lab hrs/wk, 4 cr.

A continuation of FRP064. How to use specialized equipment and techniques in responding safely to emergencies involving flammable combustible liquids, explosives, toxic material, and radioactive material. **Prerequisite:** FRP064 and successful completion Task Performance 3041. Class fee \$15. **W****FRP066 Building Construction for Fire Suppression**

3 class hrs/wk, 3 cr.

Fire problems inherent in structural elements of buildings. How knowledge gathered through interpretation of blueprints and inspection of various building types provides a basis for applying effective extinguishment practices, with adequate safeguards for personnel. **W****FRP067 Hazardous Materials Regulations**

3 class hrs/wk, 3 cr.

How to handle emergencies involving hazardous materials. Includes recognition of the hazards, handling, storing, and documentation. **Prerequisite:** FRP065, FRP068 or consent of instructor. **W****FRP068 Hazardous Materials Technician II (Part B)**

3 class and 4 lab hrs/wk, 4 cr.

Safe handling of emergencies involving hazardous materials in transport and in storage. **Prerequisite:** FRP065. Class fee \$15. **Sp****FRP069 Fire Department Leadership**

3 class hrs/wk, 3 cr.

Explains the unique aspects of a company officer's job, basic functions of management and principles of supervision, and self-analysis to become a better supervisor. Covers leadership concepts, types of supervisors, attitudes, cooperation, individual differences, motivation, communication, discipline, grievances, evaluating performance, planning, organizing, and making decisions. **Prerequisite:** FRP050, FRP060 and PSY100 or consent of instructor. **Sp****FRP070 Fire Fighting Tactics and Strategy**

3 class hrs/wk, 3 cr.

Covers the fire command system, rescue, offensive and defensive fire attack, property conservation, staging and apparatus place-

ment, sectoring and company functions, communications, and command procedures. **F**

FRP071 Fire Protection Systems and Extinguishers

3 class hrs/wk, 3 cr.

Portable extinguisher equipment, sprinkler systems, protection systems for special hazards, fire alarm and detection systems, and ventilating systems. **Prerequisite:** FRP065 and FRP059 or consent of instructor. **W**

FRP072 Fire Codes and Ordinances

3 class hrs/wk, 3 cr.

A study of the uniform fire code, uniform building code, flammable liquid and other codes relating to fire prevention and life safety. **Prerequisite:** FRP050 and FRP060 or consent of instructor. **F**

FRP073 Firefighters' Law

2 class hrs/wk, 2 cr.

Firefighters' legal responsibilities in driving, inspection, alarms and communications, and other fire protection activities. Firefighters' rights, duties, liabilities, and participation in legal activities including state and local fire marshal laws relating to fire protection. **Sp**

FRP074 Fire Investigation

3 class and 2 lab hrs/wk, 3 cr.

Burning characteristics of combustibles, interpretation of clues, burn patterns leading to points of origin, identification of incendiary indications, sources of ignition and ignited materials, and preservation of fire scene and evidence. **F**

FRP075 Aircraft Crash/Fire Rescue

1 class and 3 lab hrs/for 4 weeks, 1 cr.

Pre-planning activities for on- and off-airport emergencies. Approach, positioning, rescue procedures, and application of control techniques. **Prerequisite:** FRP051, 052, 053, 061, 062 or consent of instructor. **Sp**

FRP077 Fire Service Instructor Training

12 class and 10 lab hrs, 2 cr.

The fire service instructor and his job: principles of learning; teaching procedures (preparing course outlines and lesson plans, managing a classroom, and evaluation techniques); training aids; and devices. **Prerequisite:** Second-year status with fire protection agency or consent of instructor. **Offered as needed.**

FRP079 Wildland Urban Interface

2 class hrs/wk, 2 cr.

Studies causes and prevention of natural cover fires, ground cover fire behavior, standard fire-fighting orders, urban interface problems, fire suppression methods, and fireground management. **Prerequisite:** FRP053 or consent of instructor. **Sp**

FRP080 Hazardous Materials for Inspectors

3 class hrs/wk, 3 cr.

How to handle inspections involving hazardous materials. Covers the requirements for handling, storing, and reporting on the various hazardous materials. **Prerequisite:** FRP065, FRP068 or consent of instructor. **F**

FRP081 Fire Prevention Inspection

3 class hrs/wk, 3 cr.

Methods of contemporary fire prevention inspection practices. Includes preparation, pre-approach information, written inspection notices, relations with owners and occupants, compliances. **Prerequisite:** FRP050, FRP060, FRP072 or consent of instructor. **Offered as needed.**

FRP082 Evidence Photography for Fire and Arson Investigators

3 class hrs/wk, 3 cr.

How to improve quality and efficiency level of evidence photography, and use a broad spectrum of photographic knowledge to further the science of forensic photography. **Prerequisite:** Consent of instructor. Class fee \$15. **Offered as needed.**

FRP084 Hazardous Materials Technician III

5 class and 2 lab hrs/wk, 6 cr.

Assumption of command activities involved with operating a hazardous materials response team including preparedness, incident response, support, logistics, and finance. **Prerequisite:** FRP065, FRP068. **Offered as needed.**

FRP085 Industrial Fire Protection

3 class hrs/wk, 3 cr.

Specific concerns and safeguards related to business and industrial fire protection organization and development, fire prevention programs, fire brigade organization, cooperation between public fire departments and private fire brigades, industrial fire hazards, and prevention for industrial plants. **Prerequisite:** Second year standing in fire protection or building inspection curriculum or consent of instructor. **Offered as needed.**

FRP086 Advanced Detection and Protection Systems

3 class hrs/wk, 3 cr.

Examines and evaluates specialized extinguishing systems and their suppression agents and principles. Covers household warning systems, fire detection and alarm systems, protective signaling systems, explosion systems, and thermal smoke and flame detection systems. **Prerequisite:** FRP057 or equivalent and FRP071 or consent of instructor. **Offered as needed.**

FRP087 Fire Insurance Fundamentals

3 class hrs/wk, 3 cr.

The relationship of fire defenses and fire losses to insurance rates, basic insurance principles, fire loss experience and loss ratio applying the ISO grading schedule and state regulations of fire insurance. **Offered as needed.**

FRP088 Fire Problem Analysis

1 class and 2 lab hrs/wk, 3 cr.

Provides training in various analysis and planning processes to determine specific public fire safety education needs. Requires 16 class hours plus 30 field project hours. **Prerequisite:** Participation as paid or volunteer member of local or regional fire service or consent of instructor. **Offered as needed.**

FRP280 Cooperative Work Experience

see AUM280.

FS

Food Service, see also Hospitality Systems Management

FS055 Dining Room Management

2 class hrs/wk, 2 cr.

Introduction to restaurant operation of a dining room. Provides background and experience in layout aspects of service procedures. Discusses effective service improvement strategies. **F, Sp**

FS060 Basic Food and Nutrition

2 class hrs/wk, 2 cr.

Principles of basic food preparation, nutritional values of foods, and retention of nutrients in cooking for commercial restaurants, fast foods

operations, institutions, and industrial catering. **F**

FS061 Sanitation and Safety

2 class hrs/wk, 2 cr.

Food services sanitation and environmental health, bacteriology and food contamination, personal hygiene and safety practices and legal regulations of federal and state agencies pertaining to restaurant sanitation and USDA requirements. **F**

FS070 Purchasing and Stores Control

3 class hrs/wk, 3 cr.

Techniques of buying for large-scale food operations. Compares food quality, establishes food specifications using federal and state grade standards, and studies receiving stock and issuing controls. **W**

FS071 Beverage Management

2 class hrs/wk, 2 cr.

An introduction to hospitality beverages. Stresses industry standards and practices, health codes, governmental regulations, and server rights and responsibilities, as well as customer standards and expectations. **F**

FS072 Food Service Facilities Design

3 class hrs/wk, 3 cr.

Application of design to institutional and restaurant food service facilities. Includes principles of layout design laws, regulations concerning food service operations, and set-up of lounge operations. Design methods and techniques cover fast food to full-service operations. Features speakers from various governmental agencies which regulate construction and operation of food service facilities. **W**

FS073 Hospitality Systems Management

3 class hrs/wk, 3 cr.

An in-depth study of methods and techniques employed in restaurants to accomplish effective and efficient operations. Covers organizational analysis, site studies, laws and regulations, performance based on objectives, planning, and decision making. Uses computer program CRASE (Cornell Restaurant Administration Simulation Exercise) which emulates the "real world" situations. CRASE offers students an opportunity to explore the factors that affect restaurant sales and profits. **W**

FS087 Cooking Techniques for Schools and Institutions

15 class and 25 lab hrs/for 1 wk, 2 cr.

Supervised preparation of beef, poultry, and ground meats in a commercial kitchen. Includes preparation of entrees, stocks, and sauces using professional techniques. Covers boning procedures, the application of heat to food, temperature control and storage procedures, safety and sanitation regulations, and calculation of food costs. Class fee \$153. **Su**

FS088 Pantry Techniques for Schools and Institutions

15 class and 25 lab hrs/for 1 wk, 2 cr.

Supervised preparation of sandwiches, salads, and salad dressings in a commercial kitchen. Includes procedures for proper storage of fruits and vegetables. Covers professional techniques for garnishing, vegetable carving, and salad and sandwich bar presentation; safety and sanitation regulations; and calculation of food costs. Class fee \$153. **Su**

FS089 Baking Techniques for Schools and Institutions

15 class and 25 lab hrs/for 1 wk, 2 cr.

Supervised preparation of baked goods in a commercial bakery. Includes preparation of

quickbreads and variations, coffee cakes, muffins, yeast dough (including French, bun, sweet and Danish), fillings and icings. Covers calculating food costs, methods of packaging and storage, and bake shop safety and sanitation regulations. Class fee \$153. **Su**

FS090, 091, 092 Dietary Manager I, II, III
3 class and 5 lab hrs/wk, 5 cr.
Three-course sequence covering essential requirements of the Dietary Managers Association and state and federal regulations establishing qualifications of dietetic supervisors. Class fee \$20 each. **FS090: F; FS091: W; FS092: Sp**

FS093 Management Techniques for Schools and Institutions
15 class and 25 lab hrs/for 1 wk, 2 cr.
An in-depth study of the methods and techniques employed in institutions and commercial food service establishments to accomplish effective and efficient operations. Covers personnel practices, labor relations, staff development, communication, work systems, planning, decision making, problem solving, and current management techniques. Uses the computer program CRASE (Cornell Restaurant Administration Exercise) which emulates the "real world" of food service situations. CRASE offers students an opportunity to explore the factors that affect restaurant sales and profits. Class fee \$153. **Su**

FS094 Advanced Baking Techniques for Schools and Institutions
15 class and 25 lab hrs/for 1 wk, 2 cr.
Preparation of a variety of tarts, cakes, and French pastries. Students will prepare puff pastry dough and variations for both entree and dessert use. Covers cake decorating including mixing icings and colors, preparing cakes, and using borders, flowers and inscriptions. Stresses marketing and sales techniques. Class fee \$153. **Su**

FS099 Bartending
2 class and 1 lab hr/wk, 2 cr.
Introduction to bar operation. Emphasizes economic values, preparation and dispensation of alcoholic beverages, purchasing, ethics, and management. Stresses legal responsibilities, awareness of abuses, safety and sanitation. Provides training for entry-level employment and supplemental training for those currently employed. May interest home bartenders. Class fee \$20. **Offered as needed.**

FS280 Cooperative Work Experience
see AUM280.

G

Geology

G142 The Geology of Pacific Northwest Volcanoes, Mountains, and Glaciers
3 class and 2 lab hrs/wk, 4 cr.
Studies the nature and origin of Northwest mountains and mountain ranges. Includes volcanoes, mountain building, and glacial sculpture. Recommended for persons interested in collecting rocks and minerals, rockhounding, mining, and prospecting. Class fee \$8. **Offered as needed.**

G143 Pacific Northwest Rocks and Minerals
3 class and 2 lab hrs/wk, 4 cr.
Studies identification, occurrence, and origin of common Northwest rocks and minerals and properties of precious, semiprecious, and ornamental stones including rocks and minerals

which are economically important. Class fee \$8. **Offered as needed.**

G144 The Geology of Pacific Northwest Rivers, Streams and Deserts
3 class and 2 lab hrs/wk, 4 cr.
Studies the geomorphology of Pacific Northwest rivers, lakes and deserts, especially those in Oregon. Also studies the ancient landscapes and environments as indicated by fossils. Class fee \$8. **Offered as needed.**

G160A-E Regional Geologic Field Studies
2 class and 3 lab hrs/wk, 3 cr. each
Introductory geologic field study of specific Northwest regions. Includes an evening orientation session prior to a weekend of field study with a follow-up evening seminar. Trip worksheets, field diary, and term paper are required. **A: Crater Lake Story B: Oregon Coastal Landforms C: The John Day Country and Thundereggs/Agates D: Origin of the Columbia Gorge E: Oregon Moon Country-Bend area.** Class fee \$16 each. **Offered as needed.**

G201 Geology
3 class and 3 lab hrs/wk, 4 cr.
A systematic study of the nature and origin of common rocks and minerals. Identification techniques applied in laboratory and on field trips. Class fee \$12. **F**

G202 Geology
3 class and 3 lab hrs/wk, 4 cr.
A broad non-quantitative, descriptive survey of geologic landforms. Map interpretation activities applied in laboratory and on field trips. Class fee \$12. **W**

G203 Geology
3 class and 3 lab hrs/wk, 4 cr.
Earth's history interpreted through geophysics and plate tectonics. Couples paleontologic laboratory work with field trips. Class fee \$12. **Sp**

GE

General Engineering, see also Engineering

GE101 Engineering Orientation
1 class and 2 lab hrs/wk, 2 cr
An introduction to the engineering profession: its disciplines, principles, ethics and practice. Includes creative and logical problem solving, methods of analysis and design of engineering problems and projects, and the use of hand held calculators and computers. **Prerequisite:** MTH111. **F**

GE102 Engineering Computations
2 class and 2 lab hrs/wk, 3 cr.
Acquaints engineering students with the use and operation of the microcomputer. Programs will be developed and used by students to solve typical engineering problems. Structured programming techniques will be emphasized. **Prerequisite:** MTH111. **W**

GE103 Engineering Computations
2 class and 2 lab hrs/wk, 3 cr.
Systematic approach to engineering problem solving using computers. Includes applications in computer analysis, graphing, and data base operations using spread sheet software. **Prerequisite:** GE102 or another FORTRAN programming course. **Sp**

GE115 Graphics
6 lab hrs/wk, 3 cr.
Graphic communication, multiview and pictorial representation, graphical analysis and solu-

tions, and introduction to computer-aided drafting. Class fee \$10. **F**

GEOG

Geography

GEOG105 Introductory Geography
3 class hrs/wk, 3 cr.
Physical elements of geography and Earth's environment. Focuses on water, landforms, atmosphere, vegetation, and soils. Introduction to problems of graphic representation of the earth. **F**

GEOG106 Introductory Geography
3 class hrs/wk, 3 cr.
Introduces cultural elements of geography including human population, agriculture, political patterns, language, religion, folk culture, popular culture, ethnic culture, urban landscapes, and industry and transportation. **W**

GEOG107 Introductory Geography
3 class hrs/wk, 3 cr.
An introduction to historical evolution of cultures in the context of man-land relations. Focus is on culture areas, diffusion, and ecology in the past. Special emphasis on cultural landscapes in East Africa, South Asia, the Middle East, Mediterranean Europe, Northwest Europe, and the United States. **Sp**

GEOG201 World Regional Geography—The Developed World I
3 class hrs/wk, 3 cr.
Introduces human elements of geography in technically advanced societies. Discusses regional populations, environments, ways-of-life, and place-name location studies in Europe, North America, the Soviet Union, Japan, and modern Oceania. **Offered as needed.**

GEOG202 World Regional Geography—The Developing World
3 class hrs/wk, 3 cr.
Introduces the human elements of geography in emerging countries. Discusses regional populations, environments, ways-of-life, and place-name location studies in Latin America, China, Monsoon Asia, the Middle East, and Africa. **Offered as needed.**

GER

German

GER101, 102, 103 First Year German, Terms I, II, III
4 class hrs/wk, 4 cr.
Introduction to understanding, speaking, reading, and writing the German language, and to the culture of German-speaking countries. Emphasis on developing listening and speaking skills. A variety of activities and audio-visual materials are used to practice these skills. **Prerequisite:** GER102: GER101 or equivalent. GER103: GER102 or equivalent. Class fee \$2 each. **GER101: F; 102: W; 103: Sp**

GER201, 202, 203 Second Year German, Terms I, II, III
4 class hrs/wk, 4 cr.
Continues to develop skills needed to understand, speak, read, and write German. Reviews and continues grammar study, and incorporates German culture through readings and discussion. Focuses on oral expression and improving conversational skills. **Prerequisite:** GER201, GER202, GER203: First Year German or equivalent. Class fee \$2 each. **GER201: F; 202: W; 203: Sp**

GS**General Sciences****GS104 Physical Science**

3 class and 3 lab hrs/wk, 4 cr.

An integrated study of forces and motions in the physical world. Class fee \$12. F

GS105 Physical Science

3 class and 3 lab hrs/wk, 4 cr.

A broad, nonquantitative, descriptive survey of chemical principles which are relevant to everyday life. Class fee \$12. W

GS106 Physical Science

3 class and 3 lab hrs/wk, 4 cr.

Introduces various branches of earth sciences. Includes basic terminology, fundamental processes and respective interrelations. Class fee \$12. Sp

GS111 Oceanus

3 class and 3 lab hrs/wk, 4 cr.

A telecourse which focuses on the marine environment as a unique feature of planet Earth. Includes video viewing, written worksheet lessons, at-home quizzes, topical outside reading summaries, and an on-campus exam. Offered as needed.

GS112 Planet Earth

3 class and 3 lab hrs/wk, 4 cr.

A telecourse which investigates geoscience topics by introducing students to internationally-recognized experts who share their theories, models, and opinions. On-location film footage will take students to places and events they might not otherwise see. Includes video viewing, written worksheet lessons, at-home quizzes, topical outside reading summaries, and an on-campus exam. Offered as needed.

GS113 Earth, Sea, and Sky

3 class and 3 lab hrs/wk, 4 cr.

A telecourse survey of the multiple facets of the earth sciences: astronomy, meteorology, climatology, oceanography, and geology. Offered as needed.

GS120 Rudiments of Meteorology

3 class hrs/wk, 3 cr.

A descriptive treatment of contents of the atmosphere, cloud and precipitation types, weather instruments, thunderstorms, cyclones, hurricanes, air masses, fronts, and weather forecasting. Offered as needed.

Health Care Support Services,
see Allied Health, Medical Assisting**HD****Human Development****HD100 Orientation to Chemeketa:
Successful Entry into College**

11 class hrs/wk for 1 wk, 1 cr.

Acquaints new students with success strategies and the procedures, policies, and culture with which they will be dealing while pursuing their academic goals at Chemeketa. Includes lectures, campus tours, guest speakers, group activities, and group discussions. F, W, Sp, Su

HD112 Study Skills

3 class hrs/wk, 3 cr.

How to study effectively to succeed in college. Includes note taking and listening, textbook reading, time management, test-taking skills, coping with test anxiety, and memory and con-

centration techniques. Campus resources and learning styles are also covered. F, W, Sp, Su

HD200 Applied Learning Strategies

3 class hrs/wk, 3 cr.

In conjunction with a linked course, helps students strengthen their study, reading, and vocabulary skills. Emphasizes the development of higher-level critical thinking skills. Prerequisite: Enrollment in linked course or consent of instructor. F, W, Sp

HD220 Life Skills Seminar I

3 class hrs/wk, 3 cr.

Seminar includes personal development, career planning, skills and strategies for learning, support systems and networking, and exploration of non-traditional training. Prerequisite: None. Course to run concurrently with HD221. F, W, Sp, Su

HD221 Life Skills Seminar II

3 class hrs/wk, 3 cr.

Seminar includes personal development, resource management, job search techniques, placement strategies, understanding the working world, resolving work/school/family conflicts, goal setting, and action plan development. Prerequisite: None. Course to run concurrently with HD220. F, W, Sp, Su

HDF and HDFS**Human Development and
Family Studies****HDF050 Parent/Infant**

1 class hr/wk, 1 cr.

Covers infants' growth, learning, behavior, guidance, health, and nutrition; expectations of parenthood; and activities with infants. Parents and children attend class together. F, W, S

HDF051 Parent/Toddler

1 class hr/wk, 1 cr.

Covers toddlers' growth, learning, behavior, guidance, health, and nutrition; expectations of parenthood; and activities with toddlers. Parents and children attend class together. F, W, Sp

HDF052 Parent/Preschooler

1 class hr/wk, 1 cr.

Covers preschoolers' growth, learning, behavior, guidance, health, and nutrition; expectations of parenthood; and activities with preschoolers. Parents and children attend class together. F, W, Sp

**HDF060 Balancing School, Work and
Family**

1 class hr/wk, 1 cr.

Presents information on balancing the demands of school, work, and family. Covers the work-family lifestyle, stress reduction, communication skills, and time management. F, W, Sp

**HDF065 Parenting and Cooperative
Child Care**

1 class and 3 lab hr/wk, 2 cr.

Emphasizes working with young children by active participation in the campus Cooperative Child Care Center. Covers child development and basic guidance techniques by working with and observing the children. Selected topics related to parent education will be presented at required parent seminars. F, W, Sp

**HDF199M Multicultural Perspectives in
Early Childhood Education**

3 class hrs/wk, 3 cr.

Introduces research on the development of racial and cultural awareness. Covers the philosophy, techniques, and material involved in

multi-cultural education for culturally homogeneous early childhood classrooms.

HDFS222 Partner Relationships

3 class hrs/wk, 3 cr.

Promotes an understanding of marriage and close personal relationships by exploring a wide range of possibilities within contemporary partnerships. Emphasizes individual options for couples when deciding on the kind of relationship that will fulfill their personal and mutual needs. Sp

**HDFS225 Prenatal, Infant and Toddler
Development**

3 class hrs/wk, 3 cr.

Basic principles of growth and development, prenatal through age two years. Emphasizes physical, intellectual, emotional, and social development. F

HDFS226 The Growing Years

3 class hrs/wk, 3 cr.

An integrated learning system on child development. Principal theme is the interplay of biological factors, human interactions, cultural forces, and social structure in affecting children through adolescence. Offered as needed.

**HDFS229 Development in Middle
Childhood**

3 class hrs/wk, 3 cr.

A developmental approach to child care for children approximately six to 11 years old. Covers child development, needs and guidance, environment, equipment, parent and community involvement, staffing, administration, finances, and state and federal standards. Prerequisite: Four terms of Early Childhood Education program or consent of instructor. Sp

HDFS233 Family Dynamics

3 class hrs/wk, 3 cr.

Presents theories for understanding the dynamics of personality development and communication. Considers conflicting forces within a person and between persons. Provides class time for practicing and integrating constructive communication techniques. F

**HDFS249 Introduction to Working
with Infants and Toddlers**

3 class hrs/wk, 3 cr.

Assists practitioners in child development centers and home settings working with infants and toddlers. Focuses on understanding, facilitating, and respecting the development of these children. F

**HDFS250 The Developmental
Kindergarten**

3 class hrs/wk, 3 cr.

How kindergarten children learn. Covers development, planning, and implementation of curricula, evaluation of materials and methods, study of current educational issues, and ways to help children make a transition to elementary school. Prerequisite: HDFS225, ECE062 and second year standing in Early Childhood Education program or consent of instructor. Offered as needed.

HDFS260 Child Abuse and Neglect

3 class hrs/wk, 3 cr.

Problems of child abuse. For persons interested in child care, teaching, and other areas. Includes causes of abuse, the abused child, abusive parents, the role of teachers, areas of treatment, education, and local organizations that assist abused children and abusive parents. W

HE**Health Education, see also Allied Health****HE151 Alcohol and Other Drugs**

3 class hrs/wk, 3 cr.

