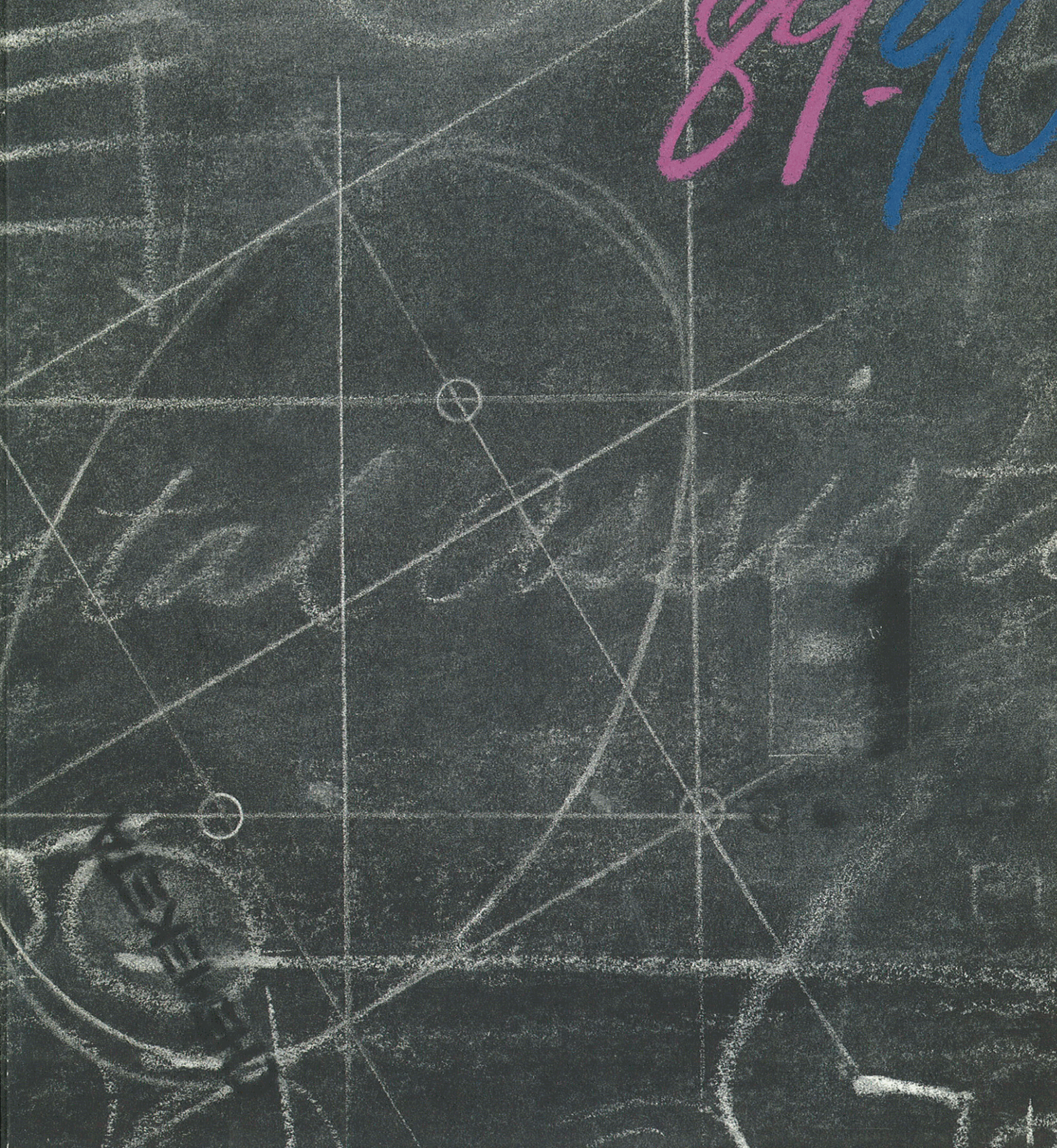


CHEMELKETA

COMMUNITY COLLEGE CATALOG

89-90



Chemeketa
Community
College
Catalog
1989-90

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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 (April)
 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 Mechanics (135)
- 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 (035)
- 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-One Year (162)
- 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 Engineering Technology (College Transfer) (149)
- Manufacturing Operations (148)
- Manufacturing Technology (147)
- Mechanical Design (143)
- *Medical Office Assistant (083-29M)

- * Nursing (084-29H)

- 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)

- Professional Cooking (102)

- Real Estate (040)

- * 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.

05/89

Lower Division courses of study which may be transferred to Oregon's four-year colleges and universities

LDC-Business (210)

- Accounting
- **Business Administration
- **Business Education
- Marketing

LDC-Computer Sciences (320)

- **Computer Science

LDC-Education (220)

- **Elementary
- **Secondary
- Special Education

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-Hotel, Restaurant and Tourism Management (350)

- **Hotel, Restaurant and Tourism Management

LDC-Humanities (230)

- Architecture
- **Art
- **English
- **Foreign Languages
- **Journalism
- Literature
- Music
- **Philosophy
- **Speech
- Theater

LDC-Mathematics (310)

- **Mathematics

LDC-Physical Education (270)

- **Physical Education

LDC-Science (300)

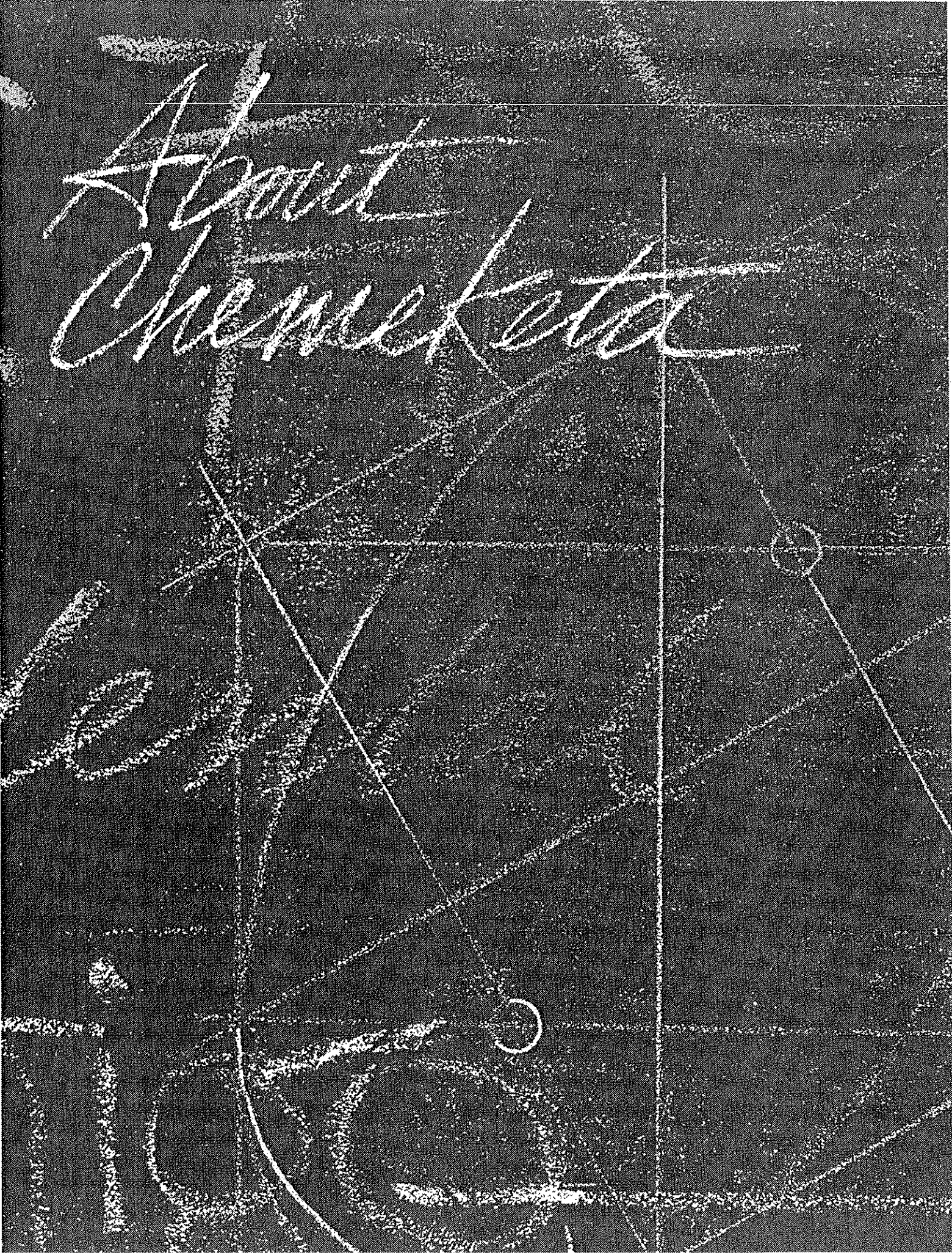
- **Agriculture
- Atmospheric Sciences
- **Biology
- **Botany
- **Chemistry
- **Chiropractic
- **Geology
- Horticulture
- Oceanography
- Physical Science
- **Physics
- **Pre-Professional Study
(Medicine, Dentistry, and Veterinary Medicine)
- **Zoology

LDC-Social Sciences (260)

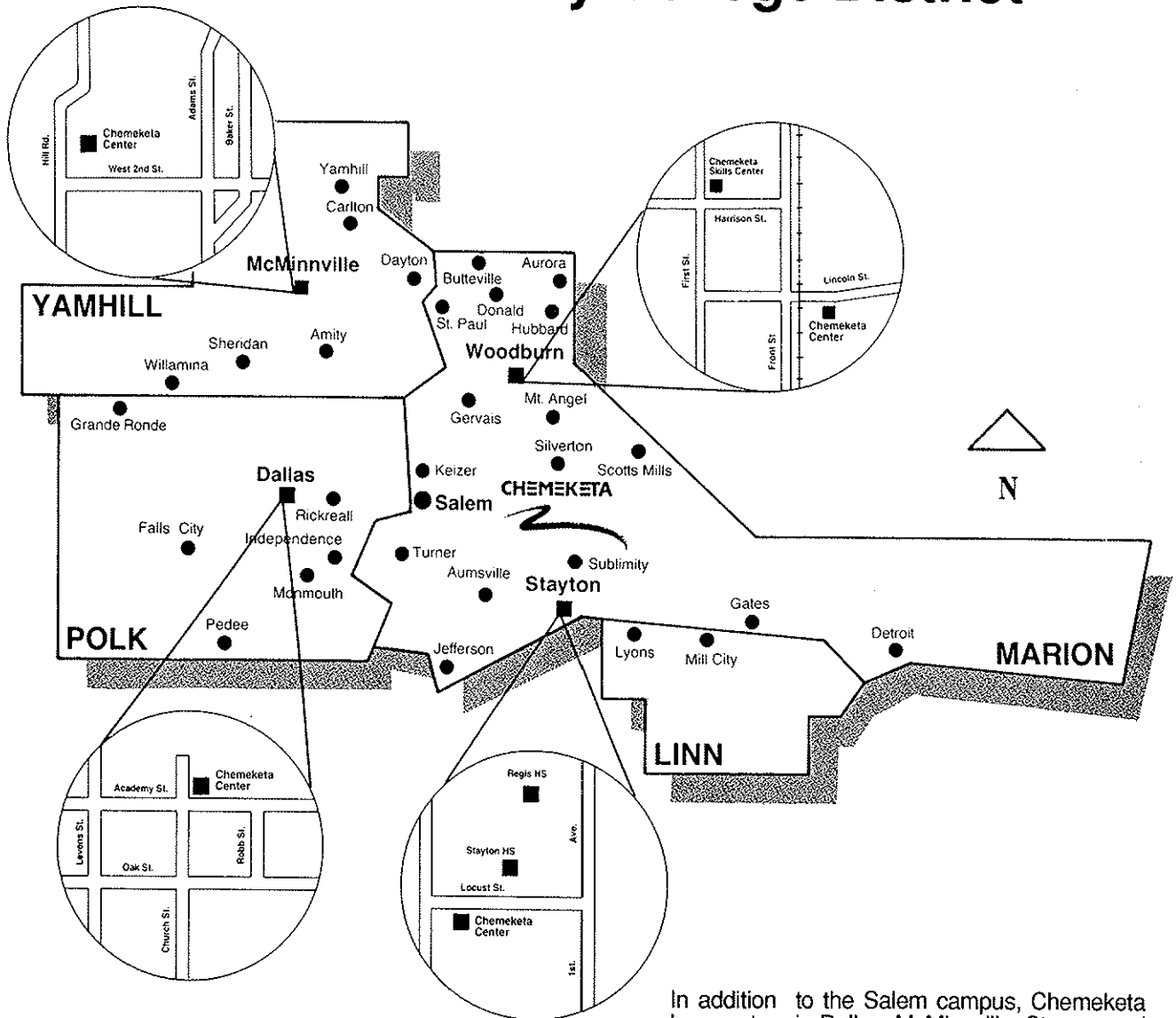
- American Studies
- **Anthropology
- **Economics
- Ethnic Studies
- **Geography
- **History
- Law Enforcement-Corrections
- **Political Science
- Pre-Law
- **Psychology
- **Sociology