Presents basic information concerning alcohol and other drugs. Covers mental, physical, emotional, and environmental aspects of alcohol and other drugs. Focuses on a "decision-making" approach to drug use and abuse. **F, W, Sp, Su**

HE199F, G, H Health and Wholeness

1-3 class hrs/wk, 1-3 cr.

Preventive health care focusing on students' awareness of their personal involvement in developing wellness. **Offered as needed.**

HE204 Nutrition, Weight Control, and Physical Fitness

3 class hrs/wk, 3 cr.

Methods of maintaining or improving fitness by considering diets and dieting, obesity, types of exercise, physical testing, cardiovascular fitness, and nutritional concepts. **F, W, Sp, Su**

HE209 Human Sexuality

3 class hrs/wk, 3 cr.

Covers mental, physical, and social aspects of human sexuality. Emphasizes development of a decision-making model that enables a person to make personal choices. Class discussion is vital. **F, W, Sp, Su**

HE222 Consumer's Guide to Health

3 class hrs/wk, 3 cr.

Looks at health resources available to consumers: medical doctors, naturopaths, chiropractors, types of insurance, drugs, hospitals, nutrition and other alternatives. Discusses how to choose and use a care provider and how to stay as healthy as possible. **Sp**

HE250 Personal Health

3 class hrs/wk, 3 cr.

Covers mental, physical, emotional and environmental health issues. Emphasizes development of stress management techniques and decision-making skills. **F, W, Sp, Su**

HE260 Emergency Medical Care—First Responder

2 class hrs and 2 lab hrs/wk, 3 cr.

Training in emergency medical care skills administered by first persons arriving at scenes of traffic accidents or other incidents. Includes airway care, respiratory and cardiopulmonary resuscitation, patient assessment, care for bleeding, shock, injuries, and other medical emergencies. Class fee \$5. **Offered as needed.**

HE261 Cardiopulmonary Resuscitation

1 class hr/wk, 1 cr.

A combination of lecture, audiovisual presentation, and mannequin practice in the principles and procedures of providing basic life support to victims of airway obstruction, respiratory arrest, and/or cardiac arrest. Successful completion leads to certification in basic life support by the American Red Cross or the Oregon Heart Association. Class fee \$5. **F, W, Sp, Su**

HE262 Cardiopulmonary Resuscitation Instruction

2 lab hrs/wk, 2 cr.

Reviews basic life support, both theory and its application. Discusses instructional materials and methods of use in CPR courses. Successful completion provides instructor certification or recertification by the Oregon Heart Association. **Prerequisite:** Current certification in CPR

by the Oregon Heart Association. Class fee \$5. **W**

HE264 Childhood Emergencies

1 class hr/wk, 1 cr.

First aid procedures for children and infants. Safety, accident prevention, medicolegal, and public health aspects of day care centers. **Sp**

HE268 Pharmacodynamics in Health Care

3 class hrs/wk, 3 cr.

Facts and principles required for safe administration of medicines in caring for patients. Provides comprehensive base for clinical application. **F, W, Sp**

HPE**Health and Physical Education, see also Physical Education****HPE295 Health and Fitness for Life**

3 class hrs/wk, 3 cr.

Provides information on the effects of exercise on the human body. **F, W, Sp**

High School Completion, see page 28.**Home Economics, see Clothing/Textiles, Foods/Nutrition, and Human Development and Family Studies****HRTM****Hotel, Restaurant, and Tourism Management****HRTM104 Introduction to Travel and Tourism**

3 class hrs/wk, 3 cr.

An overview of systems, major components, and organization of the travel and tourism industry. Studies role and structure of major tourism organizations and public and private tourism agencies. Explores career opportunities. Orientation to the HRTM program. **F**

HRTM105 Introduction to the Foodservice Industry

3 class hrs/wk, 3 cr.

An overview of the foodservice industry's structure, size and scope; managerial problems and practices; and structure and organization within individual firms. Explores career opportunities. **W**

HRTM106 Introduction to the Lodging Industry

3 class hrs/wk, 3 cr.

An overview of the lodging industry's structure, size and scope; managerial problems and practices; and structure and organization within individual firms. Studies front office procedures and explores career opportunities. **Sp**

HS**Human Services****HS101 Alcohol Use, Misuse, and Addiction**

3 class hrs/wk, 3 cr.

Presents basic information concerning alcohol, particularly in relation to physiological effects of alcohol on the human body. Information fo-

cuses on a holistic approach to alcohol problems. **F, W, Sp, Su**

HS102 Drug Use, Misuse, and Addiction

3 class hrs/wk, 3 cr.

Examines drugs and their effects. Groups drugs according to the ways they enter persons' lives. Includes additives in food, prescription drugs, chemicals in air and water and the physiological and psychological effects these drugs have on the lives of users, particularly those in drug treatment programs. Studies possible implications of these effects on the treatment and prevention of drug problems. **W, Sp**

HS140 Handling the Violent Client

1 class hr/wk, 1 cr.

An introduction to the recognition, prevention, and control of aggressive behavior. Stresses prevention of violence through early intervention and includes information on pre-aggression warning signs, as well as practice in defusing aggression and the use of physical defense responses. **F, W, Sp**

HS150 Self-awareness and Interpersonal Skills

3 class hrs/wk, 3 cr.

An introduction to self-awareness, communication skills, and interpersonal skills. Individual and small group exercises help students improve skills in awareness, communication, values clarification, problem solving, goal setting, and conflict resolution. **Prerequisite:** Admission to the Human Services program. **F, W**

HS151 Human Potential Seminar

3 class hrs/wk, 3 cr.

Assists participants to become more self-determining, self-motivating, self-affirming, and empathetic toward others. How to identify personal strengths and explore their use in meeting life goals. **Prerequisite:** Admission to the Human Services program. **F, W, Sp**

HS152 Stress Management

1 class hr/wk, 1 cr.

Introduces stress management, relaxation techniques, and their impact on health and well-being. Covers a variety of major relaxation techniques and emphasizes the development of a personalized stress management plan. Class fee \$2. **F, W, Sp**

HS153 Introduction to Residential Youth Care

3 class hrs/wk, 3 cr.

Training for child care workers, foster parents, and persons interested in working in residential child-care facilities. Includes developmental planning, developmental needs, separation, the cottage, discipline, groups, and job settings. **Offered as needed.**

HS154 Community Resources

3 class hrs/wk, 3 cr.

Explores the history and values of community resources for people with specific disadvantages or handicaps. Acquaints students with local social service agencies and organizations and how to refer clients to them. **Prerequisite:** Admission to Human Services program. **F, W**

HS155 Interviewing Theory and Techniques

3 class hrs/wk, 3 cr.

Theoretical background and specific interviewing techniques. Practice in interviewing situations and peer and professional observation and feedback. **Prerequisite:** HS150 or consent of instructor. **W, Sp**

HS160 Addictive Behaviors

3 class hrs/wk, 3 cr.

Covers the knowledge and skills needed to assist clients affected by addictive lifestyles. Through lecture, discussion, and activities students learn to identify the disease process of dependency, to understand the connection between values and behavior, and to develop goals for life changes. **F**

HS161 Dysfunctional Relationships

3 class hrs/wk, 3 cr.

Covers the knowledge and skills to assist clients affected by addictions and dysfunctional relationships. Through lecture, discussion, and activities students learn how support systems are developed, boundaries are identified and established, and how to change behaviors leading to co-dependence. **W**

HS162 Relapse Prevention

3 class hrs/wk, 3 cr.

Provides the knowledge and skills to assist clients in recovery from addictive lifestyles and relationships. Students learn to develop healthy relationships with themselves and others and to help clients experience balanced living by design. **Sp**

HS165 Activity Director Training/Long-Term Care

3 class hrs/wk, 3 cr.

Meets training requirements of activity directors in long-term care facilities. Focuses on therapeutic activities and appropriate use of people and material resources in meeting patient needs and to promote continual growth and development of long-term care residents. **W**

HS168 Mental Health and Aging

3 class hrs/wk, 3 cr.

Presents issues in mental health and aging from both normal aging and psycho-pathological points of view. Focuses on understanding psychological problems of old age, including specific organic functional disorders. Explores approaches to assessment, diagnosis, treatment, and health promotion. **W**

HS170 Introduction to Practicum

3 class hrs/wk, 3 cr.

Provides the background and specific skills needed to select and succeed in a Human Services practicum placement. Designed to be taken during the first term of the Human Services program. A prerequisite for Human Services courses HS291-296A,G,S. **Prerequisite:** Admission to Human Services program. **F, W**

HS199E Dreikurs' Principle

1 class hrs/wk, 1 cr.

Provides a basic understanding of Dreikursian principles of child guidance. Acquaints students with unique concepts of social interests, purposeful behavior, and encouragement of human relationships and with the principles for improving relationships. **Offered as needed.**

HS199R Peer-Assistance Training

3 class hrs/wk, 3 cr.

Helps students develop techniques for dealing with a variety of personal and social problems that may affect their community college peers. Students serve as resource persons in their respective departments. **Prerequisite:** Departmental nomination or consent of instructor. **F, W, Sp**

HS199T Adult Sexual Abuse Victims and Offenders

3 class hrs/wk, 3 cr.

Explores the dynamics and profiles of male and female sexual abuse victims and offenders. As-

essment and treatment strategies will be discussed. **Prerequisite:** HS230 or consent of instructor. **Offered as needed.**

HS201 Family Addiction

3 class hrs/wk, 3 cr.

Chemical dependency and how it affects a family. Focuses on family dynamics and treatment for alcoholic/addictive families. **Prerequisite:** HS101 or consent of instructor. **W, Sp**

HS202 Counseling the Chemically Dependent Client I

3 class hrs/wk, 3 cr.

Designed to assist students in developing skills for counseling chemically dependent clients in individual sessions. **Prerequisite:** HS101, HS155 or consent of instructor. **F**

HS203 Counseling the Chemically Dependent Client II

3 class hrs/wk, 3 cr.

Assists students in increasing their skills in group counseling with chemically dependent clients. **Prerequisite:** HS101, HS155, HS202. **W**

HS204 Counseling the Chemically Dependent Client III

3 class hrs/wk, 3 cr.

Assists advanced students in expanding their skills in working with chemically dependent clients. Includes information about the possibilities for wellness and wholeness for chemically dependent persons. **Prerequisite:** HS101, HS202, 203. **Sp**

HS205 Youth Addiction

3 class hrs/wk, 3 cr.

Assists students in working with chemically dependent youth. Includes prevention, intervention, assessment, and continuing recovery techniques for individuals and groups. **Prerequisite:** HS101. **Sp**

HS206 The Addicted Criminal

3 class hrs/wk, 3 cr.

Assists students in developing skills with chemically dependent clients who are convicted criminals. Includes information on recognizing, confronting, and surviving an addicted criminal. **Prerequisite:** HS101. **Offered as needed.**

HS207 Adult Children of Alcoholics/Addicts

1 class hr/wk, 1 cr.

Explores the relationship between growing up in a chemically-dependent or dysfunctional family and problems which surface in adulthood. Includes discussion of family dynamics, denial, relationships, work, social skills, and feelings. **Sp**

HS208 Alcoholics, Drugs and Sexuality

1 class hr/wk, 1 cr.

Examines the relationship between chemical dependency, sexuality, and co-dependency. Physiological, psychological, and social factors which impact the sexuality of the alcoholic will be examined. Sexual dysfunction in the female and male alcoholic and the general treatment of each will be outlined. **Prerequisite:** HS101. **W**

HS220 Aging and Society

3 class hrs/wk, 3 cr.

Introduces the field of social gerontology and explores the relationships between the aging individual and society. First course in a three-course sequence emphasizing the social, biological, and psychological aspects of aging. This course may, however, stand alone for

those seeking an introduction to the field of gerontology. **F**

HS221 Physical Aging

3 class hrs/wk, 3 cr.

Surveys the physical aspects and theories of aging, changes in body systems, and effects of lifestyle on the aging process. Second of a three-course sequence emphasizing the social, biological, and psychological aspects of aging. **Prerequisite:** HS220. **W**

HS222 Aging and Behavior

3 class hrs/wk, 3 cr.

Presents information about behavioral responses in the normal aging process, including coping, cognition and memory, personality, and adjustment. Emphasizes healthy adaptation to aging and promotion of ego integrity in old age. Also covers the description, diagnosis, assessment, and treatment of common organic and functional mental disorders. Third of a three-course sequence emphasizing the social, biological, and psychological aspects of aging. **Prerequisite:** HS220. **Sp**

HS230 Physical, Sexual and Emotional Abuse

3 class hrs/wk, 3 cr.

An overview of the effects of physical, sexual, and emotional abuse on individuals and families. Explores cultural and political implications of abuse and provides a basic working knowledge of the issues related to abuse. **Offered as needed.**

HS231 Treatment of Sexual Abuse Victims and Offenders

3 class hrs/wk, 3 cr.

Provides basic understanding of sexual abuse dynamics, responses, and treatment intervention techniques for the victim as well as the offender. Presents a basic working knowledge of the issues involved in treating abuse victims and offenders. **Offered as needed.**

HS260 Group Dynamics

3 class hrs/wk, 3 cr.

Provides students with theory and skills applicable to small group dynamics. Focuses on group formation, development of norms, conflicts and controversy, and performance and evaluation. **Prerequisite:** HS150 or consent of instructor. **Sp**

HS262 Misuse and Abuse of Alcohol and Drugs Among the Elderly

1 class hr/wk, 1 cr.

Addresses problems of drug and alcohol misuse and abuse among older adults. Focuses on prescription drugs, over-the-counter drugs, and alcohol used either alone or in combination. **Prerequisite:** HS101. **Offered as needed.**

HS265 Intervention Strategies I

3 class hrs/wk, 3 cr.

First of a three-term sequence on intervention strategies used in social service work. Includes theory and practice in behavioristic, psychoanalytic, Gestalt and psychodramatic intervention strategies. **Prerequisite:** HS150. **F**

HS266 Intervention Strategies II

3 class hrs/wk, 3 cr.

A continuation of HS265. Includes theory and practice in client centered, cognitive, and holistic intervention strategies. **Prerequisite:** HS150, HS155, HS265. **W**

HS267 Intervention Strategies III

3 class hrs/wk, 3 cr.

A continuation of HS266. Includes theory and practice in family, group, and community inter-

vention strategies. **Prerequisite:** HS150, HS266. **Sp**

HS291-296A,G,S Practicum—Human Service

9-24 lab hrs/wk, 3-8 cr.

On-site clinical and community experience with human service organizations plus seminars on integrating field and classroom experiences. **Prerequisite:** HS150, HS170. Staff referral required.

F, W, Sp (Su as needed)

HS298A-E Independent Studies

variable hrs. and cr.

Faculty-supervised individualized study in areas not covered by courses currently offered. May involve resource persons in the community. **Offered as needed.**

HSM

Hospitality Systems

Management, see also Food Service

HSM080 Introduction to the Hospitality Industry

3 class hrs/wk, 3 cr.

Defines hospitality industry as a single, interrelated industry composed of food, travel and tourism, lodging, and recreation resource management. Assesses the impact of North America's rapidly changing demographics and lifestyle on the hospitality industry. Career opportunities will be discussed. **F**

HSM081 Meeting, Planning and Convention Management

3 class hrs/wk, 3 cr.

Introduction to the meetings industry, promotional activities, negotiating for meeting services, convention market salesmanship, customer service, and convention servicing. **W**

HSM082 Marketing for the Hospitality Industry

3 class hrs/wk, 3 cr.

Introduces marketing concepts and techniques in the hospitality industry. Covers the variety of products, services, and sales conditions within the industry. Through field study, students analyze industry marketing strategies. **Sp**

HSM083 Hotel, Restaurant, and Travel Law

3 class hrs/wk, 3 cr.

Introduces marketing concepts and techniques in the hospitality industry. Covers the array of products, services, and sales conditions within the industry. Through field study, students analyze industry marketing strategies. **W**

HSM084 Feeding and Housing the Homeless

3 class hrs/wk, 3 cr.

Uses food service and lodging techniques in the management of facilities serving the homeless. Class fee \$15. **F, Sp**

HSM086 Leisure in America

3 class hrs/wk, 3 cr.

An overview of the role of leisure in America. Examines factors influencing leisure; the relationship of leisure to demographics, personality development, health, and values; and the changing lifestyles in American society. **F**

HSM087 Foundations in Resource Recreation Management

3 class hrs/wk, 3 cr.

Concepts involved in recreation resource management. Explores principles in planning and implementing programs in recreation and leisure. **W**

HST

History

HST110, 111, 112 History of World Civilization

3 class hrs/wk, 3 cr.

Human cultural, social, economic, and political development of world civilizations. **HST110:** from ancient times to 1500 A.D.; **HST111:** from 1500 to 1914; **HST112:** the Twentieth Century. **HST110: F, W; 111: W, Sp; 112: Sp**

HST157 History of the Middle East and Africa

3 class hrs/wk, 3 cr.

A survey of cultural, social, economic, and political development in the Middle East and Africa. **Offered as needed.**

HST158 History of Latin America

3 class hrs/wk, 3 cr.

A survey of cultural, social, economic, and political development in Latin America. **Offered as needed.**

HST159 History of Asia

3 class hrs/wk, 3 cr.

A survey of cultural, social, economic, and political development in Asia. **Offered as needed.**

HST201, 202, 203 History of the United States

3 class hrs/wk, 3 cr.

A study of the cultural, economic, social, and political development of the United States. **HST201:** 1492 to 1865; **HS202:** 1865 to 1920; **HST203:** 1920 to the present. **HST201: F, W; 202: W, Sp; 203: Sp**

HST210 Futurism: Alternatives for the Future

3 class hrs/wk, 3 cr.

Examines trends of the past and present. Projects the future as a "zone of potentiality." **Offered as needed.**

HST257 Introduction to Ethnic History—American Indian

3 class hrs/wk, 3 cr.

Native Americans as a minority group: their culture, heritage, humor, self-consciousness, and outlook. The history of the American Indian and his role in American history. **Offered as needed.**

HST258 Introduction to Ethnic History—Black American

3 class hrs/wk, 3 cr.

The role of blacks in American history. Re-counts and explains their experiences and attempts to gain meaningful first-class citizenship. **Offered as needed.**

HST259 Introduction to Ethnic History—Chicano

3 class hrs/wk, 3 cr.

Traces and analyzes various aspects of Chicano life and society. Focuses on racial, cultural, educational, economic, and political development of Chicanos in the United States. **Offered as needed.**

HUM

Humanities

HUM100 Introduction to the Humanities

3 class hrs/wk, 3 cr.

An overview of film, literature, music, painting, sculpture, and architecture. Concentrates on subject matter, form, content, and audience participation. **Offered as needed.**

HUM199 Orientation to Peace Studies

3 class hrs/wk, 3 cr.

Introduces students to basic historical, economical, psychological, political, sociological, and philosophical issues related to peace and conflict. Presenters from different academic areas will engage students in the development of a personal world view. **Offered as needed.**

J

Journalism

J215 Publications Lab

4 lab hrs/wk, 2 cr.

Practical application of reporting skills, photojournalism, and production principles through work on the student newspaper. **Prerequisite:** J224 or consent of instructor. Course may be repeated for a maximum of 12 credits. **F, W, Sp**

J216 Newswriting

3 class hrs/wk, 3 cr.

Gathering and processing news. Includes lead format, straight news style, and some feature writing. Considerable time devoted to writing. **Prerequisite:** Knowledge of typing. **W**

J224 Introduction to Journalism

3 class hrs/wk, 3 cr.

Survey of communication media with emphasis on historical, social, technological, and economic considerations in mass media in the United States. Examines important current legal and ethical dilemmas facing journalists. Recommended for journalism majors; open to others. **F, Sp**

J225 Advertising/Public Relations

3 class hrs/wk, 3 cr.

Communications and production aspects of advertising and public relations. Criticism and analysis combined with assignments in copywriting, design, and market strategy. **W**

J226 Layout/Production

3 class hrs/wk, 3 cr.

Newspaper management in relation to production and editing procedures. Includes printing processes, typography, page design, style, photo editing, and headline writing. **Sp**

JPN

Japanese

JPN101 First Year Japanese, Term I

4 class hrs/wk, 4 cr.

Develops skills in reading, writing, speaking, and understanding basic Japanese language. Introduces Japanese culture. Class fee \$2. **F**

JPN102 First Year Japanese, Term II

4 class hrs/wk, 4 cr.

Continues development of Japanese grammar, speaking, and listening skills. **Prerequisite:** JPN101 or equivalent. Class fee \$2. **W**

JPN103 First Year Japanese, Term III

4 class hrs/wk, 4 cr.

Expands basic literacy and conversational skills. Includes an introduction to polite versus plain speech forms and genderlects. Explores Japanese culture through everyday social situations. **Prerequisite:** JPN102 or equivalent. Class fee \$2. **Sp**

JPN201 Second Year Japanese, Term I

4 class hrs/wk, 4 cr.

Develops skills in writing and reading (including kanji) and in improving conversational Japanese. Introduces the culture in relationship to the language. **Prerequisite:** First year Japanese or equivalent. Class fee \$2. **F**

JPN202 Second Year Japanese, Term II

4 class hrs/wk, 4 cr.

Improves basic literacy skills including enlarged kanji and conversational Japanese vocabulary and written composition. **Prerequisite:** JPN201 or equivalent. Class fee \$2. W

JPN203 Second Year Japanese, Term III

4 class hrs/wk, 4 cr.

Improves language skills in using kanji and in fluency of conversation. **Prerequisite:** JPN202 or equivalent. Class fee \$2. Sp

Job Search, see Field Experience

LA**Legal Assistant****LA100 Introduction to Law and Law Ethics**

3 class hrs/wk, 3 cr.

Discusses structure of the court system, operation of a law office, law ethics, and an overview of various substantive law fields. F

LA101 Introduction to Legal Terminology and Forms

3 class hrs/wk, 3 cr.

Identifies proper use of common legal terms and their application to legal situations and transactions. Sp

LA105 Introduction to Litigation

3 class hrs/wk, 3 cr.

Analyzes the litigation process and the differences between civil and criminal litigation. Introduces the principles of the law of torts and the basic terms and concepts used in the litigation practice. Sp

LA107 Legal Interviews

3 class hrs/wk, 3 cr.

Presents principles and techniques used in interviewing clients in specific legal situations. Students conduct simulated interviews in a legal setting. Sp

LA203 Introduction to Legal Research and Library Use

3 class hrs/wk, 3 cr.

Covers organization and contents of a library used for legal research. Reviews sources of law and the judicial system. Includes gathering materials that attorneys may use. W

LA208 Introduction to Family Law

3 class hrs/wk, 3 cr.

Preparation of initial documents, pleadings, findings of fact, conclusions of law, and orders for judgment as they relate to divorce, adoption, change of name, guardianship, support, and separation agreements. Sp

Course Numbers

The numbers following the letters of course numbers indicate these classifications:

001 to 049 basic skills courses,

050 to 099 occupational courses,

100 to 199 freshman-level college courses, and

200 to 299 sophomore-level college courses.

See page 94 for more information regarding course numbers.

Literature, see English

Management, see Business Administration

Mechanical Design, see Drafting Technology

MED**Medical Assisting****MED011 Health Care Skills**

2 lab hrs/wk, 1 cr.

Provides individual and small group tutoring for students in Health Information Technician-Medical Transcriptionist and Unit Clerk programs. Helps students develop competence, confidence, and expediency in processing health care information. **Prerequisite:** Enrollment in Health Information Technician-Medical Transcriptionist or Unit Clerk programs and in MED061. F

MED051 Medical Terminology I

3 class hrs/wk, 3 cr.

Analysis of anatomical terms, roots, prefixes, and suffixes and Greek and Latin verbs and adjectives in building a medical vocabulary. Examines representative anatomical structures, diseases, operations, tumors, and descriptive terms through analysis of words. F, W, Sp

MED052 Medical Terminology II

3 class hrs/wk, 3 cr.

Continuation of MED051. **Prerequisite:** MED051. F, W, Sp

MED053 Medical Terminology III

3 class hrs/wk, 3 cr.

Language development in medicine, pharmacology, oncology, radiology, nuclear medicine, medical laboratory, and psychiatry. **Prerequisite:** MED051 and MED052. Sp

MED054 Medical Office Procedures

3 class and 3 lab hrs/wk, 4 cr.