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

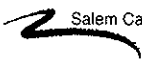


Abstract
Characteristics



Chemeketa Community College District



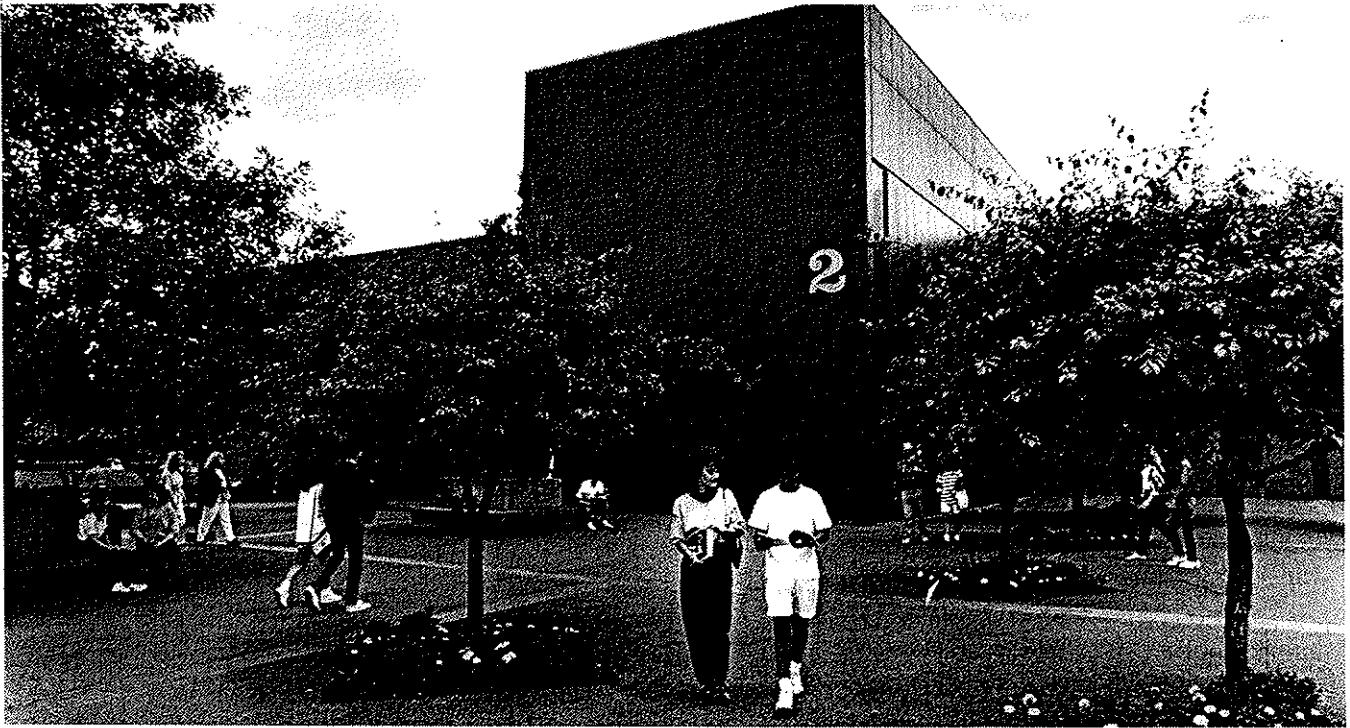
LEGEND

-  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 138.

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, finish your high school education. You can explore career ideas, retrain or add to your job skills, get professional help on how to run a business. You can pursue a special interest, 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 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.

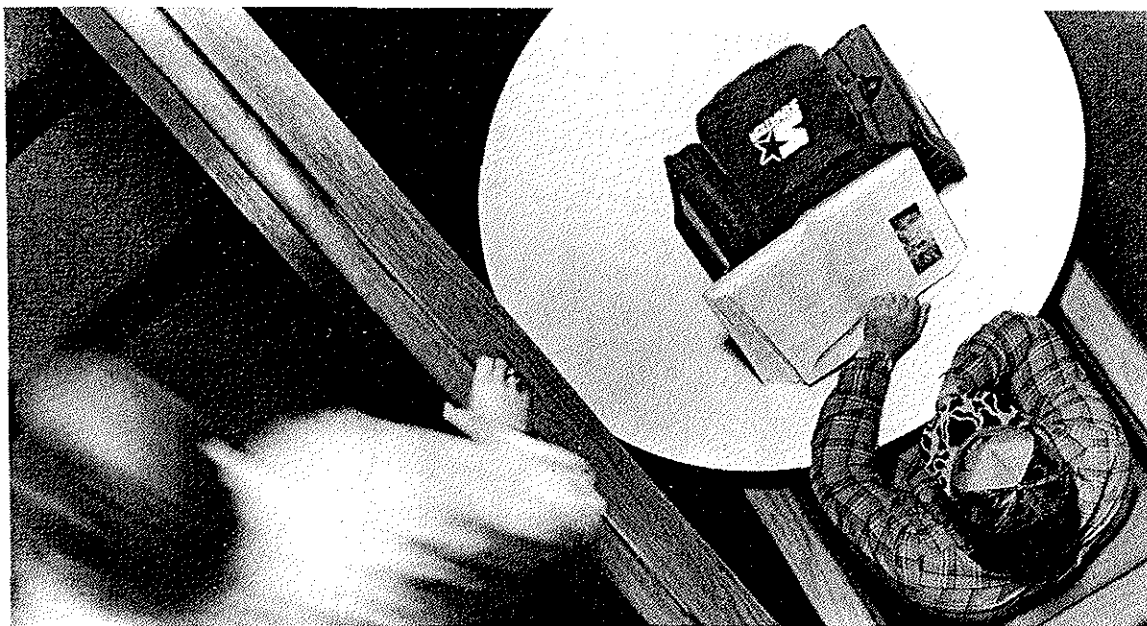
■ **College transfer courses** are for students who wish to continue their education at a four-year college or university. If you successfully complete Chemeketa's two-year college transfer program, you may also earn an Associate of Arts degree. See page 15 for requirements.

Some of our vocational and technical programs also include courses which may be transferred 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 1989	Winter 1990	Spring 1990	Summer 1990	Fall 1990 (tentative)
Registration	Sept. 18-21	Jan. 2	March 26	June 15	Sept. 17-20
Evening classes begin	Sept. 25	Jan. 2	March 26	June 18	Sept. 24
Day classes begin	Sept. 25	Jan. 3	March 27	June 18	Sept. 24
Last day to withdraw and receive a refund	Oct. 6	Jan. 16	April 9	June 29	Oct. 5
Last day to register or add classes	Oct. 13	Jan. 23	April 16	July 6	Oct. 12
Audit requests due	Oct. 20	Jan. 30	April 23	July 13	Oct. 19
Applications for next term's graduation due	Oct. 20	Jan. 30	April 23	July 13	Oct. 19
Holidays	Nov. 10 Nov. 23, 24		May 28	July 4	Nov. 12 Nov. 22, 23
Last day to withdraw from classes without responsibility for grades	Nov. 27	Feb. 23	May 18	July 20	Nov. 26
Review and final examination	Dec. 11-14	Mar. 12-15	June 4-7		Dec. 10-13
End of term	Dec. 15	Mar. 16	June 8	Aug. 10	Dec. 14
Graduation General Education Development and High School Completion			June 6		
One- and two-year programs			June 8		



■ **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 225 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 Presi-

dent 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 & Economic Development Center is located in Liberty Square, 365 Ferry Street, S.E., in downtown Salem.

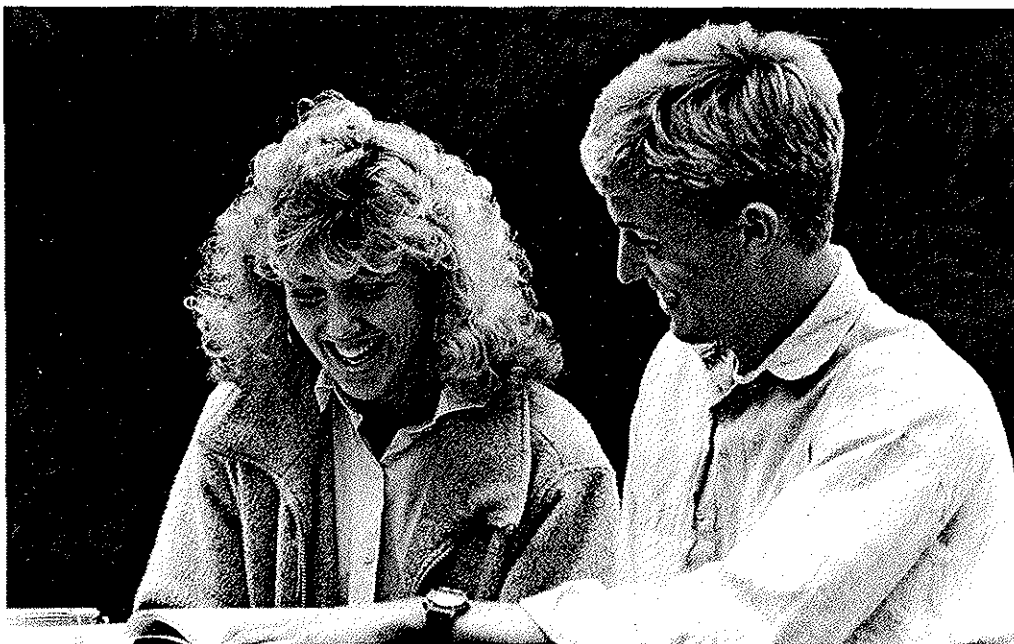
What kind of facilities does Chemeketa have?

Chemeketa's Salem campus has seven major buildings and a number of smaller buildings. Building 2 houses the counseling center, tutoring services, and the learning resource center. The learning resource center includes the library, media services, telecommunications

Affirmative action policy

It is the policy of Chemeketa Community College not to discriminate on the basis of sex, handicap, race, color, national origin, marital status, or age 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.

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



programs, a television studio, and the planetarium and multimedia theater.

The library, with its computerized card catalog, has a collection of approximately 50,000 books, over 1,000 periodicals, and a selection of maps and pamphlets.