Procedures and principles used in medical offices in administrative duties, marketing, establishment of patient records, employee manuals, office inventory, written communication, insurance processing, banking, telephone communication, office equipment, and research services. **Prerequisite:** OA121, MED055. Class fee \$10. W

MED055 Medical Law and Ethics

3 class hrs/wk, 3 cr.

Survey of the manner in which the law and codes of ethics affect the practice of medicine and health care. F, W, Sp

MED056 Medical Assisting Basic Procedures

3 class and 3 lab hrs/wk, 4 cr.

Survey of requirements and qualities for success as a medical assistant. Techniques, methods, and procedures include assisting physician with examinations, medical and surgical aseptic procedures, observing vital signs, care of equipment, supplies, patient teaching principles and considerations, and legal and ethical implications in a medical caregiving setting. **Prerequisite:** High school graduate or equivalent and enrolled in Medical Assisting Program. Class fee \$20. F

Class fee \$20. F

MED057 Medical Assisting, Advanced Procedures

4 class and 3 lab hrs/wk, 5 cr.

Survey of advanced laboratory knowledge and skills required of the medical assistant. Covers pharmacology, diet therapy, electrocardiography, hematology, urinalysis, bacteriology, radiology, physical therapy, patient teaching, office emergencies, and legal and ethical implications of treatments. Includes individual and small group laboratory experience. **Prerequisite:** MED051, MED056 or consent of instructor. Class fee \$20. W

MED060 Medical Transcription

2 class and 2 lab hrs/wk, 3 cr.

Introduction to techniques of transcribing from recorded voice to typewriter. Operation of a transcriber and transcribing mailable copy with speed and efficiency. Includes transcribing letters, case histories, pathological reports, and other medical reports. **Prerequisite:** Basic knowledge of typing techniques, typing speed of approximately 40 wpm minimum and MED051. Class fee \$10. W, Sp

MED061 Health Information Systems Procedures I

2 class and 4 lab hrs/wk, 4 cr.

Knowledge, skills and practice required of ward clerks and employees in related entry occupations. Includes admitting and bed control; patient charts and transcription of physicians' orders; admissions, preoperative and postoperative procedures; management techniques and human relations; and confidentiality of medical records. **Prerequisite:** Enrollment in Health Records Technician option of Medical Assisting program. Class fee \$5. F

MED062 Health Information Systems Procedures II

3 class and 4 lab hrs/wk, 5 cr.

Health information systems and necessary skills for health clerical functions. Includes health care delivery systems, health information, medical records, and health record processing (medical transcription) of various medical reports. Entry level skills for health record and medical transcriptionist students and additional skills required for ward clerks. **Prerequisite:** MED061 and Enrollment in Health Records Technician Program. Class fee \$5. W

MED064 Introduction to Medical Science

3 class hrs/wk, 3 cr.

A survey of disease conditions, types of treatment, and medical surgical specialties. **Prerequisite:** MED051, MED052. F, Sp

MED065 Introduction to Medical Coding Systems

3 class hrs/wk, 3 cr.

Covers basic differences between nomenclature and classification systems. Includes basic introduction to ICD9-CM for reimbursement and format of coding manual. Fundamental application of coding of conditions and procedures. **Prerequisite:** MED051, MED052, or consent of instructor. W, Sp

MED066 Medical Reimbursement Management

3 class hrs/wk, 3 cr.

Introduces basic medical and insurance terminology and abbreviations and use of Current Procedural Terminology (CPT) and Relative Value Studies (RVS). Covers reimbursement protocol for Unemployment Compensation Disability, Worker's Compensation, federal Medi-

care, Medicaid, Blue Cross, Blue Shield, Champus, and cross reference reimbursement with health maintenance organizations. **Prerequisite:** MED051, 052, 064, or consent of instructor. **W**

MED078 Medical Practice Seminar

1 class hr/wk, 1 cr.

Study of relationship of clinical practicum in medical office settings with theoretical course content. Applies to career and personal goals. **Prerequisite:** Concurrent enrollment in MED079. **Sp**

MED079 Medical Office Practice

16 lab hrs/wk, 6 cr.

Practice of medical assisting methods, procedures, and techniques in clinical situations. **Prerequisite:** MED054, MED051, MED052 or consent of instructor. Class fee \$5. **Sp**

MED080 Health Service Organizational Structure

3 class hrs/wk, 3 cr.

The organization, delivery, and financing of health care in the United States. Explores the relationship of human resources, facilities, financial controls, and legal aspects. **F, Sp**

MED081 Introduction to Medical Services Science

3 class hrs/wk, 3 cr.

Introductory course on health care institutions' organizational structures and management needs, medical practice, management techniques, and Medical Staff Bylaws. **Prerequisite:** Current enrollment in Health Care Support Services program. **F**

MED082 Advanced Medical Services Science

3 class hrs/wk, 3 cr.

Covers medical staff office functions, the credentialing process, and accreditation. Introduces effective teaching techniques. **Prerequisite:** MED080, MED081. **W**

MED083 Introduction to Health Care Monitoring Systems

3 class hrs/wk, 3 cr.

Surveys present activities and future trends of health care monitoring systems in traditional and alternative health care settings. **Prerequisite:** Current enrollment in the Health Care Support Services program. **W**

MED085 Health Services Externship

16 lab hrs/wk, 6 cr.

On-site practice of health care support services with a health care delivery organization. **Prerequisite:** MED082, MED083, consent of instructor and current enrollment in MED086. Class fee \$5. **Sp**

MED086 Health Services Seminar

1 class hrs/wk, 1 cr.

Students relate the practical experience of their health services externships with health services theory. Applies to career and personal goals. **Prerequisite:** Current enrollment in MED085. **Sp**

MED088 Medical Assisting Certification Exam Review

2 class hrs/wk, 2 cr.

Reviews essential components of the Medical Assistant curriculum in preparation for the Medical Assistant Certification examination. Covers knowledge and skills in the clinical area, administrative area, law and ethics, terminology, anatomy and physiology, pathology, and human relations. **Prerequisite:** Completion of accredited Medical Assisting program or two years' part-time experience or one year

full-time experience as a medical office assistant. **Su**

MED280 Cooperative Work Experience

see AUM280.

MFG

Manufacturing Technologies

MFG050 Introduction to Manufacturing

3 class and 9 lab hrs/1 wk, 1 cr.

A survey of manufacturing trades and employment prospects for high school students and other interested individuals. Class fee \$10. **Su**

MFG052 Fundamental Operations of Computer-Controlled Machine Tools

2 class and 3 lab hrs/wk, 3 cr.

Provides fundamental knowledge in operation and programming of computer numerical control (CNC) equipment. Includes both theoretical and practical applications of CNC. Class fee \$10. **F, W, Sp**

MFG053 Manufacturing Processes

2 class and 6 lab hrs/wk, 4 cr.

Provide basic knowledge of various manufacturing materials, methods, and processes. Includes operation of manual and CNC machine tools, tooling, workholding, measuring, inspection, quality control, welding fabrication, and casting techniques and procedures. Class fee \$16. **F**

MFG056 Machining Fundamentals I

2 class and 3 lab hrs/wk, 3 cr.

Basic machining operations including principles and operations of basic machine tools, measuring and inspection tools, bench tools, layout tools, drilling machines, pedestal grinder, and band saws. Class fee \$20. **F, W, Sp**

MFG057 Machining Fundamentals II

2 class and 3 lab hrs/wk, 3 cr.

Continuation of MFG056. Includes machining operations and setups. **Prerequisite:** MFG056 or consent of instructor. Class fee \$20. **F, W, Sp**

MFG060 Introduction to Manufacturing—Special Needs

3 class and 9 lab hrs/wk, 1 cr.

Survey of the manufacturing field for special service groups. An overview of manufacturing employment opportunities. Designed for counselors, handicapped persons, and rehabilitation advisors. Class fee \$10. **Su**

MFG063 Manufacturing Print Reading and Sketching

3 class and 6 lab hrs/wk, 5 cr.

Instruction and skill development in blueprint reading, sketching, basic drawing techniques, and geometric constructions. Class fee \$5. **F**

MFG064 Manufacturing Fundamentals

3 class and 6 lab hrs/wk, 5 cr.

Basic manufacturing operations emphasizing benchwork processes. Introduces fundamental principles, setup, and operation of basic machine tools including power saws, bench and pedestal grinders, drilling machines, turning machines, milling machines, and application of the *Machinery's Handbook*. **Prerequisite:** Consent of instructor. Class fee \$30. **F**

MFG065 Tool and Work Holding Methods

3 class and 6 lab hrs/wk, 5 cr.

Fundamental principles, setup, and operation of machine tools to emphasize tool and work holding methods. Includes continued knowledge and skill development in the area of benchwork processes, drilling, turning, basic milling operations, measuring inspection, and

quality control. **Prerequisite:** Consent of program chair. Class fee \$30. **W**

MFG066 Material Cutting/Removal Methods

3 class and 6 lab hrs/wk, 5 cr.

Emphasizes the principles, setup, and process of material cutting/removal methods. Includes continued knowledge and skill development in the areas of benchwork, measuring, inspection, quality control, machining processes, and machine tool operations. **Prerequisite:** MFG065 or consent of instructor. Class fee \$30. **Sp**

MFG068 Manufacturing Measuring, Inspection and Quality Control

2 class and 4 lab hrs/wk, 3 cr.

Instruction and skill development in the selection and application of tools for linear English and metric measuring, inspection, testing, and quality control. Methods and procedures include statistical applications and accepted care and storage of related tools and equipment. Class fee \$10. **W**

MFG069 QC Fundamentals/CMM Operations

3 class and 4 lab hrs/wk, 4 cr.

Covers quality control and the manufacturing environment. Emphasizes "hands on" coordinate measuring machine operation. **Prerequisite:** MFG063, MFG068 or consent of instructor. Class fee \$10. **W**

MFG070 Introduction to Manufacturing—Nontraditional

3 class and 9 lab hrs/1 wk, 1 cr.

A survey of manufacturing trades and employment prospects for persons interested in non-traditional work roles. Class fee \$10. **Su**

MFG076 Manufacturing Materials and Cutting Tools

3 class and 8 lab hrs/wk, 6 cr.

Provides knowledge and skill development in the selection and application of work materials and cutting tools. Includes manufacturing machine tools and nontraditional methods used in removing material to produce machined parts. **Prerequisite:** MFG066 or consent of instructor. Class fee \$20. **W**

MFG078 Hydraulic and Pneumatic Systems

2 class and 3 lab hrs/wk, 3 cr.

Fundamental principles of hydraulic and pneumatic systems. Includes basic components of hydraulic and pneumatic systems and how they may be combined to build up various circuits, and the ultimate use of those circuits. Covers selection, installation, and maintenance of hydraulic and pneumatic systems. **Prerequisite:** MTH051 or approval of program chair. Class fee \$10. **W**

MFG079 Industrial Systems

3 class and 6 lab hrs/wk, 5 cr.

An introduction to the application of power methods used by industry with relation to the basic laws of physics. Particular emphasis is placed on the general types of mechanical, hydraulic, pneumatic, and electrical equipment used; the purpose of the components; the maintenance requirements of the equipment; and terminology. **Prerequisite:** Consent of instructor. Class fee \$15. **W**

MFG081 Manufacturing Processing Planning

3 class and 6 lab hrs/wk, 5 cr.

Advanced instruction in the use of machine tools to emphasize manufacturing process

planning procedures. Automated processes included in tracer and CNC operations. **Prerequisite:** MFG066 or consent of instructor. Class fee \$30. **F**

MFG082 Manufacturing Production/Assembly Methods
3 class and 6 lab hrs/wk, 5 cr.

Emphasizes production/assembly methods. Includes setup, operation, tool selection and application, and calculating operating conditions of machine tools in production parts. **Prerequisite:** MFG081 or consent of instructor. Class fee \$30. **W**

MFG083 Manufacturing Production Control
3 class and 6 lab hrs/wk, 5 cr.

Advanced job application emphasizing quality of finished products and production, time study, and general estimating of repair jobs and small production runs. Knowledge and skills from previous course work are applied to the design, estimating, and control production of a completed product of parts. **Prerequisite:** MFG082 or consent of instructor. Class fee \$30. **W**

MFG088 Fluid Power Systems
3 class and 4 lab hrs/wk, 4 cr.

Fundamental principles of hydraulic and pneumatic systems. Includes the selection, installation, and maintenance of hydraulic and pneumatic circuit systems, including circuits with electrical controls. **Prerequisite:** Consent of instructor. Class fee \$10. **Offered as needed.**

MFG093 CNC Machine Tool Operations
3 class and 6 lab hrs/wk, 5 cr.

Introduces students to computer numerical control (CNC) terminology, applications, and operations in manufacturing. Class fee \$15. **Sp**

MFG094 Manufacturing Programming
3 class and 6 lab hrs/wk, 5 cr.

Introduces CNC programming techniques as they apply to manufacturing. **Prerequisite:** MFG093 or consent of instructor. Class fee \$10. **F**

MFG095 CAM Applications
3 class and 6 lab hrs/wk, 5 cr.

Introduces Computer Aided Manufacturing (CAM). **Prerequisite:** MFG094 or consent of instructor. Class fee \$20. **W**

MFG096 CAD-CAM Integrations
3 class and 6 lab hrs/wk, 5 cr.

Introduces transfer of CAD-generated two- and three-dimensional drawings to a CAM system. **Prerequisite:** MFG095 or consent of instructor. Class fee \$20. **Offered as needed.**

MFG097 Interaction Skills
2 class and 3 lab hrs/wk, 3 cr.

Interpersonal relationships and responsibilities of labor and management. Includes study of these related areas: education and training; personal safety, security, and well-being; organization of work environment; public and community involvements; communication; interpersonal relations; economics and productivity; career planning and job search; work habits and attitudes; teamwork; company image and reputation. Class fee \$2. **Sp**

MFG280 Cooperative Work Experience
see AUM280.

MS
Multidisciplinary Studies

MS251 The Art of Discovery
3 class hrs/wk, 3 cr.

Focuses on classical Greek culture: its science, philosophy, religion, art, and architecture. Considers their impact upon life patterns and scientific and humanistic thoughts of the day. **F**

MS252 The Art of Discovery
3 class hrs/wk, 3 cr.

Focuses on the Renaissance: the philosophy, scientific discoveries, religious upheavals, art, architecture, and theater. Discusses how these patterns affect modern-day thinking. **W**

MS253 The Art of Discovery
3 class hrs/wk, 3 cr.

Focuses on the early 20th century: the philosophies, scientific discoveries, religious developments, art, architecture, and theater. Discusses interrelationships and "the unfinished business of the 20th century." **Sp**

MS259 Death and Dying
3 class hrs/wk, 3 cr.

How modern attitudes toward death and dying are formed. Discussion of rituals, literature, religion, philosophy, the hospice movement, medicolegal issues, and personal attitudes and values. **Offered as needed.**

MTH
Mathematics

MTH007 Whole Numbers
1 class hr/wk, 1 cr.

Fundamental mathematics—addition, subtraction, multiplication, and division of whole numbers. Includes story problems with whole numbers. **Prerequisite:** Placement test score or instructor test. **F, W, Sp, Su**

MTH008 Fractions
1 class hr/wk, 1 cr.

Fundamental mathematics—addition, subtraction, multiplication, and division of fractions. Includes word problems with fractions. **Prerequisite:** Placement test score or instructor test. **F, W, Sp, Su**

MTH009 Decimals, Proportions and Percents
1 class hr/wk, 1 cr.

Covers addition, subtraction, multiplication, and division of decimals, percentages, and proportions. Includes up to four-step application problems with decimals, percentages, and proportions. **Prerequisite:** Placement test score or instructor test. **F, W, Sp, Su**

MTH051 Basic Mathematics
3 class hrs/wk, 3 cr.

Includes fundamentals of addition, subtraction, multiplication, and division in problems involving use of whole numbers, fractions, decimals, percentages, and geometric measurements. Emphasizes analysis and solution of word problems. **Prerequisite:** Proficiency in whole number operations. **F, W, Sp, Su**

MTH052 Introduction to Algebra and Geometry
3 class hrs/wk, 3 cr.

Introduces basic algebraic and geometric techniques and applications. Includes signed numbers, elements of algebra, simple equations and formulas, angles, perimeters, and areas of common polygons. **Prerequisite:** Grade of C or higher in MTH051 or equivalent. **F, W, Sp, Su**

MTH053 Introduction to Trigonometry with Geometry
3 class hrs/wk, 3 cr.

Introduces basic trigonometric and geometric techniques beyond those covered in MTH052 as well as applications of these techniques. Covers similar triangles, circles, surface areas, and volumes of common geometric solids, and right and oblique triangle trigonometry. **Prerequisite:** Grade of C or higher in MTH052 or equivalent. **F, W, Sp, Su**

MTH061 Business Math
3 class hrs/wk, 3 cr.

Applies arithmetic to the world of business and commerce with emphasis on percent problems. Applies to payroll, retailing, interest, and real estate. **Prerequisite:** Grade of C or higher in MTH051 or equivalent. **F, W, Sp, Su**

MTH062 Applied Business Math
3 class hrs/wk, 3 cr.

Applies arithmetic to the world of business and commerce. Includes applications from the fields of depreciation, notes, compound interest and annuities, stocks and bonds, insurance, and financial statements. **Prerequisite:** Grade of C or higher in MTH061 or equivalent. **F, W, Sp**

MTH065 Introductory Algebra
4 class hrs/wk, 4 cr.

Meets entry-level requirements of MTH081 and requirements for students who need non-transfer algebra course. Helps students to overcome lack of study skills or fear of algebra and to gain a strong, fundamental background in beginning algebra. Covers algebraic and arithmetic operations with real numbers, linear equations with applications, ratio and proportions, and scientific notation. Introduces rational expressions and equations. **Prerequisite:** Grade of C or higher in MTH051 or equivalent. **F, W, Sp, Su**

MTH070 Elementary Algebra
4 class hrs/wk, 4 cr.

Emphasis on properties and definitions of real numbers, solving linear and quadratic equations, polynomial arithmetic and factoring, rational expressions and equations, inequalities, exponents, one- and two-dimensional graphing, and solving linear 2x2 systems. **Prerequisite:** Grade of C or higher in MTH051 or equivalent. **F, W, Sp, Su**

MTH075 Applied Geometry
1 class hr/wk, 1 cr.

Individualized course which students may start and complete at any time during a term. Covers basic concepts of points, lines, planes, angles, triangles, congruence of triangles, different polygons, similarity from an intuitive point of view and problems involving these concepts. **Prerequisite:** Grade of C or higher in MTH070 or equivalent. **F, W, Sp, Su**

MTH076 Applied Geometry
1 class hr/wk, 1 cr.

Individualized course which students may start and complete any time during a term. Covers basic concepts of perimeter, circumference, arc length, areas of polygons and circles, surface area of solids, volume of various solids, and problems involving these figures. **Prerequisite:** Grade of C or higher in MTH070 or equivalent. **F, W, Sp, Su**

MTH077 Applied Geometry
1 class hr/wk, 1 cr.

Individualized course which students may start and complete at any time during a term. Covers use of protractor, straight edge, and compass to construct and copy various figures while

learning terms and techniques of constructions. Introduces basic concepts of analytic geometry using applied problems. **Prerequisite:** Grade of C or higher in MTH070 or equivalent. **F, W, Sp, Su**

MTH078 Applied Trigonometry

1 class hr/wk, 1 cr.
Individualized course which students may start and complete at any time during a term. Covers trigonometry definitions and various applications of triangles and trigonometric ratios. **Prerequisite:** Grade of C or higher in MTH070, MTH075, and MTH076 or equivalent. **F, W, Sp, Su**

MTH079 Applied Trigonometry

1 class hr/wk, 1 cr.
Individualized course which students may start and complete at any time during a term. Covers solution of oblique triangles, radian measurement, vectors, and trigonometry ratios of all angles. **Prerequisite:** Grade of C or higher in MTH078 or equivalent. **F, W, Sp, Su**

MTH081 Technical Mathematics I

4 class hrs/wk, 4 cr.
First course of a three-term sequence. Designed to train technicians to work in technical fields and engineering, drafting, mechanical design, and electronics. Covers fundamental algebra concepts, graphing, ratio and proportion, basic right-angle trigonometry, solution of linear equations, work problems, factoring, and operations with algebraic expressions. **Prerequisite:** Grade of C or higher in MTH065 or equivalent. **F, W**

MTH082 Technical Mathematics II

4 class hrs/wk, 4 cr.
Second term in a sequence. Covers mathematical skills necessary for technicians in civil-structural engineering, mechanical design, or electronics. Includes trigonometric functions, oblique triangle solutions and applications, exponents and radicals, logarithms, solution of logarithm equations, trigonometric identities, solution of trigonometric equations, vectors, complex numbers, and graphs of trigonometric functions. **Prerequisite:** Grade of C or higher in MTH081. **W, Sp**

MTH083 Technical Mathematics III

4 class hrs/wk, 4 cr.
Third term in a sequence. For technicians in civil-structural engineering, mechanical design, or electronics. Includes analytic geometry, differentiation, integration, and their applications plus differentiation and integration of transcendental functions. **Prerequisite:** MTH082 or equivalent. **Sp**

MTH095 Intermediate Algebra

4 class hrs/wk, 4 cr.
Covers fundamental properties of algebra with real numbers, linear equations in one and two variables, linear inequalities factoring, rational expressions and equations, systems of equations and inequalities, exponents, radical expressions and equations, quadratic equations and inequalities, absolute value expressions and equations, and applications. **Prerequisite:** Grade of C or higher in MTH070 or equivalent. **F, W, Sp, Su**

MTH105 Introduction to Contemporary Mathematics

4 class hrs/wk, 4 cr.
Surveys the application of mathematics as a problem-solving tool in the real world. Includes business, consumer, ecology, and city planning applications using probability, statistics, geometry, graph theory, linear programming, and

game theory. **Prerequisite:** Grade of C or higher in MTH095 or equivalent. **F, W, Sp**

MTH111 College Algebra

5 class hrs/wk, 5 cr.
Study of polynomial, rational, exponential and logarithmic functions, equations, and inequalities of various degrees; complex numbers; matrices and determinants; sequences and series; conic sections with transformations; and algebra of matrices. **Prerequisite:** Grade of C or higher in MTH095 or equivalent. **F, W, Sp, Su**

MTH112 Trigonometry

5 class hrs/wk, 5 cr.
A pre-calculus course with emphasis on circular trigonometric functions. Includes triangle application, vector arithmetic, polar coordinates, rotation of conics, and trigonometric form of complex numbers. **Prerequisite:** Grade of C or higher in MTH111 and MTH075 or equivalent. **F, W, Sp, Su**

MTH211 Foundations of Elementary Mathematics

3 class hrs/wk, 3 cr.
First course of a three-term sequence for liberal arts students, especially prospective elementary teachers. Emphasizes problem solving and basic concepts about whole numbers, integers, sets, and number theory. Uses manipulatives to deepen understanding. **Prerequisite:** Grade of C or higher in MTH095 or equivalent. **F**

MTH212 Foundations of Elementary Mathematics

3 class hrs/wk, 3 cr.
Second term of liberal arts mathematics sequence. Covers basic concepts about rational and real numbers, consumer mathematics and geometry. Uses computers and manipulatives. **Prerequisite:** Grade of C or higher in MTH211 or equivalent. **W**

MTH213 Foundations of Elementary Mathematics

3 class hrs/wk, 3 cr.
Third term of liberal arts mathematics sequence. Covers topics in probability and statistics, algebra and geometry. Uses computers and manipulatives. **Prerequisite:** Grade of C or higher in MTH211 or equivalent. **Sp**

MTH241 Elementary Calculus

4 class hrs/wk, 4 cr.
An intuitive approach to differential and integral calculus. Emphasizes techniques of calculus in applied problem solving. The course is primarily for non-mathematical majors. **Prerequisite:** Grade of C or higher in MTH111 or equivalent. **F, W, Sp**

MTH243 Probability and Statistics

4 class hrs/wk, 4 cr.
Basic concepts of statistics and probability, inferential methods and assessment of reliabilities of numerical information related to all occupational fields. Application of formula to problem solving is stressed over the mathematical theory. **Prerequisite:** Grade of C or higher in MTH111 or equivalent. **F, W, Sp**

MTH251 Differential Calculus

5 class hrs/wk, 5 cr.
First course of a four-term sequence. Prepares students for further study in mathematics, sciences, engineering, and other technical areas. Covers theory of calculus, derivation of theorems and formulas; and applications for sciences, engineering, and other fields. **Prere-**

quisite: Grade of C or higher in MTH112 or equivalent. **F, Sp, Su**

MTH252 Integral Calculus

5 class hrs/wk, 5 cr.
Continuation of MTH251. Covers applications of definite integral, logarithmic, exponential, trigonometric, and hyperbolic functions; techniques of integration and indeterminate forms; and functions defined in polar and parametric forms. **Prerequisite:** Grade of C or higher in MTH251 or equivalent. **F, W**

MTH253 Series Calculus and Linear Algebra

4 class hrs/wk, 4 cr.
Combines topics from linear algebra and infinite series. Includes a study of sequences and series with applications, vector and matrix manipulation as well as determinants. **Prerequisite:** Grade of C or higher in MTH252 or equivalent. **W**

MTH254 Vector Calculus I

4 class hrs/wk, 4 cr.
First of two courses in multivariable calculus. Includes coordinate systems, vectors, curves, and surfaces in three dimensions. **Prerequisite:** Grade of C or higher in MTH252 or equivalent. **Sp**

MTH255 Vector Calculus II

4 class hrs/wk, 4 cr.
Second course in multivariable calculus. Emphasizes vector fields and applications. **Prerequisite:** A grade of C or higher in MTH254, or equivalent. **Sp**

MTH256 Applied Differential Equations

4 class hrs/wk, 4 cr.
Covers solutions of linear and first order non-linear differential equations. Includes Laplace transforms and convolutions. **Prerequisite:** A grade of C or higher in MTH254 or equivalent. **F**

MUP and MUS

Music

MUP100 Piano

1 class hr/wk, 1 cr.
Individual instruction in fundamentals of music theory incorporated into basic piano playing skills. Open to students of all levels and interests. Class fee \$60. Course may be repeated for a maximum of 9 credits. **F, W, Sp**

MUP101 Symphonic Band - First Year

3 lab hrs/wk, 1 cr.
Applied study and performance on musical instruments, played in ensemble format, with some attention given to solo performances within a symphonic band setting. **Prerequisite:** Two years' instruction on an instrument or audition. Class fee \$12. **F, Su**

MUP105 Jazz Ensemble

3 lab hrs/wk, 1 cr.
Applied study and performance on musical instruments played in solo or ensemble formats. **Prerequisite:** Two years' instruction on an instrument and/or audition. Class fee \$12. **F, Su**

MUP174 Voice

1 class hr/wk, 1 cr.
Individual instruction in fundamentals of theory, melodic contouring and phrasing, vocal production, and body mechanics incorporated into basic singing skills and music reading. Open to students of all levels and interests. Class fee \$60. May be repeated for a maximum of 9 credits. **F, W, Sp**

MUS134 Class Voice

4 lab hrs/wk, 2 cr.