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.

In 1988-89, over 35,000 persons enrolled in Chemeketa classes and workshops. Each term, about 3,250 students are enrolled full time.

Admission and registration

Who may enroll at Chemeketa? (Admissions office, 399-5006)

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

You will find an application form on page iii in the front of this catalog. Before you apply for admission, contact the counseling center in building 2 on the Salem campus, phone 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

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.

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 counseling center, building 2, Salem campus (optional).	Contact 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 class schedule 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 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 shown 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 counseling center, building 2, Salem campus (optional).	Contact 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 shown above for enrolling on Salem campus. or •Register at the first class session. or •Register by phone for those classes identified as phone-in registration classes in the quarterly <i>Schedule of Classes</i>.
Interested in GED or English as a Second Language (non-credit)	Contact counseling center, building 2, Salem campus, or a Chemeketa center in Dallas, McMinnville, Stayton, or Woodburn, or the Downtown Learning Center in Salem (optional).	Contact developmental education center, building 2, Salem campus.	Application for admission not required. Students 16 and 17 years old must have a high school release.	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 40, Salem campus, or call nearest Chemeketa center in Dallas, McMinnville, Stayton or Woodburn (optional).	Contact counseling center, building 2, Salem campus.	<ul style="list-style-type: none"> •File application for admission with admissions office, building 22, Salem campus. •File high school transcript with high school completion office, building 40, 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
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

- applied for admission to the college? Contact the admissions office, Salem campus, building 22, 399-5006. An application form is on page iii.
- taken mathematics, reading, and English placement tests? Contact the counseling center, Salem campus, building 2, 399-5120.
- 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?

You will find these costs listed in this catalog in the description of your 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 counseling center, Salem campus, building 2, 399-5120, or the Chemeketa center in your community.

from the counseling center in building 2 on the Salem campus or 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.

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.

Student identification cards (399-5116)

A student identification card is required for all full-time students and for any part-time students who use the library. This includes your photograph, which can be taken when you register or at the student activities office, building 3, room 101. Your ID card serves as your library card. It also admits you to college sporting events at no cost and entitles you to discounts for various activities.

Class loads² (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 20 credit hours, you must obtain special permission from the registrar. You will be charged additional tuition for each credit hour over 20 hours. The rates are listed under **Tuition** on page 7.

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 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 the following occupational programs which limit enrollment and have special admission requirements:

- Building Inspection
- Dental Assisting
- Emergency Medical Technology
- Fire Suppression
- Health Care Support Services (Health Information Technician-Medical Transcriptionist, Health Services Coordinator, Medical Office Assistant, Unit Clerk)
- 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)

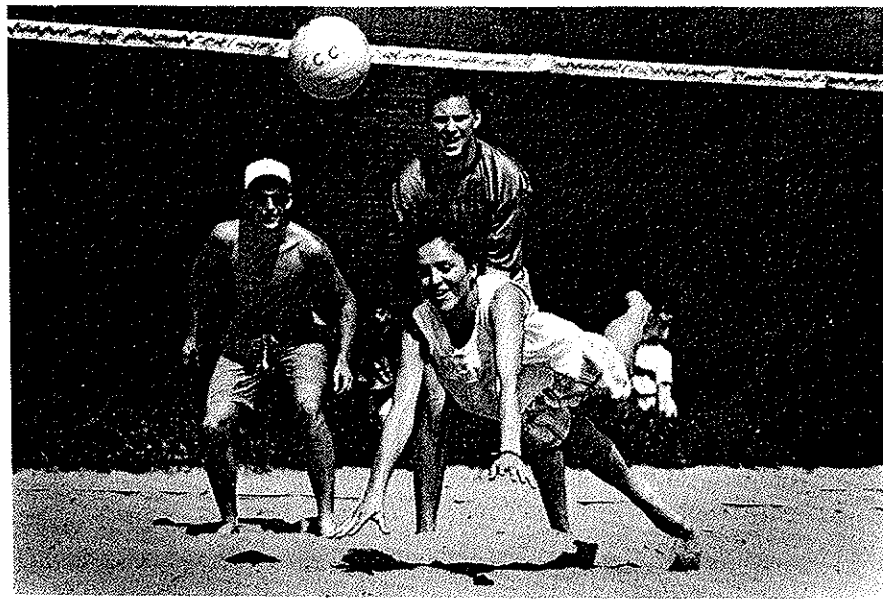
If you are a citizen of another country, you will be asked to meet certain federal immigration and college requirements before being admitted to Chemeketa. You are expected to maintain certain levels of academic achievement acceptable to the United States Immigration Service and to the college. Chemeketa's 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 a Chemeketa counselor or a bilingual staff member 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 (399-5011)

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 8.)

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 21 hours or more, you will be charged a fee per credit hour for each hour over 20 hours.

Tuition rates for 1989-90 are:

Oregon students

Full time \$276 per term
Part time \$23 per
..... credit hour

Out-of-state students

Full time \$996 per term
Part time \$83 per
..... credit hour

Non-credit courses

The cost of most non-credit courses is \$1.75 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 English as a second language classes. There is a \$25 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

Student Rights and Responsibilities

Chemeketa's Board of Education has approved a document outlining the rights and responsibilities of students. See page 134.

register as an auditor. However, you must pay full tuition 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 6 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 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 14.

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 fees (399-5011)

Materials fees vary by the course. They are included in

the course descriptions in this catalog.

You may rent a locker for \$3.50 a term. Our physical education locker and towel fee is \$6 a term if you are enrolled in a physical education class, or \$11 if you are not enrolled in a PE class.

Some of Chemeketa's programs require you to provide your own tools, equipment, and uniforms. These costs are included in the descriptions of the programs.

Contact the admissions office in building 22 on the Salem campus for more information on special program fees.

Student health and accident insurance (399-5011)

The college does not carry health and accident insurance for students. As a full-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 except summer 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.

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 record 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.

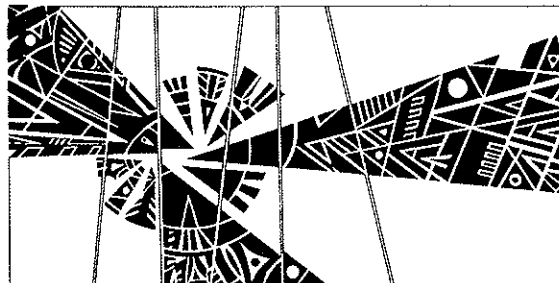
Are you eligible?

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 noncitizen.
- 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 made lower than a C grade.
 - 5) You may count up to 36 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 23 in the reading section of the college's placement test. If you score below 23:
 - 1) The college places you in a guided studies program for one to four terms. (You may also enroll in classes included

in your chosen program of study.)

- 2) The college assigns you an advisor.
- 3) You take classes to learn the basic skills you need for your program.



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 1989-90 will be \$1,770. 	<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 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 1989-90 will be \$1200. 	<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 1989-90 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 1989-90 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 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 1989-90 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 5%.
- 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 exit interview with Chemeketa's business office when you complete your studies at Chemeketa.
- 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.
- The current simple interest rate is 8%; it may increase to 10%.
- 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%.
- 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)

- 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 88-89 was \$3.60/hour.

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

Questions? Call for information

Salem campus information center, 399-5155
Chemeketa's information center is located in the counseling center on the first floor of building 2 on the Salem campus. Staff members will answer your questions about room locations, campus activities, workshops, meetings, academic advisor assignments, and instructional staff office locations. The information center also distributes the *Schedule of Classes* each term.

Chemeketa Centers

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

Chemeketa Dallas Center

182 S.W. 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

If you already have a bachelor's degree, you do not qualify for some financial aid and programs. However, you may apply for College Work Study, a Carl Perkins National Direct Student Loan (NDSL), a Stafford Student Loan, an Oregon "PLUS" loan, or a Supplemental Student Loan.

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

It takes at least six 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.

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:

- 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 one 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.

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. 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
P Pass (non-credit and credit for prior learning).....	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 P, 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 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 satisfactorily, 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.

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.

CHEMEKETA



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 8.

Withdrawal from college (399-5001)

If you decide to withdraw from Chemeketa, obtain a withdrawal (add-drop) form from the registrar, the 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 withdrawal form, you are responsible for the final grades you receive; they will appear on your transcript of Chemeketa credits.

If you return the completed withdrawal 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.

Contact the 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 45 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, homemaking, 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 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 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 offered each term are published in each term's *Schedule of Classes*.

Degrees, Certificates, and Graduation Requirements

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

You will receive a Certificate of Completion if you meet the requirements of certain one-year programs.

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.

Courses with numbers under 050 do not apply toward degrees or certificates and may not be transferred to a four-year college or university. See page 84 for course classifications.

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.

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. Some of the required classes are also scheduled at Chemeketa centers in Dallas, McMinnville, Stayton, and Woodburn. The McMinnville center now offers all first-year and some second-year courses required for some of our programs.

Associate of Arts degree

To qualify for an Associate of Arts degree, you must meet these requirements:

- Complete a minimum of 93 credit hours. These must include the following:
 - 1) Six credit hours of English composition.
 - 2) Three credit hours of health or PE231.
 - 3) Three physical education activity classes (any PE180, PE185, or PE190 classes).

4) One sequence of humanities courses. (English composition sequence does not meet this requirement.)

5) One sequence of courses in mathematics or science.

6) One sequence of courses in social science.

7) One additional sequence of courses in humanities or mathematics or science or social science.

8) Three credit hours of college transfer computer studies.

- Earn a cumulative grade point average (GPA) of 2.0 or above in all work to be applied to the degree. (You may not include courses numbered 001 to 049 to determine your GPA.)

- Complete a minimum of 30 credit hours at Chemeketa. Specific course sequences satisfying the above requirements are listed on page 26.

At least 81 of the credit hours you apply toward an Associate of Arts degree must be college transfer courses. These are courses with letter prefixes followed by number 100 or higher. Up to 12 credit hours earned in occupational courses (numbers 050 to 099) may apply toward the degree. See page 84.

If you wish to transfer to another college after earning an Associate of Arts degree, see page 26.

Associate of Science degree

You may earn an Associate of Science degree in a two-year occupational program by meeting these requirements:

- Satisfactorily complete the required courses and credit hours listed for each program in the Programs of Study section of this catalog.
- Complete the college's general education requirements. General education requirements are listed in the courses required for each program. The courses listed below meet the college's general education requirement.
 - 1) One writing class: WR115, WR121, COM051, or OA084 or higher.

2) One math class: MTH052 or higher numbered courses.

3) Computer literacy: Approved program-related instruction on computers or three credit hours of computer studies.

4) Three credit hours from each of three of the four following areas:

A. Social Science: Anthropology, Economics, Geography, History, Human Development/Family Studies, Political Science, Psychology, Social Science, Sociology, or Women's Studies.

B. Humanities/Fine Arts: Art, English, Film Art, Foreign Language, Humanities, Multidisciplinary Studies, Music, Philosophy, Religion, or Theater Arts.

C. 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, or Zoology.

D. Communications: Communication Skills, English as a Non-Native Language, Journalism, Speech, Writing, Reading, and Skills Development.

Your program may specify which of the courses you should take. Some vocational courses may satisfy the general education requirement. See your advisor.

- 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. (You may not include courses numbered 001 to 049 to determine your GPA.)

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.

Associate of Science degrees are granted in the following areas:

Accounting
Automotive Mechanics
Banking and Finance
Building Inspection
Civil-Structural Engineering
Technology
Computer Programming
Criminal Justice
Drafting Technologies-CAD
Early Childhood Education
Electronics Technology
Computer Electronics
Technology
Electronics Engineering
Technician
Industrial Electronics
Technology
Emergency Medical
Technology
Fire Protection Technology
Forest Technology
Health Services Coordinator
Hospitality Systems
Management
Human Services
Industrial Technology
Instructional Assistant
Management
Manufacturing Engineering
Technology
Computer-Aided Design/
Computer-Aided
Manufacturing
Mechanical Design
Nursing (Registered Nurse)
Office Administration
and Technology
Real Estate
Visual Communications
Welding Fabrication

Certificate of Completion

You may earn a Certificate of Completion in one-year programs 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.

Certificates of Completion are granted in the following areas:

Automotive Parts Sales
Building Inspection
Computer Support
Dental Assisting
Early Childhood Education
Health Information
Technician-
Medical Transcriptionist
Instructional Assistant

Manufacturing Operations
Medical Office Assistant
Nursing
(Licensed Practical Nurse)
Office Administration and
Technology
Professional Cooking
Unit Clerk
Welding

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 request to participate in graduation exercises held the preceding June. To do this, contact the student activities office.

The graduation ceremony for High School Completion and General Educational Development (GED) graduates is held separately during the same week.

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 (399-5093)

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.

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

Skills development classes (399-5093)

To increase your basic skills in order to do better in college-level classes, contact the learning lab in building 2, room 112 on the Salem campus. The lab offers individual and lecture classes in reading, mathematics, spelling, vocabulary development, study skills, problem solving, thinking skills, and in college success skills.

English as a second language and bilingual assistance (399-5224)

If English is not your native language and you want to increase your English language skills, contact the center for developmental education in building 2 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:

Counseling center—building 2, 399-5120, for admission and career-planning assistance.

English as a Second Language program—building 2, 399-5224.

Volunteer tutoring program—building 2, 399-5093.

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 disabled students (399-5120)

The counseling center in building 2 on the Salem campus has information about services and facilities for students with handicapping conditions.

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.

Chemeketa offers special help if you are deaf, hearing-impaired, and/or visually-impaired. This includes counseling, interpreting, note-taking, tutoring, readers, and special equipment.

If you are deaf, you may enroll in special classes in language development and basic reading.

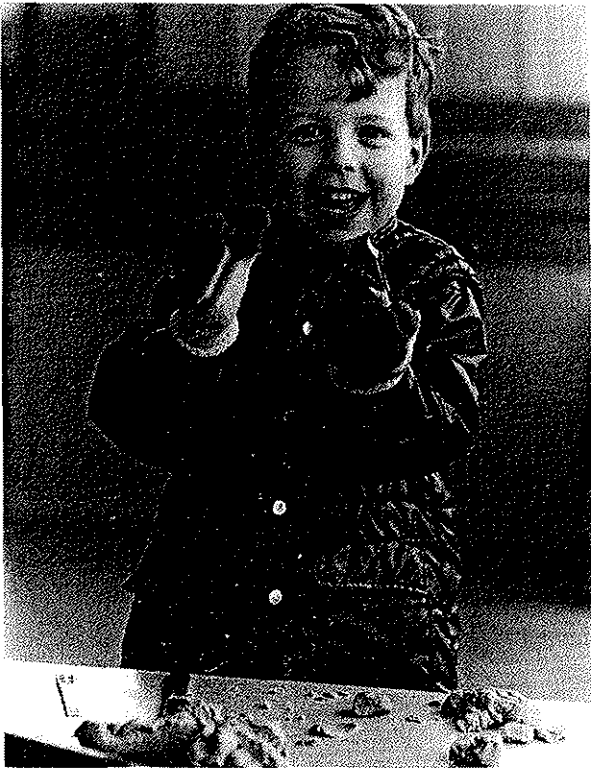
Chemeketa also offers three levels of American Sign Language classes. For information on services for deaf and hearing- and visually-impaired persons, call 399-5049 (V/TTY).

Students who have learning disabilities are encouraged to use campus support services. These services include alternative testing arrangements, diagnostic consultation, developmental skills training, note-taking help, academic tutoring, and assistance in ordering audio-taped textbooks. Call 399-5093 for information.

Chemeketa provides individual educational plans for developmentally-disabled and limited-learning handicapped students who can benefit from our instruction. If you need special assistance, call the special needs coordinator, 399-5093.



The services of interpreters are available for Chemeketa's deaf and hearing-impaired students.



Children enrolled in Chemeketa's Child Development Center enjoy a variety of activities.

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 Woodburn. 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 \$300 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.

First aid (399-5023)

For first aid services on the Salem campus, call 399-5023. 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 free permit during registration or at the student activities 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 security office has specific information on parking and traffic regulations.

Where to eat

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

Avenue 34, building 34, 399-5091—breakfast, deli lunch, fast foods, hot meals, fresh desserts.

La Maison, building 34, 399-5276—specialty lunch menus prepared and served by advanced food service students. Reservations requested.

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 activities 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 **short-term cooperative center**, run by parents and staff, accepts about 19 children ages one to six years old for up to four hours per day or 20 hours per week for a nominal fee. 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. Also, you may call Salem's Child Care Information Service, 585-2491.

Career and Employment Advising and Services

Counseling center (399-5120)

If you are interested in educational, vocational, or personal counseling, contact our 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 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 Fridays. (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 three sessions held over a period of three consecutive weeks. A schedule of workshops is published in each term's *Schedule of Classes*.

Life skills for independence

The life skills for independence program is conducted by the counseling center to help single parents and homemakers 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.

Career Resource Center

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

Women's Resource Center

The Women's Resource Center is located in building 2 near the counseling center. It provides support and encouragement for the concerns of women and directs them to campus and community services. Women are welcome to drop in, talk, and browse through books and materials.

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 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.

Career conversation videotapes

A library of videotapes gives information about a great number of careers for which training is available at Chemeketa. These tapes cover entrance requirements for Chemeketa programs, information on what is included in a training program, the qualifications for specific occupations, availability and outlook for jobs, and working conditions. The tapes feature interviews with people, usually Chemeketa graduates, who are actively engaged in a particular career.

You may view these tapes anytime the center is open.

Academic advising

Chemeketa offers academic advising for all students. If you 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 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 22, room 118 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 the term 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 across the hallway from 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 landing 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 counseling center, and the Chemeketa library have lists of employers' names, addresses, and phone numbers; company products; "how to" books; and other important information.

Videotapes on job search techniques are available in the media services area and at the 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 22, room 118 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 employee. The class is listed under Job Search and with the courses by television 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 22, room 118 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. Most classes cost \$8 plus lab fees if you have a Golden Age card.

You may apply for a card at the first class meeting. 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, computer programs, books, and periodicals on 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.

To help businesses and agencies with employee and employer development, the center offers the American Management Association (AMA) certificate program and a series of secretarial skills seminars.

The Oregon Marketplace program helps local businesses by finding local suppliers of goods and services. Through this service businesses stay close to their sources, avoid shipping charges and delays, and stimulate the Oregon economy.

Mobile computer lab (399-5181)

With our new portable computer lab we can schedule training sessions at your place of business or at other convenient locations. These 10 Macintosh SE computers are also regularly transported to our local centers in Dallas, McMinnville, Stayton, and Woodburn for one-day training sessions and are available for use at the Training and Economic Development Center in downtown Salem. There is a

charge for all instruction and equipment use.

Work and Family seminars (399-5135)

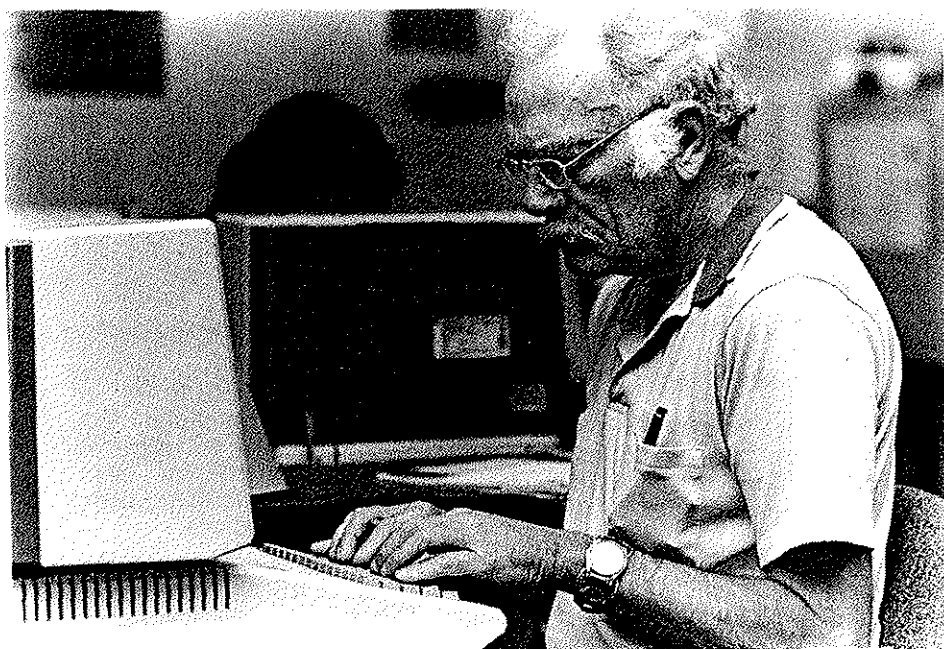
Chemeketa holds seminars on how to balance your family relationships and responsibilities with the demands and responsibilities of your work. These seminars, held at workplaces throughout the college district, are tailored to meet the specific needs of a business or agency.

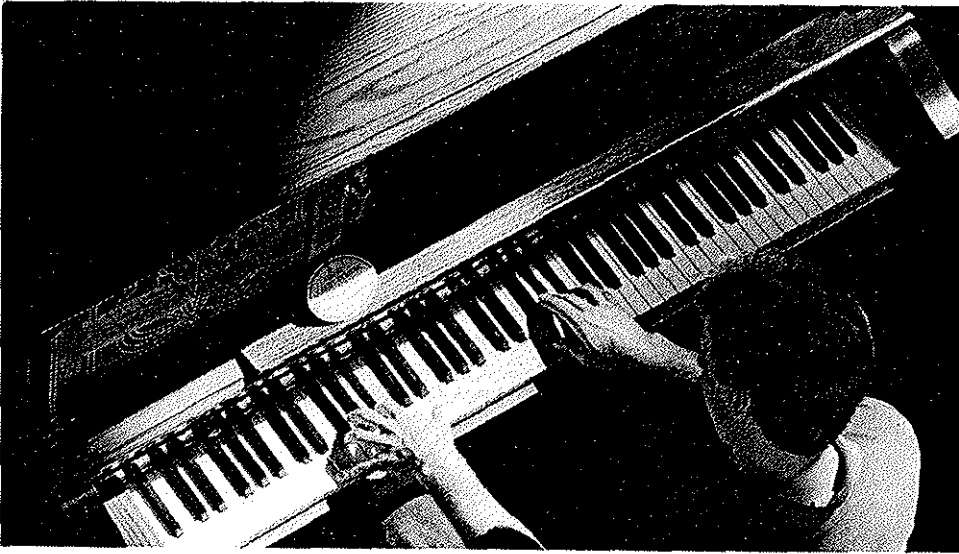
Planetarium

(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. Each spring the gallery holds a student art show. 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. When all data have been entered, all materials in member libraries will be in a data base, making it possible for patrons to search for resources by author, title, or subject.

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 activities 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 activities 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 representatives

of various academic disciplines at Chemeketa. The Senate sets ASCCC policy. The Executive Council consists of five officers who carry out these policies and represent students to the college and also at inter-institutional functions. The officers are:

The **president**, who represents Chemeketa students at meetings of the Board of Education and at other official functions.

The **vice-president**, who presides over the Student Senate.