Classroom instruction in vocal technique for persons with little or no previous vocal training. For both solo and ensemble singers, including music and non-music majors. **Prerequisite:** An interest to learn vocal music. Course may be repeated for a maximum of 8 credits. **Offered as needed.**

MUS197 Chorus

4 lab hrs/wk, 2 cr.

Rehearsal and performance of many types of styles of choral literature. **Prerequisite:** Consent of instructor and previous experience singing with school, civic, or church choirs is helpful but not mandatory. May be repeated for a maximum of 8 credits. **F, W, Sp**

MUS199 Fundamentals of Music

3 class hrs/wk, 3 cr.

A systematic study of music. Examines the various parts and elements of music and the ways in which these elements combine and interrelate to form a musical composition. **F, Sp**

MUS201 Introduction to Music and Its Literature

3 class hrs/wk, 3 cr.

A comprehensive study of music literature and history. How tones combine to create musical elements of melody, harmony, and rhythm, and how these relationships and organization of these elements apply to compositional styles and form. Combines a study of musical elements in art forms and ethnic musicology with writing melodic contours. **F**

MUS202 Introduction to Music and Its Literature

3 class hrs/wk, 3 cr.

Deals with sociological and historical development of music from the Middle Ages through the Renaissance, Baroque, and Classical eras, concluding with the 19th century Romantic period. **W**

MUS203 Introduction to Music and Its Literature

3 class hrs/wk, 3 cr.

Studies "new" music procedures and philosophies, beginning with Impressionism of the late 19th century and concluding with developments in electronic and popular music of the 1990s. **Sp**

NOR**Norwegian****NOR101, 102, 103 First Year Norwegian, Terms I, II, III**

4 class hrs/wk, 4 cr.

A grammatical foundation in formal and idiomatic Norwegian. Emphasizes speaking, reading, and writing. **Prerequisite:** NOR102: NOR101 or consent of instructor. NOR103: NOR102 or one year high school Norwegian or consent of instructor. Class fee \$2 each. **Offered as needed.**

NUR**Nursing****NUR050 Obstetrical Nursing**

2 class and 1 lab hr/wk, 3 cr.

Basic elements of parent and fetal responses to childbirth. Includes anatomy and physiology of reproduction, ante partum, birth, post partum, complications, fetal development, and care of the newborn. For practicing nurses and students. **Prerequisite:** Registered Nurse or cur-

rently enrolled nursing student. **Offered as needed.**

NUR060 Nursing Success Strategies

3 class hrs/wk, 3 cr.

Introduces basic skills that are built upon in the nursing curriculum. Includes a survey of the nursing profession, development of study skills, learning styles, coping strategies, attitude, motivation, and interpersonal process as related to the nursing curriculum. Class fee \$5. **F, W, Sp**

NUR106 Nursing

5 class and 12 lab hrs/wk, 9 cr.

Basic concepts and beginning skills for providing safe nursing care. Emphasis upon meeting basic human needs in physical and psychosocial areas. Theory and clinical experiences are integrated throughout the term. **Prerequisite:** Enrollment in the nursing program. Registration must be completed, liability insurance purchased and TB test results obtained before a student is permitted in the clinical area. Current CPR certification is required. Class fee \$30. **F**

NUR108 Nursing

5 class and 12 lab hrs/wk, 9 cr.

Presents concepts and skills that integrate growth and development with psychosocial coping responses to illness and conditions commonly encountered in children and adults. Content includes care of medical and surgical patients with emphasis on alterations related to simple conditions. **Prerequisite:** NUR106. Registration must be completed, liability insurance purchased, and TB test results obtained before a student is permitted in the clinical area. Current CPR certification is required. Class fee \$30. **W**

NUR109 Nursing

5 class and 15 lab hrs/wk, 10 cr.

Nursing care of medical and surgical patients with emphasis on alterations related to stable conditions. Concepts throughout the term integrate facts and principles from the biopsychosocial sciences. **Prerequisite:** Successful completion of NUR106, 108. Registration must be completed, liability insurance purchased, and TB test results obtained before a student is permitted in the clinical area. Current CPR certification is required. Class fee \$30. **Sp**

NUR114 Nursing Care of the Elderly

3 class hrs/wk, 3 cr.

For licensed practical nurses and registered nurses who care for elderly people. Emphasizes basic and emerging concepts related to aging and gerontological nursing. Stresses assessing health needs of the elderly, planning patient care, implementing those plans, and evaluating care. **Offered as needed.**

NUR206 Nursing

5 class and 16 lab hrs/wk, 10 cr.

Nursing care of patients with alterations related to complex conditions. Includes techniques for communicating therapeutically with patients having severe disturbances. Presents education concepts to teach patients with stable conditions. **Prerequisite:** NUR106, 108, 109. Registration must be completed, liability insurance purchased and TB test results obtained before a student is permitted in the clinical area. Current CPR certification is required. Class fee \$20. **F**

NUR208 Nursing

6 class and 13 lab hrs/wk, 10 cr.

Nursing care of patients with alterations related to complex and unstable conditions. Presents education concepts to teach patients with complex conditions. **Prerequisite:** NUR106, 108,

109, 206. Registration must be completed, liability insurance purchased, and TB test results obtained before a student is permitted in the clinical area. Current CPR certification is required. Class fee \$20. **W**

NUR209 Nursing

3 class and 16 lab hrs/wk, 8 cr.

Continuation of NUR208. Focuses on management of nursing care team in acute care settings. Nursing care of patients with critical disturbances of any or all body systems. **Prerequisite:** NUR106, 106, 108, 109, 206, 208. Registration must be completed, liability insurance purchased, and TB test results obtained before a student is permitted in the clinical area. Current CPR certification is required. Class fee \$5. **Sp**

NUR214 Introduction to Cancer Nursing

1 class hr/wk, 1 cr.

Knowledge and skills useful in cancer prevention and diagnosis, and in treatment, rehabilitation, and long term care of patients. Attempts to create positive attitudes toward cancer and the care of cancer patients. **Offered as needed.**

NUR215 Physical Assessment for Nurses

3 class and 3 lab hrs/wk, 4 cr.

Basic skills in health screening of adults. Includes health histories and screening examinations by inspection, palpation, percussion, and auscultation. **Prerequisite:** Registered nurse or enrollment in an RN program. Class fee \$10. **Offered as needed.**

NUR221 Nursing Administration in Long Term Care Facilities

3 class hrs/wk, 3 cr.

Designed for RNs employed at or interested in jobs in long-term care facilities. Emphasizes application of supervisory principles. **Offered as needed.**

NUR250 Introduction to the Operating Room I

3 class hrs/wk, 3 cr.

Fundamentals of nursing practice in an operating room. Focuses on roles of circulating and scrubbing nurses, sterilization concepts, patient support, surgical techniques, and instrumentation. **Prerequisite:** Must be a licensed registered nurse, or be eligible for and have applied for licensure, or be enrolled in an accredited nursing educational program. **Offered as needed.**

NUR251 Introduction to the Operating Room II

15 lab hrs/wk, 5 cr.

Fundamentals of nursing practices in an operating room. Focuses on roles of circulating and scrubbing nurses, sterilization, patient support, surgical techniques, and instrumentation. Practical experience included. **Prerequisite:** NUR250. Current CPR certification required. Class fee \$10. **Offered as needed.**

NUR280 Cooperative Work Experience

see AUM280.

NUR298A Holistic Health Care for Nurses

3 class hrs/wk, 3 cr.

Basic knowledge and skills in holistic health for maintenance and promotion of health. Includes therapeutic touch, biofeedback, and relaxation. **Prerequisite:** Licensed practical nurse, registered nurse, or enrolled in a nursing program. **Offered as needed.**

NUR298B The Aging Process: Implications for Nursing Practices
3 class hrs/wk, 3 cr.

Focuses on effective, cognitive, and physical changes that occur in aging and their influence on nursing care. **Prerequisite:** Licensed practical nurse, registered nurse, or current enrollment in a nursing program or other health disciplines and consent of instructor. **Offered as needed.**

NUR298C Care of the Terminally Ill
3 class and 3 lab hrs/wk, 4 cr.

Expanded knowledge and skills in holistic health care of terminally ill patients and their families. **Prerequisite:** Licensed practical nurse, registered nurse, current enrollment in nursing program or permission of instructor. Current CPR certification required. **Offered as needed.**

NUR298D Geriatric Pharmacology
3 class hrs/wk, 3 cr.

Focuses on medications for the elderly, basic drug information to assist the elderly with self-medication, and/or direct administration of medications. **Prerequisite:** Allied health practitioner, licensed practical nurse, registered nurse or enrollment in an allied health program. **Offered as needed.**

OA

Office Administration

OA051 Civil Service Exam Preparation
1 class and 4 lab hrs/wk, 3 cr.

Reviews English fundamentals, including punctuation with practical business applications. How to apply basic math procedures to business problems and business formulas, reconcile bank statements, and compute selling and purchasing invoices. Introduces property taxes, sales taxes, and budgeting. **Prerequisite:** OA084, OA099A,B. **F, W, Sp, Su**

OA058A Shorthand Refresher I
2 class hrs/wk, 2 cr.

A review of basic Gregg shorthand theory including brief forms. Practice reading and writing from shorthand plates. Some dictation from previewed material. For persons with a background of shorthand theory. Requires a specified level of achievement. **Offered as needed.**

OA058B Shorthand Refresher II
2 class hrs/wk, 2 cr.

A refresher course in Gregg shorthand for persons with a knowledge of theory and some ability to take dictation. Students progress at individual rates. Grades based on progress. **Offered as needed.**

OA061 Electronic Calculators
4 class hrs/wk for 5 weeks, 2 cr.

Use of electronic printing calculators to solve simple business and mathematical problems. **Prerequisite:** MTH061 or concurrent enrollment. Class fee \$12. **W, Sp**

OA061A Electronic Calculators A
2 lab hrs/wk, 1 cr.

Use of electronic calculators to solve mathematical problems. Includes development of speed and accuracy in touch operation of the calculator. Class fee \$4. **F, W, Sp, Su**

OA061B Electronic Calculators B
2 lab hrs/wk, 1 cr.

Continuation of OA061A. Covers percentages, simple interest, trade discounts, payroll, and calculation of consumer installment payment schedules. Speed and accuracy development

in touch operation of the calculator. **Prerequisite:** OA061A. Class fee \$4. **F, W, Sp, Su**

OA061C Electronic Calculators C
2 lab hrs/wk, 1 cr.

Continuation of OA061B. Emphasizes speed and accuracy in touch operation of electronic calculators, and solving business math problems such as distributing amounts, paying invoices, calculating merchandise, and analyzing financial statements. **Prerequisite:** OA061B, MTH061. Class fee \$4. **Offered as needed.**

OA062 Reprographics
3 class hrs/wk, 3 cr.

Studies copy preparation and duplication methods for business offices and small organizations. Emphasizes both manual and desktop publishing layouts. Compares duplication methods and machines. **Prerequisite:** Basic typing skills. Class fee \$12. **W, Sp**

OA063 Telephone Management
1 class hr/wk, 1 cr.

Review of techniques used in office telephone communications. Includes developing verbal communication skills, handling and knowledge of equipment, dealing with different types of personalities, and using general office reception techniques. Class fee \$23. **Offered as needed.**

OA064 Time Management for Office Workers
1 class hr/wk, 1 cr.

Analysis of time-management needs and the implementation of time-management skills and tools for a productive office worker. Course includes a self-analysis of time-management skills. **Offered as needed.**

OA065P WordPerfect for Personal Use
1 class and 2 lab hrs/wk, 2 cr.

Basic word processing training using WordPerfect software. Includes simple correspondence, term papers, and other personal-use projects. Credit toward a degree will not be granted to students who have earned credits for OA201P, Word Processing Procedures I: WordPerfect. **Prerequisite:** Touch typing ability; minimum 30 words per minute. Class fee \$8. **F, W, Sp**

OA066 WordPerfect Graphics Features
1 class and 2 lab hrs/wk, 2 cr.

Covers document enhancement features of WordPerfect for use in creating letters, simple flyers, and brochures. **Prerequisite:** An ability to use the basic features of WordPerfect. Completion of CS103 or OA201P is helpful. Class fee \$8. **Offered as needed.**

OA067 Word Processor Operation
1 class and 3 lab hrs/wk, 2 cr.

Provides basic training on a Cathode Ray Tube (CRT) word processor. Covers concepts of word processing systems and equipment and their relationship to students' career goals. **Prerequisite:** Touch typing ability of 30 words per minute. Class fee \$8. **Offered as needed.**

OA072 AlphaHand II
3 class and 2 lab hrs/wk, 4 cr.

Continuation of OA114. Emphasis on Alpha-Hand speed development, transcription, and review. Continuation of review and reinforcement of basic grammar, spelling, and punctuation. **Prerequisite:** OA114 and OA121 or OA122. Class fee \$12. **Sp**

OA075 Legal Office Procedures I
2 class and 2 lab hrs/wk, 3 cr.

Covers duties of a legal secretary: maintaining professional relations with employers and cli-

ents; keeping financial and other records; filing legal documents, when and how to use court and non-court documents and procedures; legal terminology, setting priorities, making decisions and integrating office skills. **Prerequisite:** OA121ABC, OA116. Class fee \$6. **Sp**

OA076 Legal Office Procedures II
2 class and 2 lab hrs/wk, 3 cr.

An introduction to legal terminology as it applies to a legal secretary plus a survey of documents common in the office. **Prerequisite:** OA075, OA122. Class fee \$12. **F**

OA077 Legal Machine Transcription I
2 class and 2 lab hrs/wk, 3 cr.

Practice in typing from machine dictation. Forms, documents, and correspondence related to the legal field. **Prerequisite:** OA075, OA076, and OA225 or consent of instructor. Class fee \$12. **W**

OA078 Legal Machine Transcription II
3 class hrs/wk, 3 cr.

A continuation of OA077 with emphasis on increased skill in typing and handling materials in producing legal documents. **Prerequisite:** OA077. Class fee \$12. **Offered as needed.**

OA080 Medical Machine Transcription
1 class and 4 lab hrs/wk, 3 cr.

Typing from a transcribing machine to increase speed, accuracy, and understanding of medical case histories, clinical reports, and medical correspondence. **Prerequisite:** OA225ABC, MED051 and typing speed of 40 words per minute. Class fee \$12. **F, Sp**

OA084 Business English I
3 class hrs/wk, 3 cr.

Emphasizes basic English skills including spelling, grammar, and dictionary use. Study of and practice in writing clear, concise, and effective sentences. **F, W, Sp, Su**

OA085 Business English II
3 class hrs/wk, 3 cr.

A continuation of OA084. Emphasizes improving punctuation, grammar, and spelling skills and writing clear and concise paragraphs. Study of a variety of short papers, memos, request and thank-you letters, and a short formal report. **Prerequisite:** OA084 or equivalent. **F, W, Sp**

OA086 Personal and Professional Development
3 class hrs/wk, 3 cr.

Helps students become aware of their personal strengths. Concentrates on helping students develop salable personal skills. Emphasizes traits businesses accept and appreciate in their employees. **Sp**

OA089 Filing
4 class hrs/wk for 5 weeks, 2 cr.

Basic principles used in the systematic planning of the classification, arrangement, storage, and retrieval of business papers. Emphasizes practice in alphabetic, numeric, subject, and geographic filing systems of correspondence and other documents. **W, Sp**

OA089A Filing A
1 class hr/wk, 1 cr.

Basic principles used in the systematic planning of the classification, arrangement, and filing of alphabetic correspondence and the requisition, charge, and follow-up controls. **F, W, Sp, Su**

0089B Filing B

3 class hrs/wk, 1 cr.

Presentation of various types of filing systems: color-coded, alphabetic, subject, numeric, and geographic. Emphasis on records control, transfer, storage, and retrieval; disposition of paper recorded; and special records filing. **Prerequisite:** OA089A. **F, W, Sp, Su**

OA090 Bookkeeping

3 class hrs/wk, 3 cr.

Basic accounting principles and procedures. Provides familiarity with financial records and accounting terminology. Includes processing techniques for handling information, special journals, controlling accounts, and work sheets used in preparing financial statements. **Prerequisite:** MTH061 or equivalent. **F, W, Sp**

OA091 Computerized Bookkeeping and Payroll Procedures

4 class hrs/wk, 4 cr.

Application of computerized accounting procedures. Covers chart of accounts, journal, general ledger, trial balance, income statement, and balance sheet. Also introduces receivables, payables, and depreciation. Examines federal and state laws which determine types of payroll records required. Provides practice computing and recording wages and salaries both manually and on computer. Preparation of quarterly reports for income and other taxes. **Prerequisite:** OA090 or BA051 or BA211. Class fee \$12. **W, Sp**

OA091A Computerized Bookkeeping

2 class hrs/wk, 2 cr.

Introduces student to computerized accounting procedures for creating and updating charts of accounts, journals, general ledgers, trial balances, income statements, and balance sheets. Additional material is introduced on receivables, payables, and depreciation. **Prerequisite:** OA090, BA051 or BA211. Class fee \$6. **Offered as needed.**

OA091B Payroll Procedures

2 class hrs/wk, 2 cr.

Includes an examination of federal and state laws which determine types of payroll records required. Students practice computing and recording wages and salaries both manually and on computer and prepare quarterly reports for income and other taxes. **Prerequisite:** OA090, BA051, or BA211. Class fee \$6. **Offered as needed.**

OA093 CPS Examination Review

2 class hrs/wk, 2 cr.

A series of review sessions on secretarial work emphasizing judgment, understanding, and administrative ability. Includes updating skills, knowledge, and techniques covered in six portions of the qualifying examination for certification as a professional secretary. **Prerequisite:** Minimum of 75 college credits of secretarial training, or three years secretarial office experience. **Offered as needed.**

OA098A CPS Office Technology Review

3 class hrs for 4 weeks, 1 cr.

An overview including information on word processing, data processing, communications, and reprographics technology. Specifically oriented as a review for the Certified Professional Secretary (CPS) exam. **Offered as needed.**

OA099 Proofreading/Editing

3 class hrs/wk, 3 cr.

Effective proofreading techniques emphasizing punctuation, word division, spelling, grammar, and abbreviations. Includes practical applications and use of an office reference manual

while utilizing editing and pre-transcription skills. **Prerequisite:** OA121 and OA084. **F, W, Sp, Su**

OA099A Proofreading/Editing A

1 class hr/wk, 1 cr.

Introduces students to effective proofreading techniques. Emphasizes grammar, word division, spelling, abbreviations, and capitalization rules. Includes instruction in using office reference manuals. **Prerequisite:** OA121 and OA084. **F, W, Sp, Su**

OA099B Proofreading/Editing B

1 class hr/wk, 1 cr.

Emphasizes punctuation, sentence structure, number expression, and use of reference manuals. Includes practical applications of subject matter. **Prerequisite:** OA099A; OA121, OA084. **F, W, Sp, Su**

OA099C Proofreading/Editing C

1 class hr/wk, 1 cr.

Emphasizes practical applications of grammar and punctuation. Includes editing and pre-transcription skills and includes use of reference manuals. **Prerequisite:** OA099A,B, OA121, OA084. **F, W, Sp, Su**

OA101 Office Careers Survey

1 class hr/wk, 1 cr.

An overview of the organization and climate of business and professional offices and an investigation of various job opportunities for persons with secretarial/clerical training. **F, W, Sp, Su**

OA114 AlphaHand I

3 class hrs and 2 lab hrs/wk, 4 cr.

A shorthand system based on the alphabet. Includes theory and practice in taking dictation and longhand transcription skills. Reinforcement of basic grammar, spelling, and punctuation is included. Useful as a vocational or personal skill. **Prerequisite:** OA122; OA084 or concurrent enrollment. Class fee \$12. **W**

OA116 Office Procedures

3 class hrs/wk, 3 cr.

An introduction to administrative support activities. Includes telephone use, development of effective listening skills, mailing and shipping services, preparation of financial records, plans for meetings and conferences, travel arrangements, scheduling appointments, meeting with the public, supervision and leadership, and employment opportunities. **F, W, Sp, Su**

OA117 Executive Office Simulation

2 class and 2 lab hrs/wk, 3 cr.

A simulated experience of working in an office with co-workers using several types of resources to produce a smooth work flow. **Prerequisite:** OA116, OA123, BA214 and OA210. Class fee \$12. **W, Sp**

OA121 Keyboarding

2 class and 3 lab hrs/wk, 3 cr.

Basic touch keyboarding skills for standard microcomputer or typewriter keyboards. Emphasizes speed and accuracy, understanding the basic vocabulary of entering or retrieving information, and formatting business letters and reports. Class fee \$12. **F, W, Sp, Su**

OA121A Keyboarding A

2 lab hrs/wk, 1 cr.

First of a three-course sequence. Covers basic touch-keyboarding on standard microcomputers or typewriters. Class fee \$4. **F, W, Sp, Su**

OA121B Keyboarding B

2 lab hrs/wk, 1 cr.