The **programming director**, who leads in planning and managing ASCCC events and activities.

The **budget director**, who is responsible for financial records and expenditures.

The **public relations director**, who is responsible for the promotion of ASCCC-sponsored events and activities.

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.

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)

- Art Club

- Christian Fellowship Club

- Data Processing

- Management

- Association (DPMA)

- Deaf Club

- Emergency Medical

- Technician Club (EMT)

- Fire Protection Club

- Forestry Club

- Gay, Lesbian,

- and Bisexual Alliance

- German Club

- Health Occupation Students of America (HOSA)

- Human Services Club

- Instrument Society

- of America (ISA)

- International Conference

- of Building Officials (ICBO)

International Students Club
 Journalism Club
 Juntos Club
 Karate Club
 National Association
 of Accountants
 Parents 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 activities office in building 3.

New ideas welcomed

If you are interested in organizing a new club or organization,

contact the student activities 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, the newspaper has earned high ratings in Associated Collegiate Press national competition. *Courier-4* is an associate member of 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.

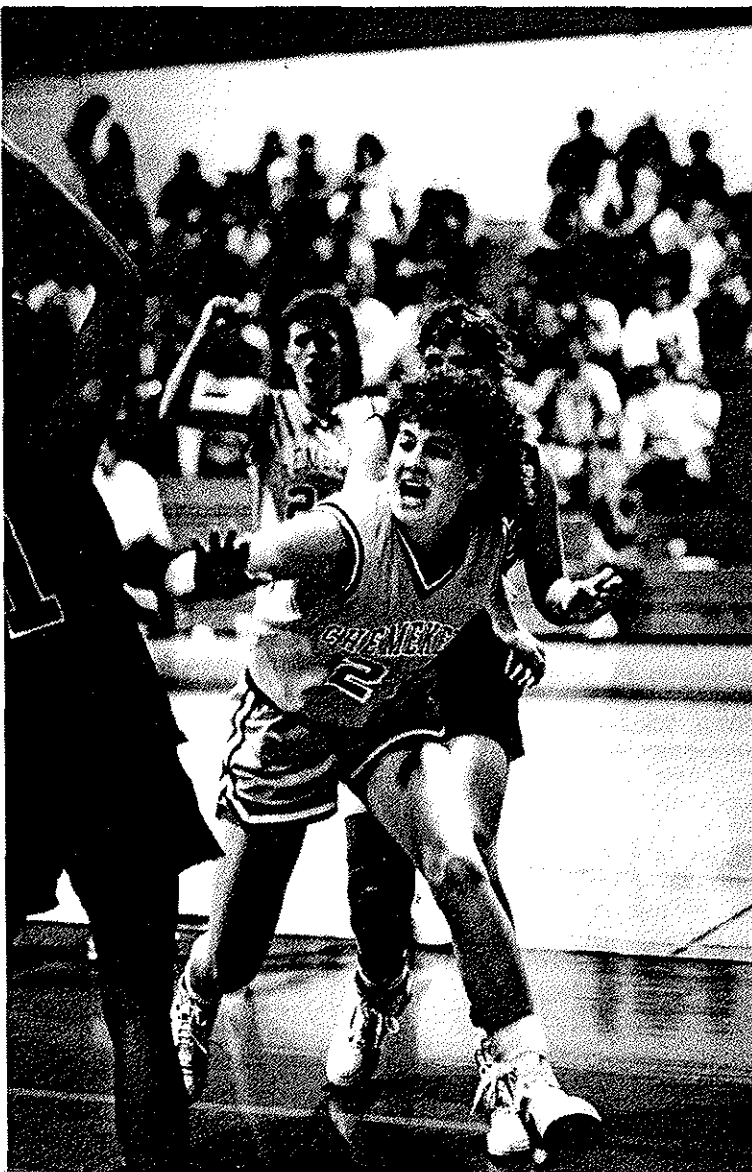
CCOSAC has various paid and unpaid positions for students who lobby the state government about community college concerns. If you are interested in such work, contact the student body president for more information.

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.





Community Education

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 nearby locations 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, dance, physical fitness 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.

Off-campus 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, foreign languages, and history to nature studies, physical fitness, writing, and arts and crafts. Tuition is reduced for holders of Golden Age cards. For more information on Golden Age cards see page 21.

Agriculture classes (399-5135)

Chemeketa offers non-credit classes to meet continuing educational and self-improve-

ment needs of persons involved in agriculture.

Sample subject areas are:

- Computers for agriculture
- Farm record keeping
- Greenhouse plant propagation
- Horse health and care
- Landscape design and maintenance
- Oregon Certified Nurseryman examination preparation
- Pesticide application and use
- Sheep dog training
- Sheep production
- Small gas engine repair

We develop other courses as requested or needed.

Farm Business Management (399-5052 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 50.

Family programs (399-5135)

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

Programs
of Study

College Transfer Courses

Most Oregon four-year colleges and universities accept Chemeketa college transfer classes as transfer credits for the first two years of college. Some four-year institutions also accept certain courses included in Chemeketa occupational programs.

Chemeketa college transfer programs are adapted from curriculum requirements listed in the most recent edition of the Oregon State System of Higher Education's transfer guide. The counseling center in building 2 on the Salem campus has copies of this transfer guide. You may also make an appointment with a counselor to review the guide at Chemeketa's Dallas, McMinnville, Stayton, and Woodburn centers.

Chemeketa college transfer programs include:

Agriculture
Anthropology
Art
Biology
Botany
Business Administration
Business Education

Chemistry
Chiropractic
Computer Science
Economics
Education
Engineering
English

Foreign Languages
Forestry
General Studies
Geography
Geology

Health
Health Education
History
Home Economics
Hotel, Restaurant, and
Tourism Management
Human Services
Journalism

Manufacturing Engineering
Technology
Mathematics
Nursing

Philosophy
Physical Education
Physics
Political Science

Pre-Professional Study
(medicine, dentistry,
veterinary medicine)
Psychology
Sociology
Speech
Zoology

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.
- 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.

Four-year colleges and universities will accept up to 108 lower division credits. In most cases, all of these may be transferred from Chemeketa. 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.

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 Bob Clausen or Elaine Yandle.

Associate of Arts Degree

If you take college transfer classes, you may also earn an Associate of Arts degree at Chemeketa. The requirements for this degree are listed on page 15. Classes which meet AA degree course requirements include:

Six credit hours of English composition. WR121 and 122, 123, or 227.

Three credit hours of health. Select from: HE151, 204, 209, 222, 250, 252, or PE231.

Three credit hours of physical education activity classes. Any PE180, 185, and 190 classes. (Enroll in only one PE class per term since some four-year institutions accept no more than one class per term.)

One sequence of humanities courses.

Select from:

ART115, 116, 117
ART119, 221, 225
ART154, 155, 156
ART204, 205, 206
ART231, 232, 233
ART231, plus any six credit hours of these courses:
ART244, 260, 261, 271, 272, 273, 281, 284, 285, 286
ART291, 292, 293

ENG101, 102, 103
ENG104, 105, 106
ENG105, 106, 261
ENG107, 108, 109
ENG201, 202, 203
ENG253, 254, 255
ENG261, 262, 263
FA255, 256, 257

FR101, 102, 103
FR201, 202, 203
GER101, 102, 103
GER201, 202, 203
JPN101, 102, 103
JPN201, 202, 203
NOR101, 102, 103
SPAN101, 102, 103
SPAN201, 202, 203

J224, 225, 226
MS251, 252, 253
MUS101, 102, 103
MUS201, 202, 203
PHL201, 202, 203
R201, 202, 203



Occupational Programs

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 Science degree. It usually takes two years to meet the Associate of Science degree requirements. In some programs, you may earn a Certificate of Completion in one year or less. Several programs have both certificate and degree options.

Information and curriculum outlines of these programs begin on page 29 along with college transfer curricula. You may earn an Associate of Science degree in all the following programs except those identified as awarding Certificates of Completion:

- Accounting
- Automotive Technology
- Automotive Mechanics
- Automotive Parts Sales (certificate)
- Banking and Finance
- Building Inspection Technology (certificate and degree options)
- Civil-Structural Engineering Technology
- Computer Support (certificate)
- Computer Programming Microcomputer
- Criminal Justice
- Dental Assisting (certificate)
- Drafting Technology—CAD Drafting
- Mechanical Design
- Early Childhood Education (certificate and degree options)
- Electronics Technology Computer Electronics Technology
- Electronic Engineering Technician
- Industrial Electronics Technician
- Emergency Medical Technology
- Farm Business Management (certificate)
- Fire Protection Technology

SP111, 112, 113
 SP112, 113, 114
 TA121, 122, 123
 WR241, 242, 243

One sequence of mathematics or science courses.

Select from:
 MTH100 or higher (any three courses)
 CS133B, 233B, 261, 262, 263 (any three courses)
 BI101, 102, 103
 BI231, 232, 233
 BOT201, 202, 203
 CH101, 102, 103
 CH104, 105, 106
 CH115, 116, 117
 CH204, 205, 206
 CH226, 227, 228, 229, 230

ENGR211, 212, 213
 G142, 143, 144
 G201, 202, 203
 GS104, 105, 106
 GS207, 208, 209
 PH201, 202, 203

PH211, 212, 213
 ZOO201, 202, 203

One sequence of social science courses.

Select from:
 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

One additional sequence of humanities or mathematics or science or social science courses.

Three credit hours of computer studies. Select from any computer science courses numbered CS103 and above.

Fire Prevention-Insurance
Risk Inspection
Fire Suppression

Forest Technology
Health Care Support
Services (certificate
and degree options)
Medical Office Assistant
(certificate)
Health Services Coordinator
Health Information
Technician-
Medical Transcriptionist
(certificate)
Unit Clerk (certificate)

Hospitality Systems
Management
Human Services
Alcohol and Drug
Gerontology
Social Services

Industrial Technology
Instructional Assistant
One-year (certificate)
Two-year options:
Classroom Assistant
Kindergarten-Primary
Elementary-Intermediate
(4th-6th grade)
Middle-Senior High
Bilingual-Bicultural Assistant
Developmental Disabilities
Assistant
Deaf-Blind
Mentally Retarded,
Physically Disabled,
Emotionally Disturbed
Vocational-Technical
Assistant

Management
Manufacturing Engineering
Technology
Computer-Aided Design/
Computer-Aided
Manufacturing
Manufacturing Operations
(certificate)
Manufacturing Technology
Welding Fabrication

Nursing
Licensed Practical Nurse
(certificate)
Registered Nurse
Office Administration
and Technology
Engineering
Executive
Information Processing
Legal
Medical
Office Accounting
One-Year Option
(certificate)
Short-Term Option
(certificate)
Professional Cooking

(certificate)
Real Estate
Small Business Management
(certificate)
Visual Communications
Welding Technology
Welding (certificate)

High School Completion and GED

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.

These are the three ways you may earn credits:

- Take copies of your high school and college transcripts to the high school completion office in building 40 on the Salem campus or to one of Chemeketa's centers in Dallas, McMinnville, Stayton, or Woodburn. Chemeketa staff members will evaluate your transcripts.
- Enroll in high school completion classes offered on the Salem campus and at Chemeketa's centers in Dallas, McMinnville, Stayton, or Woodburn. Some of these classes also carry college credits, but usually you will receive more individual help and put in more lab hours than in college level classes. (It is possible to 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, serving in a branch of 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 diploma program. To be in the program, you must be 18 years or older or have a release from your high school.

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 \$25.

Adult Basic Education (399-5224)

If you do not have a high school diploma, 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.

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 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 coordinator, you may enroll in BA280 Cooperative Work Experience and earn up to six credit hours as a business elective. For more information, look under Cooperative Work Experience in the catalog index.

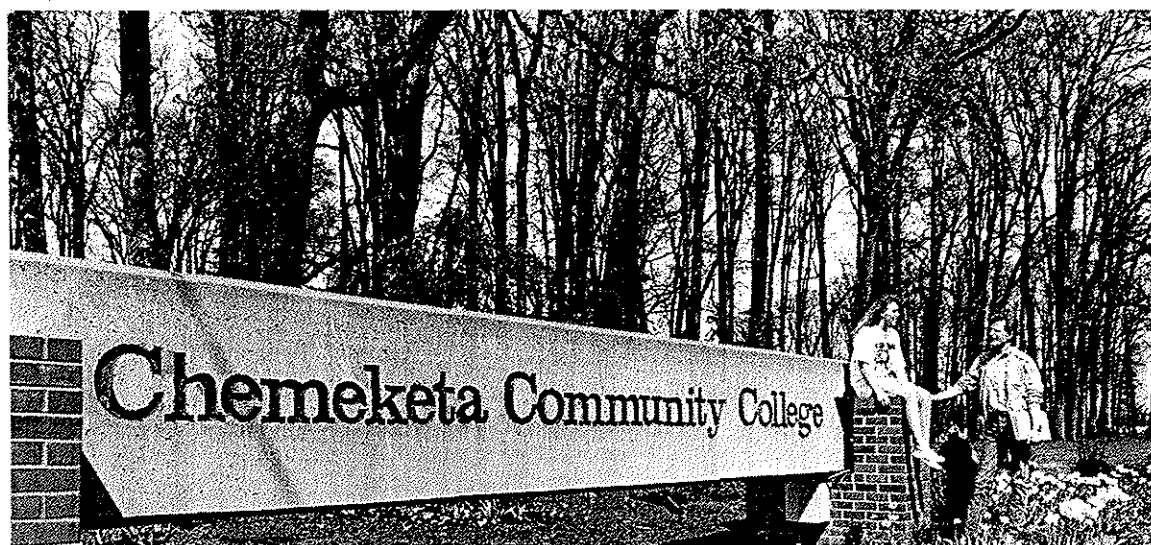
The Accounting program provides you with an opportunity to participate in a number of accounting-related extracurricular activities. Several professional accounting organizations, such as the National Association of Accountants and the American Society of Women Accountants, en-

courage you to become active in Salem area chapters.

In addition to tuition, estimated costs for students who complete the entire program are books, \$930; 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 Science degree by successfully completing these required 100 credit hours:

Course	Title	Credit Hours
Term 1		
BA211	Financial Accounting I**	4
CS103	Introduction to Microcomputer Operations	4
OA085	Business English II**	3
OA121	Keyboarding	3
MTH100	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	Fund 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
CS228	Computer Augmented Accounting 3
SP111	Fundamentals of Speech
	or
SP130	Business and Professional Speaking..... 3
	Business elective
	or
	Cooperative Work Experience 3
	Humanities elective.....

*MTH062 may be substituted for MTH100. MTH100 is, however, recommended.

**You must have completed the requirements for, or be concurrently enrolled in, MTH070 or MTH061. College transfer writing courses may be substituted for OA085 or BA214.

***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)

These courses have been suggested by the school of agriculture of Oregon State University. You may transfer these college credits into most of the major curricula offered by the school of agriculture at the junior level and complete baccalaureate degree programs within an additional two years. If you wish to major in fisheries science, food science and technology, or wildlife science, you should transfer at the end of your first year at Chemeketa.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$700; class fees, \$180; equipment and supplies, \$25. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at OSU.

	Term		
First Year	1	2	3
CH104, 105, 106 General Chemistry	5	5	5
Mathematics (per placement test)*	4	4	4
WR121 English Composition	3		
Communication skills requirements		3	3
Physical education	1	1	1
BOT201, 202, 203 General Botany			
or			
ZOO201, 202, 203 General Zoology			
or			
BI101, 102, 103 General Biology			
or			
Humanities requirements	3-4	3-4	3-4

Second Year	4	5	6
Physical science electives	4	4	4
EC201, 202, 203 Principles of Economics	3	3	3
Biological science and/or			
Humanities requirements	3-4	3-4	3-4
Mathematics*	4	4	4
Electives	3	3	3

*Mathematics requirements differ for the various areas of agriculture.



Anthropology

(college transfer)

These courses have been approved by the University of Oregon, Oregon State University, and Portland State University for students who plan to transfer college credits into a major program in anthropology, and by Eastern Oregon State College for students planning to transfer into a combined major in anthropology and sociology.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$670; class fees, \$48. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
First Year	1	2	3
WR121, 122, 123 English Composition	3	3	3
ANTH101, 102, 103 General Anthropology	3	3	3
BI101, 102, 103 General Biology	4	4	4
Physical education	1		1
HE250 Personal Health		3	
Electives		3	3
Second Year	4	5	6
Second-year foreign language	4	4	4
General education—science	3-4	3-4	3-4
General education—social science	3	3	3
SOC204, 205, 206 General Sociology (EOSC)			
or			
General education—humanities (U of O, OSU, PSU)	3	3	3
Physical education	1	1	1
Electives	0-3	0-3	0-3



Art

(college transfer)

These courses are recommended for students who plan to transfer college credits into a major program in art at the University of Oregon, Oregon State University, Portland State University, Eastern Oregon State College, Southern Oregon State College or Western Oregon State



College. If you satisfactorily complete these courses, you may be able to complete requirements for a Bachelor of Arts or Bachelor of Science degree within two additional years.

A five-year program in art leading to the Bachelor of Fine Arts (BFA) degree is offered at the University of Oregon (ceramics, visual design, photography, jewelry and metal smithing, painting, printmaking, sculpture, weaving). Four-year programs leading to a BFA degree in art are offered at Oregon State University (graphic design, crafts design, fine arts, or individually approved combinations of areas offered) and Southern Oregon State College (ceramics, crafts, drawing, graphic design, fiber arts, jewelry/metal, painting, photography, printmaking, sculpture).

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$550; class fees, \$150. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
	1	2	3
First Year			
WR121,122,123 English Composition	3	3	3
ART115, 116, 117 Basic Design (OSU, WOSC—4 credit hours; U of O, PSU, SOSC, EOOSC—6 credit hours)	3	3	3
ART231, 232, 233 Drawing (U of O, SOSC, PSU—6 credit hours; OSU—4 credit hours; WOSC—3 credit hours)	3	3	3
Additional art courses: ART119, 154, 155, 156, 221, 225, 244, 254, 271, 272, 273, 281, 284, 291, 292, 293		3	3
Science or mathematics sequence	3-4	3-4	3-4
Humanities sequence (non-art)	3	3	3
Physical education	1	1	1
Electives		0-3	0-3

Second Year	4	5	6
Social science sequence	3	3	3
Studio art courses; choose from ART119, 155, 156, 157, 221, 225, 244, 254, 271, 272, 273, 281, 284, 291, 292, 293 (See college transfer guide for limits.)	3	3	3
ART204, 205, 206 Survey of Art History	3	3	3
HE250 Personal Health			3
Computer Study	3	3	3
Electives	3-7	3-7	3-7

Automotive Technology

Do you want to become an automotive maintenance and repair worker or an auto parts salesperson? The Automotive Technology program classes emphasize 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 automotive mechanics 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 Mechanics Option

Automotive Mechanics 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 mechanics 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 coordinator, 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, \$530; class fees, \$186; 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 Science degree by successfully completing these 96 required credit hours:

Course	Title	Credit Hours
Term 1		
AUM051	Basic Automotive Engines	5
AUM057	Automotive Brake Systems	3
COM051	Communication Skills I or	
WR121	English Composition—Exposition	3
MTH051	Basic Mathematics or	
	General education elective	3
WLD097	Welding	2
Term 2		
AUM058	Automotive Steering and Suspension	3
AUM061	Standard Transmission, Clutches, and Differentials	5
AUM068	Automotive Accessory Systems	3
COM052	Communication Skills II or	
WR122	English Composition—Logic and Style	3
MTH052	Introduction to Algebra and Geometry	3
Term 3		
AUM052	Automotive Machine Shop	3
AUM066	Fuel Systems and Carburetion I	4
AUM071	Automotive Repair I	4
AUM076	Automotive Electrical Systems I	4
Term 4		
AUM063	Automatic Transmissions	4
AUM067	Fuel Systems and Carburetion II	4
AUM072	Automotive Repair II	4
AUM087	Advanced Automotive Engines	4
Term 5		
AUM073	Automotive Repair III	4
AUM077	Automotive Electrical Systems II	4
AUM086	Automotive Heating and Air Conditioning	4
DRF072	Introduction to Computer Drawing	3
Term 6		
AUM081	Tune-up and Diagnosis	6
AUM082	New Automotive Developments	4
AUM092	Automotive-Diesel Engines	4
PSY100	Introduction to Psychology	3

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 coordinator, 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,

\$221; 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 Mathematics	3
Term 3		
AUP091	Auxiliary Systems	3
AUP093	Fuel Systems	3
AUP096	Auto Parts III	4
BA051	Accounting Procedures I	4
	General education elective or	
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. There are banking career opportunities in auditing, personnel administration, public relations, and operations research and control.

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 an Associate of Science degree. The banking classes are offered only at night; other required classes are offered both days and evenings.

Chemeketa and Willamette District of the 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 coordinator, 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.

In addition to tuition, estimated costs for students who complete the entire program are books, \$1,041; 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 Science degree by successfully completing these required 98 credit hours:

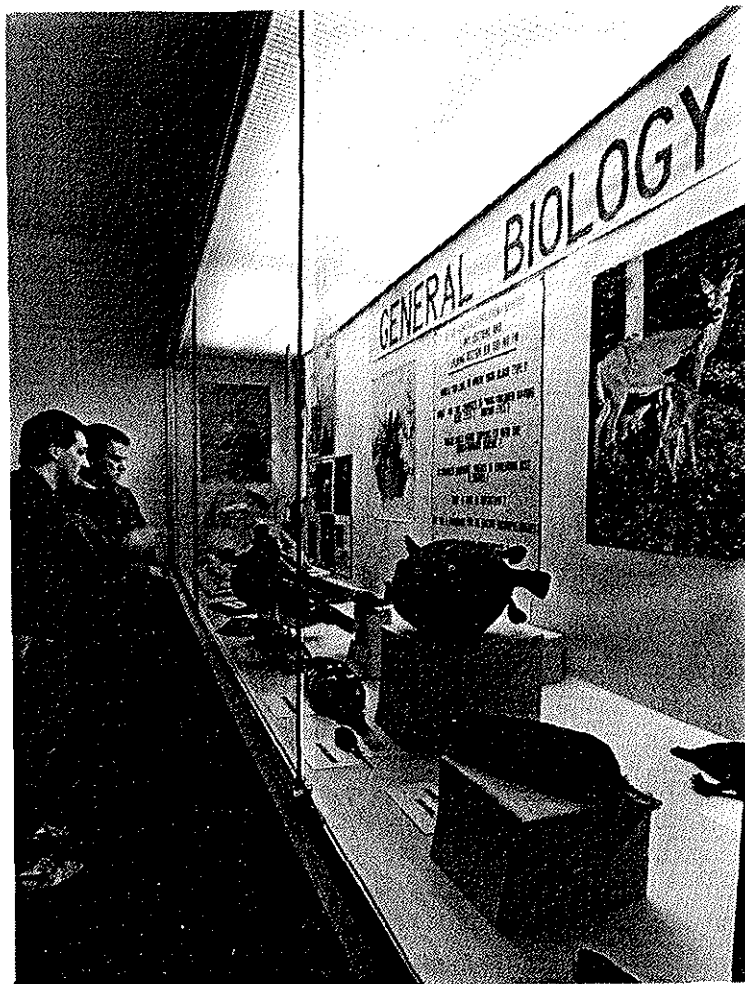
Course	Title	Credit Hours
Term 1		
BA101	Business Environment	4
BA269	Principles of Banking	3
OA084	Business English	
	or	
WR121	English Composition—Exposition*	3
OA121	Keyboarding	3
	Psychology elective	3
Term 2		
BA206	Business Management Principles	3
BA211	Financial Accounting I	4
BA270	Money and Banking	3
MTH065	Introductory Algebra	4
	or	
MTH101	College Algebra	5
OA085	Business English II	
	or	
WR122	English Composition—Logic and Style*	3
Term 3		
BA212	Financial Accounting II	4
BA214	Business Communications	3
BA284	Law and Banking—Applications	3
MTH062	Applied Business Math	3
	or	
MTH103	Probability and Statistics*	4
	Banking elective****	3
Term 4		
BA238	Sales and Persuasion	3
BA281	Consumer Lending	3
CS121	Computer Environment	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	
BA273	Marketing for Bankers	3
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 in Business	3
BA250	Small Business Management	3
	Business elective**	
	or	
	Banking elective***	
	or	
BAN280	Cooperative Work Experience	3
	Banking elective***	3
	Humanities/fine arts elective	3