Second of a three-course sequence. Emphasizes developing speed and accuracy in key-

boarding on microcomputers or typewriters. **Prerequisite:** OA121A or consent of instructor. Class fee \$4. **F, W, Sp, Su**

OA121C Keyboarding C

2 lab hrs/wk, 1 cr.

Third of a three-course sequence. Continues development of speed and accuracy in touch keyboarding on microcomputers or typewriters. Also covers formatting business letters and envelopes, and short reports with endnotes. **Prerequisite:** OA121A and B or consent of instructor. Class fee \$4. **F, W, Sp, Su**

OA122 Keyboard Skillbuilding

1 class and 4 lab hrs/wk, 3 cr.

Exercises to improve keyboarding proficiency, speed, and accuracy. **Prerequisite:** Know the keyboard and be able to type 25 words per minute minimum, 30 recommended. Class fee \$12. **F, W, Sp**

OA122A,B,C Keyboard Skillbuilding

Variable 1-3 cr.

Prepares students for production typing. Provides practice for improving keyboarding proficiency, speed, and accuracy. **Prerequisite:** Know the keyboard and be able to type 30 words per minute, OA121 or consent of instructor. Class fee \$4 each. **F, W, Sp**

OA123 Formatting

2 class and 3 lab hrs/wk, 3 cr.

Emphasizes formatting business documents. How to create and use various format styles for business letters and envelopes, tables, memorandums, reports, business forms, financial statements, and manuscripts. **Prerequisite:** OA122 or consent of instructor. Class fee \$12. **W, Sp**

OA123A Formatting A

2 lab hrs/wk, 1 cr.

First of a three-part course. Includes vertical and horizontal centering and formatting enumerations, and reviews the touch system alphabetic, numeric, and symbol keys. **Prerequisite:** OA122 and type 40 words per minute or consent of instructor. Class fee \$4. **F, W, Sp, Su**

OA123B Formatting B

2 lab hrs/wk, 1 cr.

Second of a three-part course. Presents formats for business letters, tables, and reports. **Prerequisite:** OA123A. Class fee \$4. **F, W, Sp, Su**

OA123C Formatting C

2 lab hrs/wk, 1 cr.

Last of a three-part course. Covers format styles for business letters and envelopes, memorandums, business forms, financial statements, and reports. **Prerequisite:** OA123B. Class fee \$4. **F, W, Sp, Su**

OA199D Introduction to PageMaker

1 class hr/wk, 1 cr.

Hands-on instruction with Aldus PageMaker desktop publishing software using the microcomputer. Students will practice publications in class. **Prerequisite:** Touch typing ability, experience with microcomputers. Class fee \$10. **Offered as needed.**

OA200 Introduction to Information Processing

3 class hrs/wk, 3 cr.

Information processing concepts and equipment. Covers computers and their applications in the automated office. Includes the operation of the microcomputer with word processing software. **Prerequisite:** Touch typing ability. Class fee \$12. **F, W, Sp, Su**

OA201D Word Processing Procedures I: Microsoft Word

3 class hrs/wk, 3 cr.
Basic training in operation of Microsoft Word software. **Prerequisite:** Touch typing ability-45 words per minute. Class fee \$12. **Offered as needed.**

OA201P Word Processing Procedures I—WordPerfect

3 class hrs/wk, 3 cr.
Basic training in the operation of WordPerfect software on IBM-compatible computers. **Prerequisite:** Touch typing ability: 45 wpm. Class fee \$12. **F, W, Sp, Su**

OA202P Word Processing Procedures II—WordPerfect

3 class hrs/wk, 3 cr.
Intermediate training for persons with basic skills and knowledge of WordPerfect on IBM-compatible computer. **Prerequisite:** Touch typing ability 45 wpm, OA201P or equivalent. Class fee \$12. **F, W, Sp**

OA204P Advanced WordPerfect

3 class hrs/wk, 3 cr.
Advanced WordPerfect training for persons with intermediate skills and knowledge of WordPerfect on IBM-compatible computers. **Prerequisite:** OA202P, or proficiency in WordPerfect at an intermediate level. Class fee \$12. **F, W, Sp**

OA205 Desktop Publishing I—PageMaker

3 class hrs/wk, 3 cr.
A hands-on microcomputer desktop publishing course using Aldus PageMaker. Includes microcomputer use, an overview of the printing process, typography and basic design, and the use of PageMaker software. **Prerequisite:** Touch typing ability, 25 words per minute minimum. Class fee \$6. **F, W, Sp**

OA206 Desktop Publishing II—PageMaker

3 class hrs/wk, 3 cr.
Hands-on microcomputer desktop publishing course using Aldus PageMaker software. Includes review of PageMaker operation, additional basic design for desktop publishing, and the production of publications. **Prerequisite:** OA205 or equivalent. Class fee \$6. **F, W, Sp**

OA210 Office Microcomputer Applications

2 class and 1 lab hrs/wk, 3 cr.
Integrated software training using MicroSoft Works. Includes training in word processing, database, spread sheet, and graphics on the microcomputer. Application problems will consist of using the integrated programs in business-related projects. **Prerequisite:** Keyboarding touch skill, OA200. Class fee \$12. **F, W, Sp**

OA225A Machine Transcription IA

2 lab hrs/wk, 1 cr.
An introduction to transcribing from recorded dictation. Includes how to operate a transcribing machine and techniques of efficient transcribing. Stresses development of accuracy and language arts skills. Students progress at their own rate. **Prerequisite:** OA121 or equivalent. Recommend: English skills at minimum level of OA084. Class fee \$4. **F, Sp**

OA225B Machine Transcription IB

2 lab hrs/wk, 1 cr.
Continuation of OA225A. How to prepare tables, business letters, and reports. **Prerequisite:** OA225A. Class fee \$4. **F, Sp**

OA225C Machine Transcription IC

2 lab hrs/wk, 1 cr.
Continuation of OA225B. **Prerequisite:** OA225B. Class fee \$4. **F, Sp**

OA226A Machine Transcription II-A

2 lab hrs/wk, 1 cr.
A continuation of OA225. How to produce a variety of business documents by using efficient transcribing methods. How to develop language arts skills and increase transcribing speed and accuracy to an on-the-job level. **Prerequisite:** OA225A,B,C or equivalent. Class fee \$4. **F, Sp**

OA226B Machine Transcription II-B

2 lab hrs/wk, 1 cr.
A continuation of OA226A. **Prerequisite:** OA226A or equivalent. Class fee \$4. **F, Sp**

OA226C Machine Transcription II-C

2 lab hrs/wk, 1 cr.
A continuation of OA226B. **Prerequisite:** OA226B or equivalent. Class fee \$4. **Offered as needed.**

OA280 Cooperative Work Experience

see AUM280.

OC

Oceanography

OC133 Introduction to Oceanography

3 class hrs/wk, 3 cr.
Discusses four main areas of oceanography: chemical, physical, geological, and biological. Covers plate tectonics, ocean circulation, physical properties of seawater, chemical cycles, marine ecosystems, sedimentation, land and sea cycles, and climate effects. **Offered as needed.**

Photography, see also Art, Visual Communications.

PE

Physical Education

PE131 Introduction to Physical Education

3 class hrs/wk, 3 cr.
Professional orientation to physical education and athletics, basic philosophy and objectives, professional opportunities and qualifications. **F**

PE180BN Basketball—Women's Varsity

3 lab hrs/wk, 1 cr.
Fundamentals of basketball for women.

PE180SB Softball—Women's Varsity

5 lab hrs/wk, 1 cr.
Interscholastic competition for players selected during try-outs. Involves advanced methods of team play, game strategy, training and conditioning, and officiating.

PE180SR Women's Softball—Advanced

3 lab hrs/wk, 1 cr.
Fundamentals, rules, and strategy of softball. Helps women develop skills necessary for playing recreational and/or competitive softball.

PE180TQ Track and Field Women's Varsity

3 lab hrs/wk, 1 cr.
Intercollegiate varsity track and field competition for women.

PE180VN Volleyball—Women's Varsity

5 lab hrs/wk, 1 cr.
Interscholastic competition with try-outs for player selection. Involves advanced methods of team play, game strategy, training and conditioning, and officiating.

PE185AD Back Care and Conditioning

3 lab hrs/wk, 1 cr.
Students participate in activities designed to maintain healthy backs and to improve problem backs. Class fee \$20.

PE185BE,BF,BG Baseball—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Fundamental techniques of offensive and defensive play, rules, strategy, and team play. Increased skills and strategy levels in intermediate and advanced. Class fee \$20 each.

PE185BJ,BK,BL Basketball—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Fundamental skills, techniques of offensive and defensive play, rules, team play, and competition. Increased skills and strategy levels in intermediate and advanced. Class fee \$20 each.

PE185BO Basketball Officiating

2 class and 1 lab hr/wk, 1 cr.
Officiating techniques for beginning and novice referees. Includes rules, mechanics, conditioning, and job opportunities. Class fee \$20.

PE185BV,BW,BX Bowling—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Beginning: basic fundamentals, techniques, rules, scoring, and social etiquette. Intermediate: perfection of straight ball delivery, introduction to hook and curve ball delivery, and tournament plan.

PE185CA,CB,CC Conditioning—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Development and implementation of an individualized conditioning program. Emphasis on cardiovascular improvement, flexibility, and strength development through use of aerobic exercise and strength apparatus. Class fee \$20 each.

PE185CD,CE,CF Correctives—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Exercise programs of fitness or physical therapy for students with physical injuries, disabilities, or handicaps. Class fee \$20 each.

PE185CM,CN,CP Cross Country Skiing—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Fundamental skills and techniques, types of equipment, first aid, orienteering, survival, leadership, and route finding.

PE185CR,CS,CT Dance Choreography—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Movement and improvisation techniques to develop elements of time, space, shape, and energy. Class fee \$20 each.

PE185CW,CX,CY Cycling—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Covers cycling techniques including proper bicycle fitting, maintenance, safety and pedaling.

Emphasizes cycling for fitness. Class fee \$20 each.

PE185DA,DB,DC Aerobics, Low Impact—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Designed for cardiovascular and health benefits. Using low-impact aerobic techniques to prevent jarring to weight bearing parts of the body. Class fee \$20 each.

PE185DE,DF,DG Dance, Folk—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Basic steps, skills, and training in dances reflecting cultural tradition. Schottische, polka, etc. Class fee \$20 each.

PE185DJ,DK,DL Dance Modern—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Presents a variety of modern-dance styles. Introduces the concepts of space, time, and force and explores how each of these elements plays a part in movement and dance technique. Focuses on correct alignment as well as efficient and proper use of the body. Class fee \$20 each.

PE185DM,DN,DO Aerobics—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr.
Dance routines which provide cardiovascular exercise. Class fee \$20 each.

PE185DR,DS,DT Dance, Social—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Basic dance steps of the fox trot, tango, rumba, mambo, and current popular dances. Class fee \$20 each.

PE185DV Square Dance Basic I

PE185DW Square Dance Mainstream II

PE185DX Square Dance Plus

3 lab hrs/wk, 1 cr.
Contemporary dances. Includes history, etiquette, and dances by International Association of Square Dance Callers. Prerequisite: PE185DW; PE185DV; PE185DX; PE185DV and DW. Class fee \$20 each.

PE185DY Dance/Tap, Beginning

3 lab hrs/wk, 1 cr.
Presents tap dance techniques. Introduces basic tap steps and rhythmical combinations of tap steps in varying degrees of difficulty. Class fee \$20.

PE185FD,FE,FF Soccer—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Fundamental soccer skills, position play, team formations, offensive and defensive team play, and rules. Class fee \$20 each.

PE185GJ,GK,GL Golf—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Basic fundamentals such as grip, stance, and mechanics of the swing. Use of irons, long irons, woods, and putters. Rules of the game, social etiquette, and actual playing of the game.

PE185JA,JB,JC Dance, Jazz—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Development of basic warm-ups at the barre, stretching, isolations, and floor movement with emphasis on technique, alignment, and contemporary jazz style. Class fee \$20 each.

PE185JJ,JK,JL Jogging—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Instruction and practice in jogging techniques including various systems of training. Stresses development of cardiovascular endurance. Class fee \$20 each.

PE185KA,KB,KC Karate—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Fundamentals of karate including basic stance, inside and outside blocks: straight punch: rising block: kick block: front, side, and back kicks: basic throws: come-alongs: and techniques of detaining and restraining subjects. Class fee \$20 each.

PE185LA,LB,LC Ballet—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr.
Addresses correct alignment, basic stretching, and warm-ups at the barre. Includes body and arm positions. Emphasizes techniques and technical terms. Class fee \$20 each.

PE185LJ Emergency Water Safety

3 lab hrs/wk, 1 cr.
How to make safe swimming-assists. For swimmers who want to learn personal lifesaving techniques and/or become lifeguards. Prerequisite: Minimum age 13 years. Class fee \$20. Offered as needed.

PE185LM Lifeguarding

3 lab hrs/wk, 1 cr.
Swimming and lifesaving skills for American Red Cross lifeguard certification. Prerequisite: Emergency Water Safety Certification, current CPR and first aid certification. Requires ability to pass a swimming and lifesaving-skills test. Class fee \$20.

PE185PA Personal Defense—Beginning

3 lab hrs/wk, 1 cr.
Fundamental personal defense skills, precautionary measures to insure one's safety, countering attacks using various types of weapons. Development of skill levels that promote self-assurance to reduce panic. Class fee \$20.

PE185PR,PS,PT Backpacking—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr.
An introduction to backpacking. Class fee \$20 each.

PE185RA,RB,RC Racquetball—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Fundamentals, various shots, and strategies of singles and doubles playing. Class fee \$20 each.

PE185RG,RH,RJ Roller Skating—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Fundamentals of roller skating combining conditioning and skill work.

PE185RL,RM,RN Rowing—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr.
On-land and on-water instruction and conditioning in sculling (rowing). Prerequisite: Ability to pass a swimming test. Class fee \$20 each.

PE185RW,RX,RY Running for Fitness—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Running and circuit training techniques designed to improve overall body condition. Class fee \$20 each.

PE185SA,SB,SC Scuba Diving—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Designed to promote and encourage safe underwater activities.

PE185SD,SE,SF Swim for Fitness—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Designed to increase cardiovascular endurance through swimming. Stroke technique, interval training, and lap swimming are covered. Prerequisite: Beginning swimming. Class fee \$20 each. Offered as needed.

PE185SG,SW,SX Skiing Conditioning—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Preparation for winter skiing. Includes use of universal gym machine, running, soccer skills, volleyball, and coordination exercises. Class fee \$20 each.

PE185SH,SJ,SK Skiing—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Fundamental skills and techniques including snowplow turns, traverse-stem turns, side-slip, uphill christie, beginning parallel, and parallel turn. Advanced includes free skiing, powder, phase II.

PE185SL,SM,SN Get in Shape—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr.
A fitness course designed to increase cardiovascular and muscular endurance through aerobic activity and to increase muscular strength and flexibility through stretching, isometric, and isotonic routines. Fitness assessment and nutritional evaluation are also part of the course. (Class name changed from Total Fitness.) Class fee \$20 each.

PE185SP,SQ,SR Softball—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Fundamental skills and rules presented through participation in team play. Class fee \$20 each.

PE185SS Swimming—Beginning

3 lab hrs/wk, 1 cr.
Follows Red Cross beginner and advanced beginner swimming programs. Includes floating, back and prone glides, survival floating, human stroke, front crawl, elementary backstroke, jumping and diving into deep water. Class fee \$20.

PE185ST Swimming—Intermediate

3 lab hrs/wk, 1 cr.
Follows Red Cross intermediate swimming program. Includes front crawl, back crawl, side stroke, breast stroke, surface dive, underwater swim, and standing front dive. Encourages swimming for fitness. Prerequisite: Red Cross beginner or advanced beginner certificate or consent of instructor. Class fee \$20.

PE185SU Swimming—Advanced

3 lab hrs/wk, 1 cr.
Emphasizes swimming for fitness and improving basic skills. At the completion of this course, students should have the skills necessary to progress to senior lifesaving. Prerequisite: Red Cross intermediate certificate or consent of instructor. Class fee \$20.

PE185TF,TG,TH Tennis—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Deals with tennis fundamentals, including stroke production, rules, scoring, strategy, and court etiquette. Class fee \$20 each.

PE185TL, TM, TN Track and Field—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Fundamentals, rules, theories, and training in track and field events. Class fee \$20 each.

PE185VJ, VK, VL Volleyball—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Instruction and practice in skills, rules, and strategy through individual and team play. Class fee \$20 each.

PE185WA, WB, WC Weight Management—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
A class to educate, support, and motivate individuals interested in managing their weight. Includes theory, weigh-in, class discussion, and exercise. Class fee \$20 each. **Offered as needed.**

PE185WD, WE, WF Weight Training—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
Develop and execute a strength-improvement program to meet individual goals. Class fee \$20 each.

PE185WK, WL, WM Walking Fitness

3 lab hrs/wk, 1 cr.
Helps students develop a lifelong plan for walking fitness. Includes goal setting, group and individualized recommendations for walking intensity, and pre- and post-cardiovascular assessment. Class fee \$20 each.

PE185YA, YB, YC Yoga for Relaxation—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each
An introduction to Hatha "physical" yoga. Includes the background, safety precautions, and value of yoga. Stretching postures, proper breathing techniques, and stress reduction will be emphasized. Class fee \$20 each.

PE190BN Basketball—Men's Varsity

3 lab hrs/wk, 1 cr.

PE190TQ Track and Field—Men's Varsity

3 lab hrs/wk, 1 cr.

Professional Physical Education

PE194RA Racquetball—Professional

1 class and 2 lab hrs/wk, 2 cr.
Covers progression of skills, knowledge, strategy, practice, conditioning, interpretation of rules, and teaching and coaching techniques. Class fee \$20.

PE194TF Tennis—Professional

1 class and 2 lab hrs/wk, 2 cr.
For physical education majors. Class fee \$20. **Sp**

PE199R Rafting

5 class and 18 lab hrs for 1 week, 1 cr.
A three-day, 52-mile river trip down the Deschutes River. Students will use frame-equipped rafts to practice individual rowing and maneuvering skills and paddle rafts for group participation. Class fee \$250. **Su**

PE199S Alpine Ski Racing

3 lab hrs/wk, 1 cr.
Designed to teach the intermediate to advanced skier the basic techniques and tactics

of ski racing with emphasis on balance and edging, pressure, and steering skill development. **W**

PE199SC Sports Conditioning

3 lab hrs/wk, 1 cr.
Students develop and execute conditioning programs for specific athletic activities. Class fee \$20. **F, W, Sp**

PE199WE, WF, WG Water Exercises

3 lab hrs/wk, 1 cr.
For non-swimmers and swimmers. Includes warm-up, stretching, strength, aerobic, and cool down periods so that students may improve flexibility, muscular strength, endurance, and cardiovascular fitness. Emphasizes safe exercise for each individual. Class fee \$20 each. **Offered as needed.**

PE232WW, WX, WY Backpacking and Orienteering, Beginning, Intermediate and Advanced

1 class and 2 lab hrs/wk, 2 cr. each
Builds an appreciation of the outdoors. Provides training and promotes respect for nature through such activities as hiking and backpacking. Class fee \$20 each. **Su**

PE292 Swimming Instructor—Professional

1 class and 2 lab hrs/wk, 2 cr.
Prepares students to teach American Red Cross Basic Water Safety and swimming courses. Upon completion of the course and certification instructors may teach Personal and Community Water Safety and Emergency Water Safety courses. **Prerequisite:** PE185LJ; swimming proficiency test. Class fee \$20. **F**

PE294AP Professional Activities—Aerobics

1 class and 2 lab hrs/wk, 2 cr.
Provides teacher training. Presents an overview of different types of classes and teaching methods and skills. Class fee \$20. **W**

PE294BP Professional Activities—Basketball

1 class and 2 lab hrs/wk, 2 cr.
Includes skill progression, knowledge, strategy, teaching and coaching techniques, practice, rules interpretation, and conditioning for safety. Class fee \$20. **F**

PE294SP Softball—Professional

1 class and 2 lab hrs/wk, 2 cr.
Instruction and practice in basic skills, teaching and coaching techniques, rule interpretation, strategy, and officiating. Class fee \$20.

PE294TR Track and Field—Professional

1 class and 2 lab hrs/wk, 2 cr.
For physical education majors. Class fee \$20.

PE294VP Professional Activities—Volleyball

1 class and 2 lab hrs/wk, 2 cr.
Includes skill progression, knowledge, strategy, practice, conditioning, rules interpretation, and teaching and coaching techniques. Class fee \$20. **F**

PE294WP Professional Activities—Weight Training

1 class and 2 lab hrs/wk, 2 cr.
How to teach or coach weight training. Emphasizes teaching and lifting techniques and safety. **Prerequisite:** PE185WD or consent of instructor. Class fee \$20. **W**

PH

Physics

PH051 Practical Physics

3 class and 2 lab hrs/wk, 4 cr.
Practical physics for skilled workers, covering heat, light, and sound. Laboratory time provides demonstrations and experiments to help clarify principles and procedures covered in class. Class fee \$8. **W**

PH052 Practical Physics

3 class and 2 lab hrs/wk, 4 cr.
Practical physics for skilled workers covering matter, measurements, mechanics, machines, and electricity. Laboratory time provides demonstrations and experiments to help clarify principles and procedures covered in class. **Prerequisite:** MTH053. Class fee \$8. **F**

PH081 Applied Physics

3 class and 2 lab hrs/wk, 4 cr.
Fundamental principles, concepts, and applications of work, energy, and power; basic machines and straight line and rotary motion. Use of vectors to analyze and solve problems. **Prerequisite:** Concurrent registration in MTH082 or MTH053 or consent of instructor. Class fee \$8. **F, W**

PH082 Applied Physics

3 class and 2 lab hrs/wk, 4 cr.
Applied physics at post-high school level covering mechanics of measurement, structure of matter, heat energy, heat engines, sound, light, and nuclear physics. Laboratory time provides demonstrations and experiments to clarify principles and procedures covered in lectures. **Prerequisite:** PH081 or consent of instructor. Class fee \$8. **W, Sp**

PH121 Introduction to Astronomy

3 class hrs/wk, 3 cr.
An introduction to the fundamentals of astronomy. Designed for non-science majors who have little or no preparation in mathematics or physical science. **Offered as needed.**

PH201 General Physics

3 class and 3 lab hrs/wk, 4 cr.
Develops strategies for analyzing the motion of objects. Applications range from the motion of planets to the motion of molecules. **Prerequisite:** MTH111. Class fee \$12. **F**

PH202 General Physics

3 class and 3 lab hrs/wk, 4 cr.
Heat transfer, kinetic theory, thermodynamics, vibrations, wave motion, and electrical forces. **Prerequisite:** PH201. Class fee \$12. **W**

PH203 General Physics

3 class and 3 lab hrs/wk, 4 cr.
Electrical energy, magnetic fields, electromagnetic induction, electromagnetic waves, reflection and refraction of light, optical instruments, special relativity, and atomic physics. **Prerequisite:** PH202. Class fee \$12. **Sp**

PH207 Astronomy

3 class and 2 lab hrs/wk, 4 cr.
A descriptive treatment of Earth's coordinate system, observational astronomy, the moon and the planets, evolution of the solar system, and the sun. Lab demonstrations illustrate principles of our solar system. **Prerequisite:** MTH070. Class fee \$8. **F**

PH208 Astronomy

3 class and 2 lab hrs/wk, 4 cr.
A descriptive treatment of stellar coordinates and sidereal time, the nature of light and the spectroscope, and the birth and death of stars. **Prerequisite:** MTH070. Class fee \$8. **W**

PH209 Astronomy

3 class and 2 lab hrs/wk, 4 cr.
A descriptive treatment of astronomical, optical, and radio telescopes; the Milky Way galaxies; the universe of galaxies; and the origin of the universe and life in the universe. Laboratory demonstrations illustrate physical principles of the galactic system. **Prerequisite:** MTH070. Class fee \$8. Sp

PH211 General Physics for Engineers and Scientists

4 class and 3 lab hrs/wk, 5 cr.
Motion, force, work, energy, and field interactions in one-, two-, and three-dimensional space. **Prerequisite:** MTH251. Class fee \$12. F

PH212 General Physics for Engineers and Scientists

4 class and 3 lab hrs/wk, 5 cr.
Periodic motion, forced oscillations, wave propagation, molecular basis of temperature, thermodynamics, and electrostatic fields. **Prerequisite:** MTH252 and PH211. Class fee \$12. W

PH213 General Physics for Engineers and Scientists

4 class and 3 lab hrs/wk, 5 cr.
Moving charge, magnetic fields, electromagnetic induction, propagation of electromagnetic waves, geometric optics, physical optics, and image formation. **Prerequisite:** PH212. Class fee \$12. Sp

PHL

Philosophy

PHL201 Problems of Philosophy

3 class hrs/wk, 3 cr.
Introduces philosophical methods and surveys and the history of philosophy and applies same to contemporary issues. F

PHL202 Problems of Philosophy

3 class hrs/wk, 3 cr.
Philosophical comparison and evaluation of world views of science and religion. W

PHL203 Elementary Ethics

3 class hrs/wk, 3 cr.
Theoretical and historical analysis of value systems which play a part in understanding contemporary issues. Sp

PHL204 Introduction to Logic

3 class hrs/wk, 3 cr.
Study of informal logic in language, including forms of reasoning and argument. An introduction to propositional logic, fallacies, proofs, and probabilities. **Offered as needed.**

PHL205 Biomedical Ethics

3 class hrs/wk, 3 cr.
Focuses on ethics in medical and health care fields. Studies roles of patients and health care providers, highlights personal and professional issues, examines special areas, including case studies, life-death questions, and social attitudes. **Offered as needed.**

Non-credit courses

In addition to the courses listed in this catalog, Chemeketa offers many non-credit classes each term. Both credit and non-credit classes are listed in the quarterly *Schedule of Classes*.