*College transfer to four-year college

**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.



Biology, Botany, Zoology

(college transfer)

These courses are recommended if you plan to transfer college credits into a major program in biology at the University of Oregon, Portland State University, Eastern Oregon State College, Southern Oregon State College or Western Oregon State College, or into a major program in biology, botany, entomology, environmental health, general science, industrial hygiene, microbiology, or zoology at Oregon State University. After you transfer your credits from Chemeketa, you may complete the requirements for a baccalaureate degree within two more years. A normal course load is approximately 15 to 17 credit hours per term for science students.

If you plan to transfer to the U of O or to OSU with a major in microbiology, you will find some advantage in transferring at the end of the freshman year. However, combining general botany and general zoology courses with appropriate chemistry and mathematics classes makes a second year of science study at Chemeketa practical. Your score on Chemeketa's mathematics placement test determines which math class you enroll in first.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$700; class fees, \$152; equipment and supplies, \$25. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center or an advisor at the institution to which you plan to transfer.

	Term		
	1	2	3
First Year			
WR121 English Composition and approved courses in communication skills	3	3	3
Mathematics (approved sequence)*	4	4	4
CH104, 105, 106, or CH204, 205, 206 General Chemistry	5	5	5
Humanities			
or			
Social science sequence	3	3	3
Physical education	1	1	1
Second Year	4	5	6
BOT201, 202, 203 General Botany and/or	4	4	4
ZOO201, 202, 203 General Zoology	4	4	4
CH226, 227, 228 Organic Chemistry	4	4	4
or			
PH201, 202, 203 General Physics	4	4	4
Social science			
or			
Humanities sequence	3	3	3
Electives	3	3	3

*As the level and depth of mathematics training varies considerably for different science degrees, we strongly urge you to consult with an advisor before you select a mathematics sequence.

Building Inspection

The Building Inspection 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 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 coordinator, 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, \$572; 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	Beginning 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	Beginning Algebra	
or		
MTH081	Technical Mathematics	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 Science Degree

In addition to tuition, estimated costs for students who complete the entire program are books, \$1,029; class fees, \$138; equipment and supplies, \$636. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of 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
CS121	Computer Environment	3
DRF059	Print Reading	2
MTH052	Introduction to Algebra and Geometry or	
MTH053	Introduction to Trigonometry with Geometry	3
MTH070	Beginning Algebra or	
MTH081	Technical Mathematics I	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
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
CVL059	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)

Chemeketa offers college credit transfer courses which satisfy lower division requirements in business administration programs. The courses listed below are typical of those accepted by Oregon institutions of higher education.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$550. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
	1	2	3
First Year			
BA101 Business Environment		4	
WR121, 122, English Composition	3	3	
BA214 Business Communications			3
MTH101 College Algebra	5		
MTH103 Probability and Statistics		4	
MTH106 Elementary Calculus			4
CS131 Introduction to Data Processing		3	
Humanities sequence	3	3	3
Social science sequence	3	3	3
HE250 Personal Health			3
Physical education	1	1	1
Second Year			
SP111 Fundamentals of Speech	3		
BA211, 212, 213 Accounting	4	4	4
EC201, 202, 203 Economics	3	3	3
BA226 Business Law I		3	
BA232 Business Statistics			3
Humanities electives	3	3	3
Business and sciences courses	3		3

Business Education

(college transfer)

Chemeketa offers a selection of college transfer credit courses which satisfy the lower division requirements of business education degree programs. The courses listed below are typical of those accepted by Oregon institutions of higher education. By adding HE250 Personal Health, you may fulfill requirements of the Associate of Arts degree at Chemeketa.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$550. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
First Year	1	2	3
WR121, 122 English Composition	3	3	
SP111 Fundamentals of Speech			3
Physical education	1	1	1
Humanities sequence	3	3	3
OA111, 112, 113 Shorthand	4	4	4
OA121, 122, 123 Keyboarding	3	3	3
Mathematics sequence	4	4	4
Second Year	4	5	6
BA211, 212, 213 Accounting	4	4	4
BA251 Office Management			3
OA211 Shorthand/Briefhand			
Skillbuilding	3		
EC201, 202, 203 Economics	3	3	3
CS131 Introduction to Data			
Processing		3	
Social science sequence	3	3	3
BA214 Business Communications	3		
CS103 Introduction to Microcomputer			
Operations		4	
BA232 Business Statistics			3



Chemistry

(college transfer)

These courses are recommended if you plan to transfer college credits into a major program in chemistry at the University of Oregon, Oregon State University, Portland State University, Southern Oregon State College, or Eastern Oregon State College.

We recommend that you plan to transfer after one year at Chemeketa. If you transfer more than one year of community college work, it may take you more than four years to complete a bachelor's degree. The amount of time required to complete a major program depends upon the requirements of the department, your ability and industry, and your level of achievement in mathematics at the time you transfer.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$610; class fees, \$36; equipment and supplies, \$65. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
First Year	1	2	3
WR121, 122, 123 or 227			
English Composition	3	3	3
Mathematics (per placement test)	4	4	4
CH204, 205, 206 General			
Chemistry	5	5	5
GER101, 102, 103 First Year			
German (U of O, PSU)	4	4	4
General education—humanities			
or			
Social science (SOSC, EOSC)	3-4	3-4	3-4
Physical education	1	1	1

Chiropractic

(college transfer)

The two-year Chiropractic program is recommended if you plan to apply for admission to Western States Chiropractic College in Portland.

For admission, WSCC requires at least 90 credit hours, some specified courses, a minimum 2.25 grade point average, and a 2.25 grade point average in general chemistry and organic chemistry.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$510; class fees, \$140; equipment and supplies, \$25. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's

counseling center and the admissions office of WSCC for any new requirements.

	Term		
	1	2	3
First Year			
CH204, 205, 206 General Chemistry	5	5	5
MTH101 College Algebra, MTH102 Trigonometry or MTH078, 079 Applied Trigonometry		2-5	
WR121 English Composition	3		
Other communication skills classes		3	3
PSY201, 202 General Psychology		3	3
Humanities or social sciences	3	3	3
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	4	4	4
Humanities or social sciences	3		
Electives	4	3	3



Civil-Structural Engineering Technology

The Civil-Structural Engineering Technology program offers practical training for entry-level engineering technicians employed by businesses, industries, private consultants, or government agencies. The curriculum includes courses and field experiences in basic engineering science; timber, steel, and concrete design; communication skills; psychology; drafting; surveying; soil mechanics; water supply; and waste water treatment.

Job opportunities vary. 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. As a technician on construction projects, you may assist in estimating costs, writing specifications, inspecting or testing materials, surveying, drafting, or designing.

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 coordinator, you may enroll in CVL280 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, \$1,162; class fees, \$67; equipment and supplies, \$205. Contact the financial aid office to find out if you qualify for help with these costs.

An Associate of 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		
COM051	Communication Skills I or English Composition—Exposition	3
WR121	English Composition—Exposition	3
CVL060	Plane Surveying I	4
CVL053	Engineering Technician Orientation	3
DRF054	Drafting I	2
MTH081	Technical Mathematics I	4
MTH101	College Algebra	5
Term 2		
CVL061	Plane Surveying II	5
CVL071	Contracts and Specifications	3
MTH082	Technical Mathematics II	4
MTH102	Trigonometry	5
PH081	Applied Physics	4
Term 3		
CVL062	Survey Computations	3
CVL080	Applied Mechanics	3
DRF072	Introduction to Computer Drawing	3
MTH083	Technical Mathematics III	4
MTH200	Calculus	5
PSY246	Introduction to Industrial Psychology	3
	Humanities or Social science elective	3
Term 4		
BLD051	Building Codes I	3
COM053	Technical Report Writing or Technical Writing	3
WR227	Technical Writing	3
CVL063	Route Surveying	4
CVL082	Strength of Materials	4
DRF082	Civil Engineering Drafting	3
Term 5		
BDL052	Building Codes II	3
CVL073	Construction Estimating	3
CVL087	Hydraulics	4
CVL090	Timber Construction and Design	3
CVL091	Steel Construction and Design	3
Term 6		
CVL084	Soil Mechanics	4
CVL088	Environmental and Safety Engineering	4
CVL092	Concrete Construction and Design	3
DRF083	Project Development	3
FE205	Job Search Techniques	1



Computer Electronics Technology

see Electronics Technology

Computer Programming

Chemeketa's Computer Programming curriculum is for men and women who wish to become professional computer programmers. The program offers two paths of entry, one emphasizing mainframe computers, the other emphasizing microcomputers.

The two-year program includes theory and technical information as well as experience in performing actual systems maintenance tasks. The curriculum emphasizes problem solving and working effectively with people.

You may select individual courses to meet your needs, or you may work toward an Associate of Science degree. With this degree 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.

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 coordinator, 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, \$667; class fees, \$108; equipment and supplies, \$75. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
BA051	Accounting Procedures I*	4
CS070	Fundamentals of Computer Programming I	4
CS103	Introduction to Microcomputer Operations	4
CS131	Introduction to Data Processing	3
MTH062	Applied Business Math or General education elective	3
Term 2		
BA052	Accounting Procedures II*	4
CS071	Fundamentals of Computer Programming II	4
CS133C	COBOL I	4
CS263	Computer Organization	4
Term 3		
OA084	Business English I or English Composition—Exposition	3
CS075	OS Concepts and Facilities	5
CS233C	COBOL II	5
CS244	Systems Analysis I	3
FE205	Job Search Techniques	1

Term 4	
CS091	On-Line Programming Techniques
CS133A	Assembler I
CS274	Systems Analysis II
CS280	Cooperative Work Experience or Business elective

Term 5	
WR227	Technical Writing or Technical Report Writing
COM053	COBOL III
CS081	Data Base Program Development
CS275	Cooperative Work Experience or Business elective

Term 6	
BA053	Accounting Procedures III*
CS280	Cooperative Work Experience or Business elective
SP111	Fundamentals of Speech or Interpersonal Communication
SP114	Humanities/fine arts elective or Science/applied science elective or Social science elective

*You may substitute BA211 Financial Accounting I, BA212 Financial Accounting II, and another business course in place of the BA051, BA052, and BA053 sequence.