Physical Science, see General Sciences

PS

Political Science

PS201 American Government

3 class hrs/wk, 3 cr.
Basic concepts and principles of the American political system. Covers United States political culture, political socialization and political philosophy. Discusses political parties, interest groups, and the media's role in the political process. F, W

PS202 American Government

3 class hrs/wk, 3 cr.
Continuation of PS201, dealing with executive, legislative, and judicial branches of government. Includes a study of civil liberties and selected aspects of domestic and foreign policy as examples of interaction of governmental and non-governmental institutions in the political system. W, Sp

PS203 State and Local Government

3 class hrs/wk, 3 cr.
Introduces American state and local government structure with emphasis on comparative political behavior in states and communities. Covers both policy content and the political and institutional processes by which state and local governments make policy. **Offered as needed.**

PS205 International Relations

3 class hrs/wk, 3 cr.
An introduction to American politics. Deals with the nature of the superpower conflict, nationalism, non-aligned nations, foreign policy, the role of multinational corporations in international decision-making, development and underdevelopment, and the mechanisms of conflict resolution. **Offered as needed.**

PSY

Psychology

PSY100 Introduction to Psychology

3 class hrs/wk, 3 cr.
Application of basic concepts and methods of psychology to one's vocational and life situations. Covers motivation, learning, perception, emotion, personality, and mental health. F, W, Sp

PSY101 Psychology of Human Relations

3 class hrs/wk, 3 cr.
Explores basic principles of psychology to enhance an understanding of personality development, self-concept, and interpersonal relations. F, W, Sp

PSY102 Assertiveness Training

3 class hrs/wk, 3 cr.
Theoretical background, behavioral skills, and techniques of assertion. Particularly valuable to those anxious about situations which require they stand up for their personal rights. Explores internal and external blocks to assertion as a method for learning self-management skills. **Offered as needed.**

PSY114 Career Development, Personal Perspective

3 class hrs/wk, 3 cr.
A comprehensive developmental program that explores opportunities to integrate personal, educational, and occupational elements of career development. Encourages career-plan-

ning and decision-making based on realistic self-knowledge and self-assessment. **Offered as needed.**

PSY119 Processes in Living

3 class hrs/wk, 3 cr.
How to achieve self-understanding through exploring values, attitudes, interests, beliefs, and abilities. How these personal factors influence learning, educational and vocational decision making, and interpersonal relationships. **Offered as needed.**

PSY199 Psychology of War and Peace

3 class hrs/wk, 3 cr.
Explores psychological research on war and peace topics. Introduces research on group psychology, human aggression, perceptions of enemies, and attitude formation. Reviews past international crisis and resolutions of conflicts. Analyzes policies of deterrence. Presents psychology's role in promoting peace. **Offered as needed.**

PSY201 General Psychology

3 class hrs/wk, 3 cr.
Introduction to psychology. Focuses on psychology as a science. Stresses history, methodology, biological foundations of behavior, human development, sensation and perception. F, W, Sp

PSY202 General Psychology

3 class hrs/wk, 3 cr.
Second of three introductory courses in psychology. Includes learning, memory, cognition, motivation, emotion, and stress. **Prerequisite:** PSY201. W, Sp

PSY203 General Psychology

3 class hrs/wk, 3 cr.
Third of three introductory courses in psychology. Includes personality; mental disorder; social, statistical, and psychological assessment; and intelligence testing. **Prerequisite:** PSY201. Sp

PSY206 Introduction to Social Psychology

3 class hrs/wk, 3 cr.
Problems, theories, and methods of social psychology. Emphasizes diverse ways social influences alter an individual's thoughts, feelings, and actions. Examines prejudice, conformity, leadership, and aggression and how they affect such events as wars, elections, discrimination, violence, and interpersonal attraction. **Offered as needed.**

PSY211 Brain, Mind, and Behavior

3 class hrs/wk, 3 cr.
Study of the human brain, integrating neurobiology with brain functions. Discusses current findings, theories, and applications of brain science and its effects on human behavior. **Offered as needed.**

PSY219 The Mind

3 class hrs/wk, 3 cr.
A multidisciplinary approach to understanding the human mind and its functioning. **Offered as needed.**

PSY237 Growth and Development

3 class hrs/wk, 3 cr.
Human growth and development from conception through death. In-depth study of birth through middle adulthood. **Prerequisite:** PSY201 or consent of instructor. F, W, Sp

PSY239 Introduction to Abnormal Behavior

3 class hrs/wk, 3 cr.
Theories, diagnosis, and treatment of major psychopathological syndromes. Includes anxi-

ety and related neuroses, depressions, schizophrenia, psychophysiological and personality disorders, and sexual variations and dysfunctions. **Offered as needed.**

PSY245 Psychology of Women

3 class hrs/wk, 3 cr.

A survey of theories, physiological and psychological development, socialization and needs of women. A look at facts and myths about being a woman in today's society. Compares male and female psychology in relationship to the dynamics of being female in a male-model world. **Offered as needed.**

PSY246 Introduction to Industrial Psychology

3 class hrs/wk, 3 cr.

Applied psychological concepts stressing interpersonal communication skills, work values, habits, and attitudes. **Offered as needed.**

R

Religion

R199 Comparative Religion: The Long Search

3 class hrs/wk, 3 cr.

A study of living religions (primitive, eastern, and western traditions) in the 20th century. Examines the questions of syncretism, exclusivity, and "new" vs. "old" faiths. **F**

R201 Primitive and Far Eastern Religions

3 class hrs/wk, 3 cr.

Introduces ways of studying religions. Concentrates on history, beliefs, and practices in Hinduism and Buddhism. **F**

R202 Near Eastern Religions

3 class hrs/wk, 3 cr.

Surveys the beginnings of Judaism, Christianity, and Islam. Focuses upon history of early founders, beliefs, and communal traditions. **Prerequisite:** R201 and/or consent of instructor. **W**

R203 American Religions

3 class hrs/wk, 3 cr.

A critical approach to American religious pluralism and secularity. Traces the immigrations to America and roots American piety in the Catholic and Protestant reformations. **Sp**

RD

Reading, see also Communication Skills, Skills Development

RD005 Basic Reading Skills for Deaf and Hearing Impaired

6 lab hrs/wk, 3 cr.

Helps deaf and hearing-impaired community college students improve their reading skills. Emphasizes comprehension of words, phrases, sentences and paragraphs, and development of specific comprehension skills. **F, W, Sp**

RD009 Reading Fundamentals

3 class hrs/wk, 3 cr.

Lecture or individualized instruction for students who need to improve their basic reading skills. Emphasizes reading vocabulary, decoding skills, and paragraph comprehension. **Prerequisite:** Concurrent registration in RD009LL, a college reading placement score for RD009, or consent of instructor. **F, W, Sp, Su**

RD009LL Reading Fundamentals Lab

2 lab hrs/wk, 1 cr.

Individualized reading practice to help students improve reading. Pays special attention to comprehension and vocabulary skills. **Prereq-**

uisite: A score on the college placement test in reading that recommends RD009 or consent of instructor. **F, W, Sp, Su**

RD010 College Textbook Reading

3 class hrs/wk, 3 cr.

Lecture or individualized instruction to help students improve their reading skills. Emphasizes understanding paragraphs, reading chapters, and learning vocabulary. **Prerequisite:** College reading placement score for RD010 or consent of instructor. **F, W, Sp, Su**

RD115 Accelerated Reading Tactics I

3 class hrs/wk, 3 cr.

Comprehending and remembering nonfiction material. Instruction and practice aids students in varying and increasing reading speed, according to reading purpose and difficulty of material. Offered in either lecture or individualized classes. **Prerequisite:** College reading placement score for RD115 or consent of instructor. **F, W, Sp, Su**

RD116 Accelerated Reading Tactics II

3 class hrs/wk, 3 cr.

Provides instruction in an analytical method of reading nonfiction material. Aims to improve reading speed and comprehension using organizational patterns of articles. **Prerequisite:** College reading placement score for RD116. **Offered as needed.**

RD117A,B,C Reading for Professionals, Managers and Technicians

1 class hr/wk, 1 cr. each

Uses job-related materials to improve personal reading productivity. Geared to professionals, managers, and technicians. **Offered as needed.**

RD120 Critical Thinking and Reading

3 class hrs/wk, 3 cr.

Assists students in analyzing and improving both their critical and creative thinking skills and problem-solving techniques. Students will practice metacognitive techniques to analyze their own thinking processes and learn how to examine and evaluate thinking processes. Critical reading skills will be applied to both verbal and mathematical word problems and to essays in a variety of content areas. **Prerequisite:** College placement score at or above RD115 or consent of instructor. **F, W, Sp**

RE

Real Estate

RE051 Legal Descriptions, Platting and Map Reading

1 class and 2 lab hrs/wk, 2 cr.

Locating properties, sites and points, and reading and writing legal descriptions using metes and bounds, lot and block, and governmental rectangular survey systems. Presents information graphically with drafting plats, plot plans, and maps. Studies land measurements, areas, and dimensions. Emphasizes functional skills rather than cartographic methods. **Prerequisite:** BA260 suggested. **Sp**

RE055 Applied Mathematics in Real Estate

3 class hrs/wk, 3 cr.

Fundamental mathematics necessary in real estate transactions, tax computations, real property assessments, percentage relationships, ratios of values, finance, leverage, appreciation, depreciation, and equity ownership. **Offered as needed.**

RE056 Escrow Procedures I

3 class hrs/wk, 3 cr.

The use of work sheets by escrow agents. Emphasizes significance of a third party in real estate transactions. Covers documents required to be held on deposit between the seller and buyer until terms of a contract are completed. **Prerequisite:** BA260 and BA262. **F**

RE057 Escrow Procedures II

3 class hrs/wk, 3 cr.

Obligations of escrow departments and title insurance companies in real estate transactions. Deals with defects of title and abstracts of title to indicate the value of title insurance. Emphasizes the ramifications of title insurance. **Prerequisite:** RE056. **Offered as needed.**

RE058 Escrow Procedures III

3 class hrs/wk, 3 cr.

Theory and practice of real estate exchanges and sales of businesses, including ordinary exchange, tax-free exchanges, multiple exchanges and, in the sale of businesses, bulk sales affidavits, security agreements, assignments of leases, leasehold interests, and other ramifications. Includes review of RE056 and RE057. **Prerequisite:** RE057. **Offered as needed.**

RE061 Real Estate Appraisal I

3 class hrs/wk, 3 cr.

Theories, functions, and purposes of appraisal principles of valuation. Includes cost, market and income approach techniques for determining condemnation, insurance, loan, purchase, and sales values. Students prepare a residential property report. Satisfies the Oregon's brokers' license requirement for appraising. **Prerequisite:** BA264 or consent of instructor. **F, Sp**

RE062 Real Estate Appraisal II

3 class hrs/wk, 3 cr.

Methods and theories of income property appraisal techniques using indicators of value including gross rent multiplier (GRM), capitalization, and yield rates. **Prerequisite:** RE061. **W**

RE063 Real Estate Appraisal III

3 class hrs/wk, 3 cr.

Continuation and applications of RE062. Students prepare income property demonstration reports. **Prerequisite:** RE062 or qualified appraisal experience. **W**

RE064 Real Estate Appraisal IV

3 class hrs/wk, 3 cr.

Mass appraising techniques. **Prerequisite:** RE061 or qualified appraisal experience. **Sp**

RE065 Appraisal Report Writing

3 class hrs/wk, 3 cr.

How to write appraisal reports that can be easily understood by clients and their representatives. **Prerequisite:** RE061. **Offered as needed.**

RE066 Real Estate Investment Analysis I—Principles

3 class hrs/wk, 3 cr.

Basic understanding of investments and how to measure their returns. Includes analyzing commercial property to determine income and return on investments, determining cash flow before and after taxes, mortgage retirement, and internal rate or return. **F**

RE069 Elements of Design and Construction

2 class hrs and 3 lab hrs/wk, 3 cr.

An introduction to design and construction terminology, architectural styles and building design, material and labor requirements, building codes, and approximate cost estimating for

real estate students. Covers materials application, labor methods, costs for representative types of construction and site requirements, and unit-in-place method of estimating. **Offered as needed.**

RE070 Zoning, Subdividing, and Community Planning

3 class hrs/wk, 3 cr.
Zoning regulations, codes, restrictions, and cost of development of property for persons who want to subdivide, upgrade or change land use under zone codes, procedures, and material required by the State of Oregon, Marion County and City of Salem. **Offered as needed.**

RE083 Real Estate Effective Selling

3 class hr/wk, 3 cr.
Positive approaches and methods of handling functions and requirements of real estate sales, especially residential property. Lectures, class discussions, visual aids, films, tapes, case studies, and role-playing to help students develop and improve sales abilities. **Offered as needed.**

RE085 Property Management

2 class hrs/wk, 2 cr.
Emphasizes, but not limited to, residential landlord-tenant relationships, proper conduct of a firm under Oregon's property management license, owner-tenant relations, leasing procedures, marketing, and record keeping. **F, Sp**

RE090 Applied Title Operations

3 class hrs/wk, 3 cr.
Problems in real property title transfers. Emphasizes avoiding, eliminating, and solving problems from viewpoints of principals, agents, and title insurance companies. **Prerequisite:** BA263 or equivalent. **Offered as needed.**

RE280 Cooperative Work Experience
see AUM280.

RUS

Russian

RUS101, 102, 103 First Year Russian,
Terms I, II, III

4 class hrs/wk, 4 cr.
Covers speaking, reading, writing, and aural comprehension. **Prerequisite:** RUS102: RUS101 or consent of instructor. RUS103: RUS101, 102 or consent of instructor. Class fee \$2 each. **Evenings only. RUS101: F; RUS102: W; RUS103: Sp**

Secretarial, see Office Administration

SKD

Skills Development, see also Human Development, Mathematics, Reading

SKD003 College Orientation For Deaf Students

1 class hr/wk, 1 cr.
Offers a survey of services available to deaf students at Chemeketa. Also helps deaf students develop basic study skills and decision making. **Offered as needed.**

SKD005 Language Development for Deaf and Hearing-Impaired Students

6 lab hrs/wk, 3 cr.
For deaf and hearing-impaired community college students who want to improve their basic

writing skills. Emphasizes expanding vocabulary, developing writing skills through language and paragraph practice, and creating short essays and business letters. **F, W, Sp**

SKD009 Introduction to College Language Skills

5 class and 3 lab hrs/wk, 6 cr.
Provides intensive, integrated work in writing, spelling, reading, and vocabulary development with an emphasis on developing communication skills which will assist in subsequent course work and career choices. **Prerequisite:** A score of 15 or less on the college writing placement test or consent of instructor. **F, W, Sp**

SKD010 Discover Success

3 class hrs/wk, 3 cr.
Designed to help students succeed in college through discovering self, establishing priorities, setting goals, using resources, communicating effectively, solving problems, reducing stress, and implementing strategies for future success. **F, W, Sp**

SKD013ABC Phonics Review

1 class hrs/wk, 1 cr. each
Covers phonics, basic word attack skills, and syllabication to help students' spelling. Students will develop personal spelling list. Offered as lecture or individualized format. **SKD013A:** consonant sounds **SKD013B:** vowel sounds **SKD013C:** syllabication and pronunciation. **F, W, Sp, Su**

SKD014A,B,C Intermediate Spelling

1 class hrs/wk, 1 cr. each
Individualized instruction in spelling rules, exceptions, pronunciation, and developing a personal spelling list. Students may register for one, two, or three credits. **Prerequisite:** Score 28 or higher on the 36-word placement test or consent of instructor. **F, W, Sp, Su**

SKD015A,B,C Vocabulary Building

1 class hr/wk, 1 cr. each
Instruction in methods of learning vocabulary. Students will apply these techniques to their college textbooks. Offered individualized format. **SKD015A:** dictionary, thesaurus and context; **SKD015B:** prefixes, suffixes and roots; **SKD015C:** word histories and word memory techniques. **F, W, Sp, Su**

SKD030A,B,C Advanced Vocabulary Building

1 class hr/wk, 1 cr. each
Provides an in-depth analysis of vocabulary. Designed to increase the student's general and/or vocational vocabulary. Offered in individualized format. **Prerequisite:** SKD015A,B,C or consent of instructor. **F, W, Sp, Su**

SKD031A Academic Skills Preview

1 class hr/wk, 1 cr.
Focuses on the personal side of academic success: organization and motivation, listening and note taking, analysis of learning styles, and time management. **Su**

SKD031B Academic Skills Preview

1 class hr/wk, 1 cr.
Focuses on specific study strategies: concentrating, reading college textbooks, and developing a more retentive memory. **Su**

SKD031C Academic Skills Preview

1 class hr/wk, 1 cr.
Focuses on dealing with testing situations: coping with test anxiety, and predicting exam questions. **Su**

SKD031L,M,N Introduction to Studying for College

1 class hr/wk, 1 cr. each
Designed for students with specific learning needs. After an initial assessment of study behaviors, the student, with the instructor, will select study behavior modules based on the initial assessment. **Prerequisite:** None. SKD031LMN cannot be taken if SKD031ABC has already been taken. **Offered as needed.**

SKD045A Problem Solving and Thinking Skills

1 class hr/wk, 1 cr.
Assists students in analyzing and improving thinking skills and problem-solving techniques. Focuses on how to improve diagnostic and troubleshooting skills by acquiring insight into one's own problem-solving processes (metacognition). Emphasizes problem-solving (protocol), critical reading, creative thinking and analyzing personal thinking styles. **Su**

SOC

Sociology

SOC204 General

Sociology—Introduction

3 class hrs/wk, 3 cr.
Basic issues and findings regarding the biological, symbolic, and social nature of humankind. Discusses foundations for social interaction including patterns of social structure, culture, socialization, primary relationships, social differentiation, organization, deviance, and collective behavior. Includes principles of scientific methods and major sociological theorists. **F, W**

SOC205 General Sociology—Institutions

3 class hrs/wk, 3 cr.
An analysis of social institutions emphasizing family, religion, education, economy, politics, and factors contributing to institutional stability and change. **Prerequisite:** SOC204 or consent of instructor. **W, Sp**

SOC206 General Sociology—Social Problems

3 class hrs/wk, 3 cr.
A sociological approach to major social problems in contemporary American society. Emphasizes concepts of aging, health care, law, leisure, minorities, pollution, poverty, technology, urbanization, work, and youth. **Prerequisite:** SOC204 or consent of instructor. **Sp**

SOC210 Marriage Relationships

3 class hrs/wk, 3 cr.
Sociological approach to marriage, including preparation for marriage, mate selection, adjustment to marriage, marital problems to expect and solve, and changing styles of family relationships. **Offered as needed.**

SOC221 Juvenile Delinquency

3 class hrs/wk, 3 cr.
The nature, extent, causes, control, reaction, treatment, and rehabilitation of juvenile delinquency in contemporary American society from a sociological perspective. **Offered as needed.**

SOC227 Introduction to Social Psychology

3 class hrs/wk, 3 cr.
Presents some of the problems, theories, and methods of social psychology. Emphasizes diverse ways in which social influence alters an individual's thoughts, feelings, and actions. Examines prejudice, conformity, leadership, and aggression from an experimental viewpoint. Considers the relationship of these traits to

such phenomena as wars, elections, discrimination, violence, and interpersonal attraction. **Offered as needed.**

SOC291 Introduction to Data Collection and Interpretation

3 class hrs/wk, 3 cr.

Survey of concepts, techniques, and approaches used in collecting information from a scientific perspective. Covers varieties of procedures and strategies used in decision making and information reporting. Includes analysis of data. **Offered as needed.**

SOC292 Introduction to Consumer Behavior

3 class hrs/wk, 3 cr.

How behavioral science concepts, theories, and research observations apply to various aspects of consumer behavior. Discusses influences of perception, personality, attitudes, culture, family life, and social class on how and why people buy and consume products. **Offered as needed.**

SP

Speech

SP105 Effective Listening

3 class hrs/wk, 3 cr.

How students may improve their listening abilities. Analyzes listening behavior and develops an understanding and appreciation of the importance of listening. **Offered as needed.**

SP111 Fundamentals of Speech

3 class hrs/wk, 3 cr.

A survey of communications including interpersonal, group, and public. **F, W, Sp**

SP112 Fundamentals of Persuasion

3 class hrs/wk, 3 cr.

Introduces public speaking on a persuasive level. Includes discussion of the verbal and nonverbal levels of persuasion and concentrates on effective delivery, theories of persuasion, and use of support in effective persuasive speeches. Activities allow students to use theories in public speaking situations. **F, W, Sp**

SP113 Fundamentals of Small Group Communication

3 class hrs/wk, 3 cr.

Designed to prepare people to participate effectively in our committee-oriented society. Includes discussion and activities designed for developing leadership abilities and improved communication techniques in small group situations. **W, Sp**

SP114 Interpersonal Communication

3 class hrs/wk, 3 cr.

For students who would like to be able to communicate more effectively with friends and business associates in one-on-one settings. Covers concepts of self-awareness, nonverbal communication, emotional listening, and assertiveness. **F, W, Sp**

SP115A Interpersonal Communication in the Health Professions

1 class hr/wk, 1 cr.

Designed to familiarize students with the communication skills essential to the health care provider. Emphasizes the provider/client relationship. **Prerequisite:** Interest or involvement in health professions. **Offered as needed.**

SP115B Nonverbal Communication in the Health Professions

1 class hr/wk, 1 cr.

Designed to sensitize students to the nonverbal behaviors that are critical in the provider/cli-

ent relationship. **Prerequisite:** SP115A or consent of instructor. **Offered as needed.**

SP115C Group Dynamics in the Health Professions

1 class hr/wk, 1 cr.

Designed to help students identify and analyze communication patterns involved in working with other health care providers, functioning in a professional office, and working within an organization. **Prerequisite:** SP115A, SP115B or consent of instructor. **Offered as needed.**

SP126 Awareness of Communication in Relationships

3 class hrs/wk, 3 cr.

Practical information to strengthen personal relationships through communication. Explores major communication styles often confronted in intimate relationships and offers techniques for improving them. Stresses problem-solving options, and flexibility. **Recommended:** Previous enrollment in SP114 enhances appreciation of this course. **Offered as needed.**

SP130 Business and Professional Speaking

3 class hrs/wk, 3 cr.

Stresses improved speech efficiency, self-confidence, and skill in organization and delivery of speeches for business and social activities. **Offered as needed.**

SPAN

Spanish

SPAN066, 067, 068 Conversational Spanish, Terms I, II, III

3 class hrs/wk, 3 cr. each

Emphasizes Spanish-American pronunciation, grammar, and practical curriculum-based vocabulary, with some reading and writing. **Offered as needed evenings only.**

SPAN069 Advanced Conversational Spanish, Term I

3 class hrs/wk, 3 cr.

Advanced conversational skills, including comprehension, self-expression, and pronunciation. Emphasizes vocational and special interest vocabulary building. **Prerequisite:** SPAN068 or proficiency in basic conversational Spanish. **Offered as needed.**

SPAN101 First Year Spanish, Term 1

4 class hrs/wk, 4 cr.

Develops skills in reading, writing, speaking, and understanding basic Spanish. Introduces culture of Hispanic countries. Class fee \$2. **F**

SPAN102 First Year Spanish, Term II

4 class hrs/wk, 4 cr.

Continuation of skills development in reading, writing, speaking, and understanding basic Spanish. Focuses on culture of Hispanic countries. **Prerequisite:** SPAN101. Class fee \$2. **W**

SPAN103 First Year Spanish, Term III

4 class hrs/wk, 4 cr.

Continuation of skills development in reading, writing, speaking, and understanding basic Spanish. Focuses on culture of Hispanic countries through individual oral presentations. **Prerequisite:** SPAN101, 102. Class fee \$2. **Sp**

SPAN111 Spanish Conversation—Beginning, Term I

3 class hrs/wk, 3 cr.

Introduces the language and culture of Spanish-speaking countries through oral communication. Includes practice in idiomatic usage, vo-

cabulary, and aural comprehension. Class fee \$2. **F**

SPAN112 Spanish Conversation—Beginning, Term II

3 class hrs/wk, 3 cr.

Continues study of the language and culture of Spanish-speaking countries through oral communication. Includes practice in idiomatic usage, vocabulary, and aural comprehension. **Prerequisite:** SPAN111. Class fee \$2. **W**

SPAN113 Spanish Conversation—Beginning, Term III

3 class hrs/wk, 3 cr.

A continuation of SPAN112. **Prerequisite:** SPAN112. Class fee \$2. **Sp**

SPAN199 Special Studies: Spanish Conversation Workshop

11 class hrs for 1 day/1 cr.

Presents selected topics in Spanish. Emphasizes development of oral communication skills and concepts through participation in a variety of large and small group situations. **Prerequisite:** SPAN101, 102. **Sp**

SPAN201 Second Year Spanish, Term I

4 class hrs/wk, 4 cr.

Continues study and application of Spanish vocabulary, grammar, and syntax. Emphasizes self-expression in Spanish. Includes study of Hispanic literature and culture. **Prerequisite:** SPAN103 or equivalent. Class fee \$2 each. **F**

SPAN202 Second Year Spanish, Term II

4 class hrs/wk, 4 cr.

Continues study and application of Spanish vocabulary, grammar, and syntax. Emphasizes self-expression in Spanish. Includes study of Hispanic literature and culture. **Prerequisite:** SPAN201 or equivalent. Class fee \$2 each. **W**

SPAN203 Second Year Spanish, Term III

4 class hrs/wk, 4 cr.

Focuses on Hispanic culture, reviews grammar, and expands vocabulary through extensive reading, writing, and discussion. Emphasizes self-expression in Spanish. **Prerequisite:** SPAN202 or equivalent. Class fee \$2 each. **Sp**

SSC

Social Science

SSC150 Ethnic Cultures of the Willamette Valley

3 class hrs/wk, 3 cr.

An introductory study of major ethnic groups currently residing in the Willamette Valley. Lectures, audio-visual resources, discussions, group assignments, and field studies provide a variety of experiences for students. Members of cultural groups serve as resource persons. Independent study is encouraged. **Offered as needed.**

TA

Theater Arts

TA110 Introduction to the Theater Arts

3 class hrs/wk, 3 cr.

An overview of the theater: past, present and future. Emphasis on historical development and general theater appreciation. Focuses on directing, acting, design, playwriting, lighting, and costuming. **Offered as needed.**

TA121 Fundamentals of Acting

3 class hrs/wk, 3 cr.

Introduction to principles of acting, development of body control, investigation of body

skills, and use of improvisation in dramatic expression. **F, W, Sp**

TA122 Fundamentals of Acting

3 class hrs/wk, 3 cr.

Use of the voice in dramatic roles, its production, and control. An introduction to dialects and accents. **Prerequisite:** TA121 or consent of instructor. **F, W, Sp**

TA123 Fundamentals of Acting

3 class hrs/wk, 3 cr.

Problems in the analysis and presentation of characters in dramatic literature. **Prerequisite:** TA122 or consent of instructor. **F, W, Sp**

TA261 Costuming

3 class hrs/wk, 3 cr.

Elements of costume design and production. Includes line, form, and color within various historical periods, as applied to particular actors. Covers historical costuming and practical costume construction. **F**

TA285A,B,C, Theater Production Workshop

Variable hrs and cr.

Principles of dramatic production demonstrated through practical production experiences or special laboratory projects. Course may be repeated for a maximum of 9 credits. **F, W, Sp**

TR

Tourism

TR051 Domestic Travel

3 class hrs/wk, 3 cr.

An introduction to travel attractions of the United States. Regional studies of all 50 states. Emphasizes understanding and comprehension of physical and cultural points of interest. **F**

TR052 International Travel I

3 class hrs/wk, 3 cr.

An introduction to travel attractions of Europe, including the Soviet Union. Regional studies emphasize understanding and comprehension of physical and cultural points of interest.

TR053 International Travel II

3 class hrs/wk, 3 cr.

An introduction to travel attractions of South and East Asia, the Middle East, and Southeast Asia, including Indonesia. Emphasizes understanding and comprehension of physical and cultural landscapes within each country. Covers major cities' traveler attractions, world religions, and cultural behaviors. **W**

TR054 Travel Agent Basics

3 class hrs/wk, 3 cr.

Covers use of reference material, itinerary planning, domestic tariff and ticketing, reservation procedures, introduction to tours, and agency office procedures for travel industry personnel. **W, Sp**

TR055 Travel Agency II

3 class hrs/wk, 3 cr.

Continuation of TR054. Designed to provide students with the working knowledge and skills required to continue beyond an entry level travel agent. Study of trade publications, videos, tour products, ticketing procedures, and travel planning. **Prerequisite:** TR054. **W**

VC

Visual Communications

VC040 Introduction to Graphics

3 class and 9 lab hrs/wk, 1 cr.

A 12-hour introduction to Visual Communications. Provides a brief look at the graphic arts industry and an opportunity to try the skills required of workers. **Su**

VC051 Graphic Design and Character Generation

3 class and 12 lab hrs/wk, 6 cr.

Development of skills in desktop publishing, typesetting, and paste-up, with additional work in principles of layout, proofreading, copy fitting, and typography. Also examines career opportunities. **Prerequisite:** A course in basic keyboarding or a minimum typing speed of 35 words per minute. **F, W, Sp**

VC052 Process Photography, Stripping and Platemaking

3 class and 12 lab hrs/wk, 6 cr.

Development of technical competency in production methods including photography, line copy, halftones, development stripping (including multiple exposures), register systems, exposure computers, platemaking, elementary densitometry. Also examines career opportunities. **Prerequisite:** Completed or currently enrolled in a basic black and white photography course. **F, W, Sp**

VC053 Press Work and Reproduction Systems

3 class and 12 lab hrs/wk, 6 cr.

Development of skills in offset press operation with additional work in press adjustment and minor repair, dampening units, inking systems, register systems, paper stock cutting, finishing, and bindery. **Prerequisite:** Ability to lift 30 pounds or more. **F, W, Sp**

VC061 Advanced Graphic Design

3 class and 12 lab hrs/wk, 6 cr.

Practice and experience in visual communication and graphic technology relating to information design. Typesetting systems, typographic design, display and tabular composition, proofing/planning procedures, career opportunities, and audience analysis will be studied. Students will produce work for real clients. **Prerequisite:** Successful completion of the first year of the Visual Communications program, or consent of instructor. **F, W, Sp**

VC062 Image Conversion and Image Carriers for Offset Lithography

3 class and 12 lab hrs/wk, 6 cr.

Practice and experience in visual communication and graphic technology relating to process photography, densitometry, multiple color stripping, specialized films, photographic materials, plates, and other image carriers. Students will produce work for real clients. **Prerequisite:** Successful completion of the first year of the Visual Communications program, or consent of instructor. (Color blindness may be a problem.) **F, W, Sp**

VC063 Advanced Presswork

3 class and 12 lab hrs/wk, 6 cr.

Practice and experience in visual communication and graphic technology in operation and maintenance of offset presses. Skills to be developed include presswork, trouble shooting, ink mixing, color matching, quality control, and speed of operation. Students will produce work for real clients. **Prerequisite:** Successful completion of the first year of the Visual Communi-

cations program, or consent of instructor. (Color blindness may be a problem.) **F, W, Sp, Su**

VC067 Basic Technical Photography

3 class and 6 lab hrs/wk, 5 cr.

Fundamentals and technical aspects of photography including types of cameras, f/ systems, shutter speeds, film types and specifications, developing, basic enlarging, composition, career opportunities, vocabulary, equipment, and display techniques. Includes directed photographic assignments and photo lab work. **Prerequisite:** Current enrollment in the Visual Communications program. Class fee \$8. **W**

VC068 Intermediate Technical Photography

2 class and 9 lab hrs/wk, 6 cr.

Professional and graphic arts photography incorporating light measuring, gamma, densitometry, interpretation and uses of technical data, technical aspects of photographic design, microfilm, shooting and processing of color slides, use of color analyzers and densitometers, career opportunities, techniques of photographic copying, and retouching of negatives and prints. **Prerequisite:** VC067. Class fee \$8. **F**

VC071,072,073,074,075,076,077,078,079

Special Problems in Graphic Communications

variable hrs and cr.

A graphic communication problem is identified and a contract written by student and instructor. The contract sets forth a proposal to solve the problem and identifies objectives, procedures, and equipment needed, together with key checkpoints for student-instructor conferences. This is intended as a "final" course for students in both graphic arts and photography. Potential areas of study also include color separation, plant management, and quality control. Consideration and encouragement will be given for an interdisciplinary team of students working on a common problem. **Prerequisite:** VC051, VC052, VC053 or consent of instructor. **F, W, Sp**

VC083 Cost Accounting for Printers

3 class and 1 lab hr/wk, 3 cr.

Use of cost accounting in the printing industry. Covers calculation of overhead, labor, and material costs and establishing the hourly costs of the different operations of a printing business. **Prerequisite:** Second year standing in Visual Communication Technology program or consent of instructor. **W**

VC280 Cooperative Work Experience

see AUM280.

WFB

Welding Fabrication

WFB087 Fabrication Practices III

1 class and 6 lab hrs/wk, 3 cr.

Emphasizes structural fabrication using steel and aluminum. **Prerequisite:** Basic welding skills. Class fee \$15. **W**

WFB088 Fabrication Practices IV

1 class and 6 lab hrs/wk, 3 cr.

Instruction and experience in production type welding with use of jigs, fixtures, and positioners. **Prerequisite:** Successful completion of WFB087 or consent of program chair. Class fee \$15. **Sp**

WFB093 Fabrication Shop Problems

8 lab hrs/wk, 3 cr.

Continuation of WFB092 with emphasis on quality control. **Prerequisite:** WFB092 or consent of program chair. Class fee \$20. **W**

WFB096 Shop Projects

1 class and 3 lab hrs/wk, 2 cr.

Practical experience in maintenance and repair of weld shop machines, accessories, and fixtures. Uses selected fabrication and repair projects to develop resourcefulness and confidence in the application of skills and knowledge developed in concurrent courses. **Prerequisite:** Concurrent enrollment as a full-time student in the welding program or consent of the program chair. Class fee \$40. **Sp**

WFB097 Welding Codes and Standards

3 class hrs/wk, 3 cr.

Introduces welding codes and standards interpretation. Includes AWS D1.1 Structural Welding Code—Steel, ASME Section IX Welding and Brazing Qualifications Boiler and Pressure Vessel Code, and American Petroleum Institute 1104 Piping Code. **Prerequisite:** Concurrent full-time enrollment in welding and fabrication program or graduate of one-year welding or graduate of two-year welding and fabrication program, or experienced welders holding AWS D1.1 or ASME Section IX welding certification papers, or consent of welding program chair. **Sp**

WFB280 Cooperative Work Experience

see AUM280.

WLD**Welding****WLD051 Basic Arc Welding**

2 class and 9 lab hrs/wk, 5 cr.

A study of the basic principles involved in making fillet welds on mild steel using standard industrial procedures, equipment, and welding electrodes with the shielded metal arc welding (SMAW) process. Includes information concerning other welding processes and compares them to the shielded metal arc welding process. Class fee \$25. **F**

WLD052 Intermediate Arc Welding

2 class and 9 lab hrs/wk, 5 cr.

Continuation of WLD051 covering ferrous and non-ferrous alloys and welding procedures. Demonstration and supervised practice of techniques on various metals, applied in fabrication and repair concurrently with related information concerning the use and structure of these materials. **Prerequisite:** WLD051 or WLD077 or consent of program chair. Class fee \$30. **W**

WLD053 Advanced Arc Welding

1 class and 6 lab hrs/wk, 3 cr.

Welding under code type procedures, on pipe and plate. A study of welding procedures previously covered as they apply to heavy gauge welding with groove type joints. For an additional fee, students may take a certification test. **Prerequisite:** Satisfactory completion of WLD051 and WLD052 or equivalent industrial experience with consent of program chair. Class fee \$30. **Sp**

WLD054 Introduction to Welding/GMA-Gas

12 hrs/1 wk (3 hrs/day, 4 days), 1 cr.

A survey of safety, power sources, wires, shielding gases, application of the gas metal arc (GMA) process, and support equipment used in welding. Class fee \$10. **Su**

WLD056 Blueprint Reading and Sketching

6 lab hrs/wk, 2 cr.

Basic sketching techniques and reading of three-view drawings for welders. Includes dimensioning practices, scaling, line alphabet notes, and symbols. Emphasizes developing skills in reading detail and welding drawings. **F**

WLD057 Layout Practices

3 lab hrs/wk, 1 cr.

A study of layout tools and their use in fabricating structural members, bins, hoppers, pipe fittings, chutes, etc. Includes principles and practices of pattern development for typical forms and fitting. Class fee \$5. **W**

WLD058 Weld Shop Problems

2 class and 15 lab hrs/wk, 7 cr.

A review and application of welding, layout, and fabrication processes covered during the year. Includes study and practice of production welding methods, electrode consumption, and method selection. Selected fabrication and assembly projects present typical layout, fabrication, and production problems. **Prerequisite:** Student must possess sufficient welding and fabrication skills to complete assigned projects under job shop conditions. Class fee \$25. **Sp**

WLD061 Basic Gas Metal Arc Welding (MIG)

1 class and 4 lab hrs/wk, 2 cr.

Basic skills in semiautomatic metal inert gas (MIG) welding processes. Principles involved in equipment, material, and procedures combined with demonstrations and supervised practical experience using standard industrial equipment. Use of solid and flux-cored wire in typical industrial applications. Class fee \$25. **Prerequisite:** WLD051, WLD071 or consent of program chair. **F**

WLD062 Intermediate Gas Metal Arc Welding (MIG)

1 class and 4 lab hrs/wk, 2 cr.

A continuation of WLD061. Includes study of and practice in welding of carbon steel. Emphasizes production welding situations using large diameter electrodes (solid and fluxcored) with mixed shielding gases in flat or horizontal positions. **Prerequisite:** WLD061 or consent of program chair. Class fee \$35. **W**

WLD063 Advanced Gas Metal Arc Welding (MIG)

1 class and 6 lab hrs/wk, 3 cr.

Continuation of WLD062. Includes welding mild steel, aluminum, stainless steel and steel pipe welding. Students may take a certification test in accordance with the American Society of Mechanical Engineers (ASME) Section IX code or the American Welding Society (AWS) unlimited plate test in accordance with AWS D1.1 structural code. **Prerequisite:** WLD061 or consent of program chair. Class fee \$35. **Sp**

WLD064 Introduction to Welding/SMA-Arc

12 hrs/1 wk (3 hrs/day, 4 days), 1 cr.

A survey of safety, power sources, and electrodes used in the shielded metal arc (SMA) process and support equipment used in welding. Class fee \$10. **Su**

WLD071 Basic Oxyacetylene Welding

1 class and 3 lab hrs/wk, 2 cr.

Fundamentals of oxyacetylene welding including brazing and cutting processes. Class fee \$20. **F**

WLD072 Oxyacetylene Cutting

5 lab hrs/wk, 2 cr.

Use and care of oxyacetylene cutting equipment. Class fee \$20. **W**

WLD073 Basic Gas Tungsten Arc Welding (TIG)

1 class and 6 lab hrs/wk, 3 cr.

Fundamentals of tungsten inert gas (TIG) welding processes, machine setting and application and development of inert gas welding skills. Includes welding of mild steel, aluminum, aluminum alloys, stainless steel, and magnesium. **Prerequisite:** WLD051, WLD071 or consent of program chair. Class fee \$35. **W**

WLD074 Weld Shop Safety

1 class hr/wk, 1 cr.

A survey of principles of safety for industry. Uses films and case studies to develop an awareness of hazards and positive attitudes toward prevention of accidents. **F**

WLD077 Welding Processes

2 class and 6 lab hrs/wk, 4 cr.

A beginning course in fundamentals of shielded metal arc welding, oxyacetylene welding and cutting, metallic inert gas welding (MIG), and arc-air procedures. Class fee \$35. **W**

WLD081 Welding Metallurgy I

2 class hrs/wk, 2 cr.

Fundamentals of metallurgy pertaining to welders. Covers identification of ferrous metals, distortion, stress relieving, flame straightening and hardening, plus various metallurgical problems. **W**

WLD082 Welding Metallurgy II

2 class hrs/wk, 2 cr.

Continuation of WLD081 covering common non-ferrous metals and chromium alloys. **Sp**

WLD097 Welding

1 class and 3 lab hrs/wk, 2 cr.

Fundamentals and application of arc welding, oxyacetylene welding, brazing and cutting pertaining to the automotive industry. Class fee \$20. **F**

WLD098 Metallurgy

2 class and 3 lab hrs/wk, 3 cr.

Covers physical and mechanical properties of metals, effects of alloying elements, and heat treatment. Lab work includes preparation and inspection of sample for chemical analysis, micro structure analysis, and mechanical properties. **Prerequisite:** WFB081 or consent of program chair. Class fee \$10. **W**

WR**Writing, see also Skills Development****WR040 Writing Skills**

3 class hrs/wk, 3 cr.

Writing correct and varied sentences. Includes grammar, punctuation, and writing practice. **F, W, Sp, Su**

WR115 Introduction to Composition

3 class hrs/wk, 3 cr.

Introduces the writing of expository essays. Emphasizes sentence and paragraph development as well as short essay formation. Class fee \$2. **F, W, Sp, Su**

WR121 English Composition—Exposition

3 class hrs/wk, 3 cr.

Emphasizes clear, detailed informative writing, clear thinking, and active reading. **Prerequisite:** Demonstrate mastery of 1) conceiving and developing ideas about a single topic for a

specific audience; 2) formulating a single statement (thesis) that clearly expresses a central idea regarding the topic; 3) organizing related ideas and developing them into coherent paragraphs that provide specific supporting details or reasons; and 4) using standard written English to write complete correct sentences, punctuate correctly, follow generally accepted conventions of use, spell correctly, and know the meanings of words commonly used in one's own writing. (Proficiency is determined by standard placement test.) Class fee \$2. **F, W, Sp, Su**

WR122 English Composition—Logic and Style

3 class hrs/wk, 3 cr.

Includes logical, effective argumentative prose, awareness of stylistic elements, and critical reading. **Prerequisite:** WR121. Class fee \$2. **F, W, Sp, Su**

WR123 English Composition—Research Writing

3 class hrs/wk, 3 cr.

Covers the acquisition and evaluation of evidence, integration of opinion, and process and forms for developing research papers. **Prerequisite:** WR121 and WR122. Class fee \$2. **F, W, Sp, Su**

WR227 Technical Writing

3 class hrs/wk, 3 cr.

Objective and direct report writing including format, organizational strategies, supplements, and illustrations. Emphasizes coherence, clarity, conciseness, and accuracy in a wide range of occupational writing situations as well as technical writing as a career. **Prerequisite:** WR121 or consent of instructor. Class fee \$2. **F, W, Sp, Su**

WR241, 242, 243 Imaginative Writing

3 class hrs/wk, 3 cr.

Workshop in writing fiction, drama, and poetry. Daily discussions of student writings. Includes some textual explorations with student and instructor presentations. Class fee \$2 each. **WR241: F; 242: W; 243: Sp**

WR248A-C Strategies for Revision

3 class hrs/wk, 1-3 cr.

Series of exercises designed to initiate, sustain, and refine personal and professional writing. **Offered as needed.**

WR298A Independent Studies: Writing

3 cr.

Faculty-supervised independent study in an area of student interest. May be taken for a maximum of 9 credits. **Offered as needed.**

WS

Women's Studies

WS101 Introduction to Women's Studies

3 class hrs/wk, 3 cr.

Women as a minority group, the role of women from a variety of social science perspectives, position of women in the family and the labor force, and the political psychology of women. A look at women cross-culturally, in history, and in literature. **Offered as needed.**

WS102 Introduction to Women's Studies

3 class hrs/wk, 3 cr.

The historical development of women from the 1920s through the 1980s with major emphasis on women cross-culturally in developing third world countries and modern industrial societies. **Offered as needed.**

WS103 Introduction to Women's Studies

3 class hrs/wk, 3 cr.

Women as social beings moving toward the year 2000. Emphasizes theoretical changes occurring in anthropological, psychological, and other social areas which have major implications on future behavioral trends. Includes development of changes in labor, laws, and social institutions with an eye toward future patterns. Focuses on research and evaluation of theories and data. **Offered as needed.**

WS199A Women in the Humanities

1 class hr/wk, 1 cr.

An introduction to the contributions of women to the humanities. Identifies women of achievement in such fields as art, music, film, drama, literature, philosophy, and religion. **Offered as needed.**

WS199B Women in the Social Sciences

1 class hr/wk, 1 cr.

An introduction to the contributions of women in the Social Sciences. Includes fields such as anthropology, economics, geography, history, political science, psychology, and sociology. **Offered as needed.**

WS199C Women in Science and Technology

1 class hr/wk, 1 cr.

An introduction to the work of women scientists, health care providers, and military personnel, and those working in the trades and technologies. Current issues involving women, science, and technology are identified, and women's non-traditional career choices are explored. **Offered as needed.**

ZOO

Zoology

ZOO201 General Zoology

3 class and 3 lab hrs/wk, 4 cr.

An introductory study of principles and theories of animal life. Includes application of these theories and principles to vertebrates as well as selected study of the morphology and physiology of animal cells. Class fee \$12. **F**

ZOO202 General Zoology

3 class and 3 lab hrs/wk, 4 cr.

A continued study of the animal cell dealing with the principles of embryology and Mendelian and molecular genetics. Includes selected study of the morphology, physiology, and ecology of invertebrates. **Prerequisite:** ZOO201 or consent of instructor. Class fee \$12. **W**

ZOO203 General Zoology

3 class and 3 lab hrs/wk, 4 cr.

A continued study of animal biology dealing with the principles of the morphology, physiology and ecology of vertebrates. Involves a comparative anatomical survey of the major vertebrate groups with a study of selected human body systems. **Prerequisite:** ZOO201 and ZOO202 or consent of instructor. Class fee \$12. **Sp**

Board of Education

Members of Chemeketa's Board of Education are elected to represent seven geographical zones in the college district.

Zone one—Signe Pribnow

Zone two—Marilyn Crouser

Zone three—Robert Simon

Zone four—Wayne E. Feller

Zone five—Philip Frey

Zone six—Gerald Watson

Zone seven—Gwen VanDenBosch

Staff as of May, 1991

This is a partial listing of Chemeketa Community College's staff. It includes most of the people who are employed full time in instructional, coordinating, and administrative roles.

Adams, Chuck—Foundation Development Officer
Adcock, James—Instructor, Computer Science
Aebischer, Joanne—Automation Project Librarian
Agee, Steve—Instructor, Automotive Technology
Alfaqeeh, Nuri—Instructor, Mathematics
Alvarez, Maria (Cleo)—Counselor
Anderson, D. Craig—Coordinator, Community Agriculture Program
Anderson, Frank—Coordinator, Campus and Apprenticeship Programs
Anderson, Gwenellyn—Counselor
Anderson, Holly—Program Chair, Human Services
Anderson, Kenneth—Instructor, Math and Computer Literacy
Anderson, Robert—Manager, Computer Services
Archer, Nancy—Diagnostician, Counseling
Asher, Greg—Instructor, Psychology
Atwell, Kenneth—Instructor, Small Business Management

Barber, Wayne—Instructor, Mathematics
Barth, H. Philip—Director, Business Services
Bartlett, Karen—Instructor, German
Bates, Michael—Program Chair, Computer Science
Bay, Brian—Director, Emergency Services
Beaufeit, Dorothy—Instructor, Mathematics
Beebe, Janell—Instructor, Office Administration and Technology
Beigh, Marybelle—Instructor, Electronics
Bennett, Suzanne—Coordinator, Cooperative Work Experience
Benolken, Robert—Instructor, Physical Science and College Transfer Engineering
Benson, June—Instructor, Developmental Education
Berger, Gerard—Vice President, Academic Services
Berman, Arthur—Program Chair, Accounting and Management
Bibler, Rob—Instructor, Art
Blodget, James—Specialist, Media Production
Bode, Elizabeth—Instructor, Health Care Support Services
Bodtker, Diana—Program Chair, Life Science
Bodtker, Egon—Director, Social Science and Criminal Justice
Bohlander, Susan—Instructor, Office Administration and Technology
Bolen, Gene—Director, Advising and Counseling

Booth, Karleen—Instructor, Office Administration and Technology
Bothwell, Bruce—Instructor, Electronics
Bowman, Roberta—Instructor, Deaf and Hearing Impaired
Boyington, Gary—Program Chair, Electronics
Brady, Bruce—Purchasing Agent
Brock, Clifford—Instructor, Journalism; Advisor, Student Newspaper
Brooks, W. David—Instructor, Accounting
Brownlow, Carol—Director, Allied Health, Physical Education, and Athletics
Brummond, Candis—Counselor, Life Skills
Bunch, Ray—Instructor, Computer Science
Buttles, George—Instructor, Human Services
Byers, E. Maxine—Instructor, Learning Assistance/Skill Development

Campbell, Lorraine—Coordinator, Family Programs
Carnegie, Kay—Instructor, Nursing
Cardiff, Bill—Coordinator, Copy Center
Caster, John—Instructor, Farm Business Management, McMinnville Center
Chancey, Fred—Program Chair, English, Writing, and Literature
Chavez, Robert—Athletic Director and Instructor, Physical Education
Chesley, Robert—Instructor, Math
Christner, Ray—Instructor, Computer Science
Clark, Lori—Instructor, Physical Education
Clyde, Bobbie—Coordinator, Small Business Assistance
Cochrane, Edward—Instructor, History
Cochrane, Linda—Director, Learning Resource Center
Cockrell, Barbara—Director, Business and Management
Cockrell, James—Program Chair, Real Estate; Risk Manager
Concepcion, Paul—Program Chair, Social Science
Connor, Marilyn—Instructor, Communication Skills
Cooter, Steve—Instructor, Composition and Literature
Cornutt, Delvin—Instructor, Sociology
Couse, Lyle—Instructor, Accounting
Craven, Linda—Instructor, Early Childhood Education
Cudmore, Wynn—Instructor, Life and Physical Sciences
Cullison, Joanne—Program Chair, Learning Assistance/Skill Development
Cushing, Kenneth—Instructor, Spanish and French

Daugherty, Ron—Dean, Business, Health, and Industry
Davis, Anne—Counselor
Davis, Michael—Coordinator, Cooperative Work Experience and Curriculum Developer
Day, Matilda—Instructor, Nursing
DePue, Thomas—Director, Information Technology
Dinsdale, Sara—Instructor, Basic Skills
Dixon, Robert—Program Chair, Manufacturing Engineering Technology
Dobay, Deborah—Instructor, Psychology
Doeneka, Molly—Instructor, Anthropology and Political Science
Dunn, Tim—Instructor, Forestry

Ehlers, Deborah—Instructor and Counselor, Life Skills
Eichsteadt, Wendy—Instructor, Emergency Medical Technology
Elegant, Ann—Instructor and Counselor, Life Skills
Eppler, Carol—Instructor, Office Administration and Technology
Erovick, Joyce—Instructor, Nursing
Eustrom, James—Coordinator, Student Life

Felton, Maureen—Program Chair, Instructional Assistant
Fenske, Helen—Instructor, Human Services
Ferry, Marjorie—Instructor, English

Fisher, Gene—Instructor, Fire Protection
Fishfader, Randy—Instructor, Early Childhood Education
Fitzgerald, George—Instructor, Life Science
Ford, Edward—Instructor, Health, Physical Education
Ford, Lowell—Dean, Community Education and Student Services
Forest, Jacques—Instructor, Economics
Forslund, Larry—Program Chair, Life Science
Freeman, Tony—Instructor, Human Services

Galbraith, Joan—Coordinator, Older Adult Programs
Galligan, Patricia—Director, Financial Aid
Garaventa, James—Specialist, Executive/Employee Development
Garcia, Francisco—Counselor
Garcia, Margarita—Instructor, Inmate Education
Gassner, Gayle—Director, Corrections Education
Gerard, Kay—Instructor, English as a Second Language
Gilbert, Jeremy—Instructor, Psychology
Gill, Tom—Assistant to the President for Institutional Advancement
Gillette, David—Instructor, Mathematics
Gleason, Susan—Coordinator, Older Adult Programs
Gohaidan, Carol Ann—Instructor, English as a Second Language
Gohring, Judy—Director, Personnel and Affirmative Action
Goward, Richard—Director, Auxiliary Services
Graves, Susan—Instructor, Instructional Assistant
Green, Constance—Assistant to the President, Special Projects
Gubrud-Howe, Paula—Instructor, Nursing

Haack, Wendy—Instructor, Emergency Medical Technology
Haines, Beverley—Coordinator, Cooperative Work Experience
Hanby, Stephen—Instructor, Welding Technology
Hargreaves, Hal—Instructor, Philosophy and Religion
Harmon, Millie—Instructor, Sociology
Harris, Lois—Instructor, Nursing
Harris, Ralph—Instructor, Mathematics
Hassoun, Judith—Counselor
Heater, Steven—Instructor, Welding Technology
Held, Leonard—Instructor, Composition, Literature, and Film Studies
Henderson, Madeleine—Program Chair, Center for Individual Learning, Woodburn Center
Henry, Max—Instructor, Mathematics
Hilgemann, Vickie—Program Chair, Humanities, Speech, and Foreign Language
Hodges, Gary—Instructor, Automotive Technology
Holmes, Darrel—Program Chair, Building Inspection
Hoobler, Tony—Instructor, Physical Science
Horn, Terry—Program Chair, Office Administration and Technology
Howard, Jeffrey—Program Chair, Deaf and Hearing Impaired
Hulett, Ronald—Director, Training & Economic Development Center

Irving, Jan—Instructor, Nursing

Jacobson, Lee—Instructor, Art
Jakubowski, Thomas—Instructor, Alternative High School
Jantzi, Ron—Director, Trades and Technologies
Johanson, Terri—Coordinator, Macintosh Computer Grant
Johnen, Elizabeth—Associate Dean/Director, Developmental Education
Johnson, Donald—Instructor, Drafting Technology
Jolly, Dale—Instructor, Geography
Jones, Ben—Counselor

Jones, Debra—Instructor, Alternative High School
Jones, Jeffrey—Instructor, Fire Protection Technology
Jones, Lee—Instructor, Mathematics
Judd, Connie—Instructor, Learning Assistance/Skills Development
Judd, Roger—Instructor, Mathematics

Kalb, David—Instructor, Automotive Technology
Killpatrick, Paul—Instructor, Adult Basic Education and GED
Kimmel, Fred—Instructor, Drafting Technology
King, James—Instructor, Human Services
King, Janet—Coordinator, Stayton Center
Kirk, Barbara—Instructor, Physical Science
Kirksey, Nancy—Director, Woodburn Center
Kizziah, John—Instructor, Welding Technology
Knab, Bernard—Director, Humanities and Communications
Knight, Franklin—Instructor, Electronics
Koch, Alan—Director, Marketing, Publications, and Student Life
Koontz, Everett—Instructor, Adult Basic Education
Kurz, Sandra—Instructor, Physical Education

Lacy-Tang, Jean—Career Counselor
Larson-Kent, Lit—Instructor, Early Childhood Education
Leavitt, Judith—Manager, Bookstore
Leonard, Phyllis—Instructor, Math
Levine, Ellen—Program Chair, AFS Jobs Program
Longshore, Glen—Specialist, Media Production
Lund, Eugenia—Instructor, Center for Independent Learning, Dallas Center
Lynch, James—Program Chair, Industrial Skills Training

MacDonald, Lucy—Instructor, Learning Assistance/Skills Development
Macinnes, Patricia—Instructor, Inmate Education
Malone, Patricia—Instructor, Office Administration and Technology
Marckx, Elaine—Instructor, Nursing
Marges, Dawn—Director, Child, Family, and Work
Marshall, Jean—Accountant
Martin, Joel—Counselor
McConville, Virginia—Instructor, Adult Basic Education and GED
McCready, Marveen—Instructor, Mathematics
McCullough, Linda—Instructor, Business and Management
McDermott, Laura—Reference Librarian
McDonough, Thomas—Program Chair, Physical Science
McGill, Meg—Coordinator, Salem Area Programs
McGowan, Esther—Instructor, Inmate Education
McLain, Roger—Instructor, Criminal Justice
McLaughlin, Suzanne—Instructor, Foreign Languages
McNicholas, Michael—Instructor, Physical Science
Mellinger, Sherry—Instructor, Nursing
Mendenhall, Mike—Instructor, Building Inspection
Merola, Joseph—Instructor, Visual Communications
Meyers, Dianne—Instructor, Nursing
Michels, John—Instructor, Mathematics
Mills, Keith—Instructor, Management
Minato, Al—Program Coordinator, Forest Technology
Mock, John—Instructor, Composition and Literature
Mock, Lorene—Instructor, Dental Assisting
Moffitt, Ray—Small Business Advisor
Mohn, Elaine—Instructor, Nursing
Moothart, Janine—Director, Vocational Education, Tri-Counties
Morgan, Michael—Director, Math and Science
Morin, Christiane—Instructor, French
Mount, Joan—Instructor, Center for Independent Learning, McMinnville Center

Moxley, Doug—Specialist, Academic Computing
Murray, Susan—Program Chair, High School Completion/Alternative High School
Myers, James—Instructor, Psychology
Myers, Lynette—Instructor, Basic Skills

Nagle, Priscilla—Instructor, Adult Basic Education and GED
Nelson, Cynthia—Instructor, Early Childhood Education
Nelson, Sandra—Program Chair, New Workforce
Neuendorf, Mary—Coordinator, Public Relations
Newton, Kristi—Instructor, Business
Nichols, Van—Program Chair, Civil-Structural Engineering, College Transfer Engineering, and Drafting Technology
Niebuurt, Kathleen—Instructor, Nursing
Nubile, Barbara—Team Coordinator, Nursing

Ochsner, Ken—Program Chair, Emergency Medical Technology
O'Harra, Kris—Instructor, Communication Skills
Olheiser, Dean—Program Chair, Automotive Technology
Olson, Betty—Instructor, Nursing
O'Reilly, Edward—Instructor, Automotive Technology
Ottaway, Carol—Program Chair, Business Education, Dallas Center
Owens, Chris—Instructor, Health Education

Panasuk, Eugene—Program Chair, Farm Business Management
Parmeter, Stanton—Instructor, Life Science
Patterson, Darrell—Instructor, Emergency Medical Technology
Perkins, Ruth—Instructor, Inmate Education
Phipps, Raymond—Director, Cooperative Work Experience and Placement Services
Pielstick, Dean—Registrar
Pillsbury, Chris—Instructor, Human Services
Pintler, Michael—Program Chair, Welding Technology
Pitt, Donald—Instructor, Civil-Structural Engineering Technology
Powell, Sheryl—Instructor, Emergency Medical Technology
Prater, Linda—Instructor, Early Childhood Education
Pratt, Betty—Instructor, Business Education, Woodburn Center
Prothero, Marilyn—Instructor, English as a Second Language

Rasmussen, Douglas—Program Chair, Mathematics
Reid, Donna—Program Chair, Art, Film
Rengert, Lee—Instructor, Human Services
Rhodes, Sandra—Instructor, Adult Basic Education and GED, Downtown Learning Center
Rice, Leonard—Instructor, Drafting Technology
Richardson, Steve—Instructor, Communication Skills
Ringwald, Beverley—Instructor, Office Administration and Technology
Roelofs, Gary—Instructor, English as a Second Language
Rogers, Timothy—Instructor, High School Completion
Rogland, Paul—Instructor, Inmate Education
Rollings, Ronald—Instructor, Automotive Technology
Rosen, Lois—Program Chair, English as a Second Language
Rude, John—Coordinator, Grants

Sansone, Steve—Program Chair, Health and Physical Education
Sauter, Betty—Instructor, Business Education, McMinnville
Sawser, Judith—Program Chair, Banking and Finance
Schaefer, William—Instructor, Physical Science
Scheer, Sara—Instructor, Nursing

Scherf, Joan—Director, Dallas Center
Schuette, Gretchen—Dean, Humanities, Sciences, and Learning Assistance
Schwab, Patrick—Specialist, Instructional Computers
Scoggin, Paul—Specialist, Hospitality Systems
Seals, Georgina—Instructor, Office Administration and Technology
Segura, William—President
Sharp, Grady—Program Chair, Criminal Justice
Shaw, Robert—Program Chair, Visual Communications
Showers, Alene—Coordinator, Tutoring Center Services
Skirvin, Charles—Counselor
Slemenda, Steve—Instructor, Composition and Literature
Slosser, Joseph—Instructor, Psychology
Smith, Craig—Dean, College Support Services
Smith, Warren—Instructor, Speech
Stam, Bruce—Program Chair, Early Childhood Education
Steiner, Ann—Instructor, Adult Basic Education
Steiner, Jerry—Executive Dean
Streight, Gene—Coordinator, Cooperative Work Experience
Stubbs, Dina—Instructor, Nursing
Suter, Marcia—Program Chair, Humanities
Suter, Paul—Instructor, Communication Skills

Tabor, Patrick—Instructor, History
Tardaewether, Virginia—Instructor, ABE and Even Start
Terhes, John—Instructor, Communication Skills
Terpin, Mark—Education Specialist, Developmental Education
Triplett, Geary—Counselor
Trumbo, Mark—Director, McMinnville Center

Vancalcar, Verna—Coordinator and Instructor, Adult Basic Education
Varnum, Sara—Director, Extended Learning
Vaughan, Joyce—Program Chair, Dental Assisting
Vessello, Jerry—Director, Facilities and Operations

Wade, Devon—Instructor, Accounting
Wahner, Royal—Instructor, Manufacturing Engineering Technology
Wall, David—Instructor, Science
Wall, James—Coordinator, Cooperative Work Experience
Ward, H. Jill—Special Projects Coordinator, Developmental Education
Warren, John—Instructor and Counselor, Life Skills
Warren, Lynda—Manager, Business Office
Wasson, Barbara—Instructor, Learning Assistance
West, Susan—Instructor, Physical Education
Welle, Victoria—Program Chair, Health Care Support Services
Westford, Gary—Instructor, Inmate Education
White, Roger—Instructor, Electronics
Whitton, Louanne—Program Chair, Adult Basic Education and GED
Wigginton, Barbara—Instructor, Composition and Literature
Williams, Doris—Director, Nursing
Williams, Shirley—Reference Librarian
Willis, Vicki—Human Resource Development Specialist
Wintermeyer, Larry—Instructor, Computer Science
Woods, Rae—Counselor
Wright, Larry—Instructor, Accounting and Business Management

Yenne, Michele—Instructor, Nursing

Zacharias, Patricia—Instructor, Health Care Support Services
Zolkoske, Gary—Instructor, Manufacturing Engineering Technology

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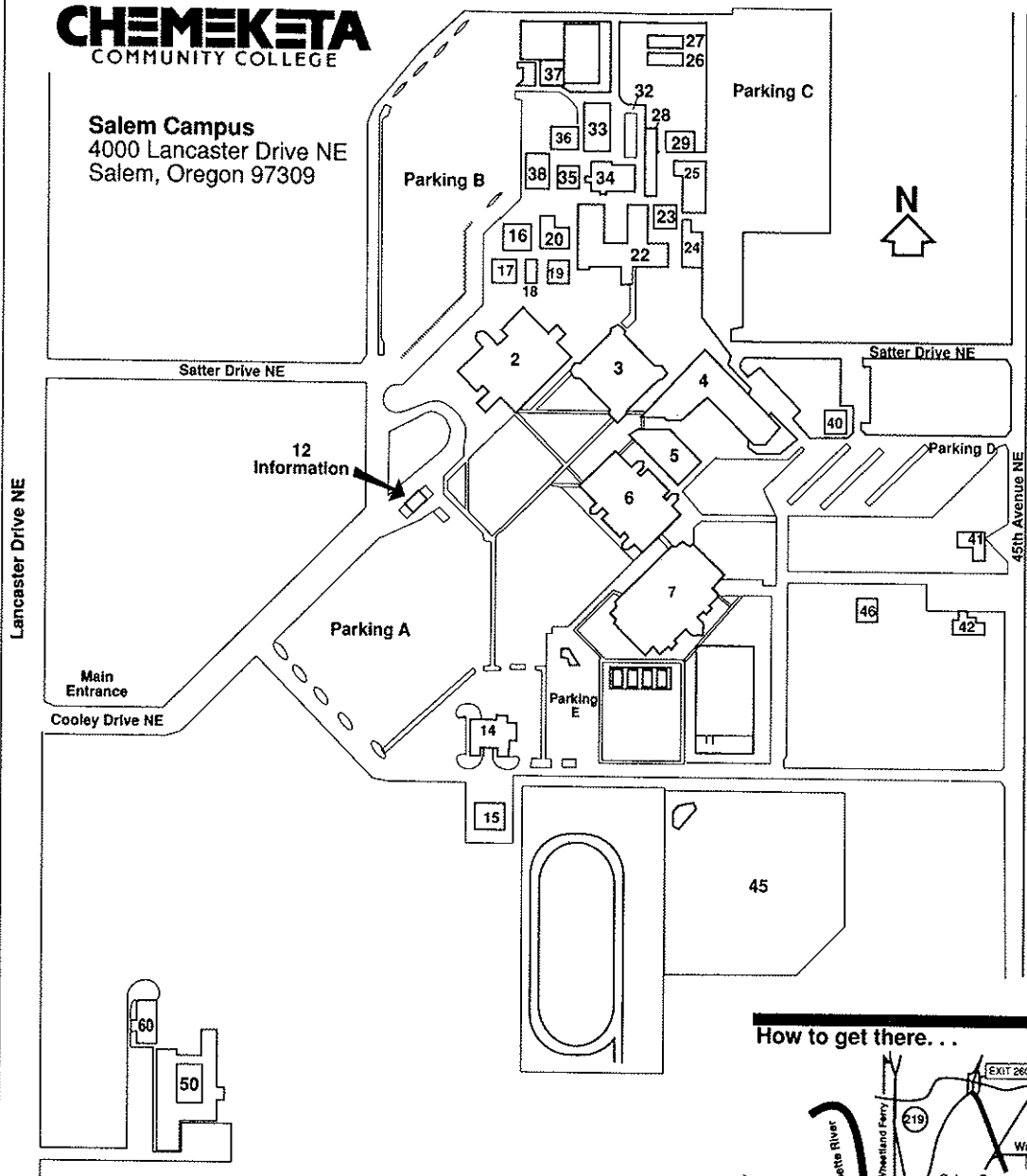
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CHEMEKETA COMMUNITY COLLEGE

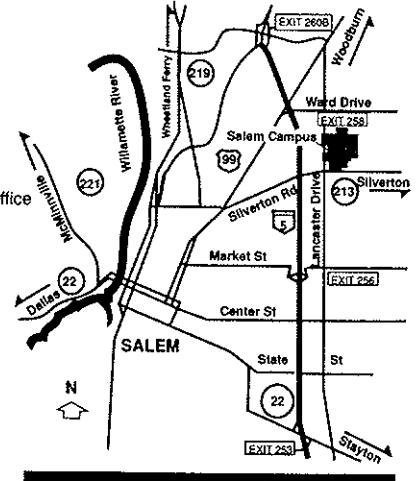
Salem Campus
4000 Lancaster Drive NE
Salem, Oregon 97309



Map Legend

- 2. Advising and Counseling, Developmental Education, Library, Media Services, President's Office, and Tutoring
- 3. General classrooms
- 4. Technical Skills classrooms
- 5. Technical skills classrooms
- 6. Science and Allied Health classrooms and labs
- 7. Physical Education
- 12. Information and Security
- 14. Fire Station
- 15. Emergency Operations and Research Facility
- 16. Staff offices
- 17. Placement Services and Volunteer Tutor Program
- 18. English as a Second Language Program
- 19. Life Skills Center
- 20. College Bookstore
- 22. Admissions, Business Office, Computer Services, Cooperative Work Experience, Financial Aid, Personnel, and Registrar's Office
- 23. Staff offices
- 24. Machine Shop
- 25. Welding Shop
- 26. Classrooms A-B
- 27. Classrooms A-B
- 28. Classrooms A-F
- 29. Staff offices and Apprenticeship
- 30. Maintenance and Repair
- 32. Classrooms A-D
- 33. Mailing, Purchasing, and Receiving
- 34. Food Service
- 35. Staff offices
- 36. Staff offices
- 37. Child Development Center
- 38. Math-lab and classrooms
- 42. Ceramics and Sculpture
- 45. Activity Field
- 46. Greenhouse

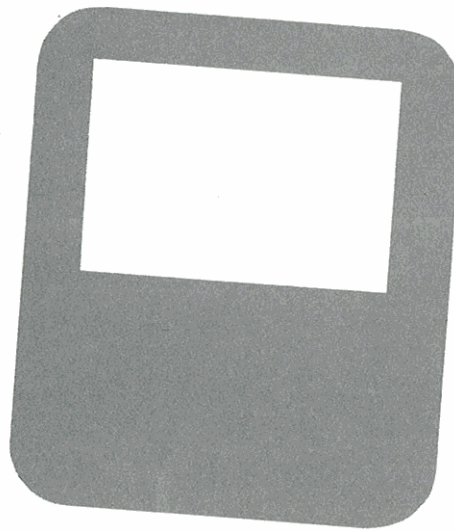
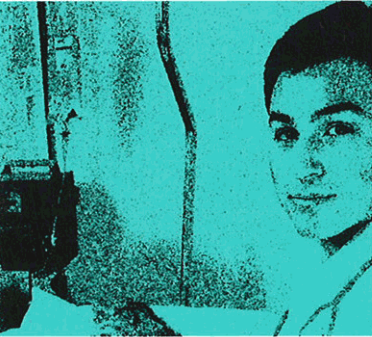
How to get there . . .



- 50. Classrooms, High School Completion, Extended Learning offices, Cooperative Child Care Center, Family Resource Center
- 60. Employee Development and Management Training Center



CHEMEKETA



CHEMEKETA
COMMUNITY COLLEGE

4000 LANCASTER DR. NE
PO BOX 14007
SALEM, OREGON 97309-7070