Microcomputer Option

This option emphasizes BASIC and other mini-computer languages. 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, \$820; class fees, \$84; equipment and supplies, \$90. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
CS103	Introduction to Microcomputer Operations	4
CS131	Introduction to Data Processing	3
MTH062	Applied Business Math	3
SP111	Fundamentals of Speech	3
WR121	English Composition—Exposition	3
Term 2		
BA211	Financial Accounting I	4
CS070	Fundamentals of Computer Programming	4
CS104	LOTUS I—Worksheets	4
CS263	Computer Organization	4
FE205	Job Search Techniques	1
Term 3		
BA212	Financial Accounting II	4
CS050	Computer Center Operations	5
CS140	Microcomputer Operating Systems	3
CS244	Systems Analysis I	3
Term 4		
CS271	Microcomputer Assembler	4
CS274	Systems Analysis II	3
WR227	Technical Writing or Computer Science elective or Business elective	3
Term 5		
CS061A	Computer Lab Assistant I	1
CS107	LOTUS II—Macros	3
CS133U	C Language	4

CS276	Data Base Management.....	3
	Cooperative Work Experience	
	or	
	Computer science elective.....	3
	Humanities/fine arts elective	
	or	
	Applied science elective.....	3

Term 6

CS060	Techniques of User Training	2
CS061B	Computer Lab Assistant II.....	1
CS106	dBase III.....	3
CS237	Software Design	4
CS280	Cooperative Work Experience	
	or	
	Computer science elective.....	3
	Social science elective.....	3



Computer Science

(college transfer)

Chemeketa offers college credit courses which satisfy the freshman and sophomore requirements of the computer science degree programs at Portland State University and Oregon State University.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$600; class fees, \$150; equipment and supplies, \$200. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term 1	Term 2	Term 3
First Year	1	2	3
CS261 Computer Science I—PASCAL	4		
CS262 Computer Science II—PASCAL		4	
CS173 Computer Science III			4
MTH101 College Algebra	5		
MTH231 Discrete Mathematics		4	
MTH102 Trigonometry			5
Biological science sequence	4	4	4
WR121, 122, English Composition 3		3	
Elective			3
Second Year	4	5	6
CS271 Microcomputer Assembler	4		
CS133U C Language		4	
Computer science elective			4
MTH200, 201, 202 Calculus	5	5	4
Physical science sequence	4	4	4
Social science sequence			
or			
Humanities sequence	3	3	3



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 in-

dividual 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 results show that your skills are above the levels of the required first term courses, you may request to substitute general education courses. If you are not ready for the required courses, you may need to take preparatory courses. You should also have keyboarding skills equivalent to 30 words per minute.

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 coordinator, 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, \$430; class fees, \$48; equipment and supplies, \$45. 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 48 required credit hours:

Course	Title	Credit Hours
Term 1		
CS103	Introduction to Microcomputer Operations.....	4
CS131	Introduction to Data Processing.....	3
MTH062	Applied Business Math.....	3
SP111	Fundamentals of Speech.....	3
WR121	English Composition—Exposition.....	3
Term 2		
BA211	Financial Accounting I.....	4
CS070	Fundamentals of Computer Programming I..	4
CS104	LOTUS I—Worksheets.....	4
CS263	Computer Organization.....	4
FE205	Job Search Techniques.....	1
Term 3		
BA212	Financial Accounting II.....	4
CS050	Computer Center Operations I.....	5
CS140	Microcomputer Operating Systems.....	3
CS244	Systems Analysis I.....	3



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 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 coordinator, 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 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, 15 credit hours of criminal justice core requirements, and 18 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	3
	Computer science elective	3
	Speech elective	3
	Mathematics	4
	Physical education electives (three different activities)	3
	Social science sequence	9
	Humanities sequence	9
	General education electives	18

Criminal Justice Core requirements (15 credit hours)

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

Criminal Justice electives (Select 18 credit hours)

CJ110	Introduction to Law Enforcement	3
CJ132	Introduction to Probation and Parole	3
CJ195C	Independent Study in 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	6

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.

Applicants 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.

In order to graduate, you must be able to type at least 30 words per minute and show that your mathematics competency is equivalent to MTH051 Basic Mathematics. 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 American Dental Assistants Association certification 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, \$285; class fees, \$105; equipment and supplies, \$354; test fees, \$110. 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 64 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
ES071	Multimedia First Aid.....	1
HE261	Cardiopulmonary Resuscitation.....	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
Term 3		
CS121	Computer Environment.....	3
DEN070	Dental Office Management.....	3
DEN071	Dental Office Practicum II.....	6
DEN072	Expanded Functions II.....	3
DEN074	Dental Radiology II.....	2
Term 4		
DEN080	Dental Assistant Seminar.....	2
DEN081	Dental Office Practicum III.....	5
SP199	Special Studies—Communications in the Health Professions.....	3

Drafting Technology—CAD

Drafting Technology offers two paths of entry into careers in drafting—Drafting and Mechanical Design. During the first year students in both 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 Science degree. You should choose Drafting or Mechanical Design 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 coordinator 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 a school 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, \$803; 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 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.....	1
DRF072	Introduction to Computer Drawing.....	3
MFG053	Manufacturing Processes.....	4
MTH052	Introduction to Algebra and Geometry.....	3
	Physical education or General education elective.....	1
Term 2		
COM051	Communication Skills I or English Composition—Exposition.....	3
WR121	English Composition—Exposition.....	3
DRF052	Machine Drafting II.....	3
DRF056	Architectural Drafting I.....	4
DRF073	Computer Aided Design.....	3
MTH053	Introduction to Trigonometry with Geometry.....	3
Term 3		
CVL066	Surveying for Drafters.....	4
DRF074	Descriptive Geometry.....	3
DRF075	CAD—Mechanical.....	2
DRF081	Mapping and Platting.....	4
MTH070	Beginning Algebra.....	4
Term 4		
CVL054	Engineering Fundamentals.....	3
DRF078	CAD Programming.....	3
DRF082	Civil Engineering Drafting.....	3
ELE060	Electronic Fundamentals for nonmajors or Electric Circuits.....	4
ELE061M	Elective or Cooperative Work Experience.....	3
DRF280	Cooperative Work Experience.....	3
Term 5		
DRF055	Architectural Design.....	3
DRF089	Structural Drafting.....	3
DRF090	Electronic Drafting.....	3
PH081	Applied Physics.....	4
PSY246	Introduction to Industrial Psychology.....	4

	or	Humanities or social science elective	3
Term 6			
COM053	Technical Report Writing		
	or		
WR227	Technical Writing		3
DRF061	Technical Illustration		3
DRF069	Pipe and Flow Systems		1
DRF070	CAD Pipe Systems		1
DRF079	CADD Electronics		
	or		
DRF083	Project Development		3
DRF093	Technical Software Applications		3
	or		
CS104	LOTUS I - Worksheets		4

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, \$887; 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 Science degree by successfully completing these required 98 credit hours:

Course	Title	Credit Hours
Term 1		
DRF050	Sketching	1
DRF051	Machine Drafting I	3
DRF065	Drafting Room Computation	1
DRF072	Introduction to Computer Drawing	3
MFG053	Manufacturing Processes	4
MTH081	Technical Mathematics I	4
	or	
MTH101	College Algebra	5
Term 2		
COM052	Communication Skills I	3
	or	
WR121	English Composition—Exposition	3
DRF052	Machine Drafting II	3
DRF073	Computer Aided Design	3
MFG068	Manufacturing Measuring, Inspection and Quality Control	3
MTH082	Technical Mathematics II	4
	or	
MTH102	Trigonometry	5
Term 3		
CVL080	Applied Mechanics	3
DRF070	CAD pipe Systems*	2
DRF074	Descriptive Geometry	3
DRF075	CAD-Mechanical	2
MTH083	Technical Mathematics III	4
	or	
MTH200	Calculus	5

PSY246	Introduction to Industrial Psychology		
	or		
	Humanities or social science elective		3

Term 4

CVL082	Strength of Materials I		4
DRF071	Machine Design Lab I		3
DRF078	CAD Programming*		3
ELE060	Electronic Fundamentals		
	or		
ELE061M	Electric Circuits		4
PH081	Applied Physics		
	or		
PH201	General Physics		4

Term 5

DRF066	Tool Design Lab I		3
DRF086	Power Transmissions Design		3
DRF089	Structural Drafting*		3
DRF090	Electronic Drafting*		3
	Elective		
	or		
DRF280	Cooperative Work Experience		3

Term 6

COM053	Technical Report Writing		
	or		
WR227	Technical Writing		3
CS104	LOTUS I—Worksheets		4
DRF061	Technical Illustration*		3
DRF079	CADD Electronics*		3
DRF087	Flexible Manufacturing Systems		3
DRF093	Technical Software Applications*		3

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

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 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 coordinator, 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, \$270; class fees, \$13. 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		
ECE060	Introduction to Early Childhood Education	3
ECE066	Observing and Recording in the Pre-school	3
ECE070	Environments for Young Children	3
ECE074	Children's Literature	3
HDFS225	Prenatal and Infant Development	3
Term 2		
COM051	Communication Skills I or English Composition—Exposition	3
WR121	English Composition—Exposition	3
ECE062	Development in Childhood II	3
ECE067	Observing and Guiding Behavior	3
ECE091	Supervised Field Experience I	3
HDFS233	Family Dynamics	3
Term 3		
COM053	Technical Report Writing or English Composition—Logic and Style	3
WR122	English Composition—Logic and Style	3
WR227	Technical Writing	3
ECE071	Creative Activities	3
ECE072	Learning Experiences for Young Children	4
ECE092	Supervised Field Experience II	4
ES071	Multimedia First Aid	1

ECE066	Education	3
ECE066	Observing and Recording in the Preschool	3
HDFS225	Prenatal and Infant Development	3
	Social science general education elective*	3

Term 2		
COM053	Technical Report Writing or English Composition or Technical Writing	3
WR122	English Composition or Technical Writing	3
WR227	Technical Writing	3
ECE062	Development in Childhood II	3
ECE067	Observing and Guiding Behavior	3
ES071	Multimedia First Aid	1
HDFS233	Family Dynamics	3
	Math general education elective	3

Term 3		
ECE071	Creative Activities	3
ECE072	Learning Experiences for Young Children	4
ECE091	Supervised Field Experience I	3
HDFS222	Partner Relationships	3
	Computer science general education elective	3

Term 4		
ECE070	Environments for Young Children	3
ECE074	Children's Literature	3
ECE080	Home, School, and Community	3
ECE092	Supervised Field Experience II	4
	Communications general education elective	3

Term 5		
ECE075	Music for Young Children	3
ECE079	Child Nutrition	2
	or Nutrition	4
FN225	Directed Participation I	7
ECE096	Humanities or science general education elective	3

Term 6		
ECE085	Administration of Child Care Centers	3
ECE097	Directed Participation II	8
	General Education elective	3
HDFS228	The Exceptional Child	3

*ECE students may only apply three credits to the social science general education elective from either HDFS225, 222, 233, or 228.

Two-Year Option

In addition to tuition, estimated costs for students who complete the entire program are books, \$540; class fees, \$16. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
COM051	Communication Skills I or English Composition	3
WR121	English Composition	3
ECE060	Introduction to Early Childhood	3

Economics

(college transfer)

The curriculum below is recommended if you plan to transfer college credits into a major program in economics at the University of Oregon, Oregon State University, Portland State University, Southern Oregon State College, or Western Oregon State College. You may complete requirements for the baccalaureate degree within two additional years.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$715; class fees, \$36. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
First Year	1	2	3
WR121, 122, 123 or 227			
English Composition	3	3	3
Humanities sequence (WOSC: ENG104, 105, 106 or ENG107, 108, 109)	3	3	3
Mathematics (per placement test)	4	4	4
EC201, 202, 203 Principles of Economics	3	3	3
Physical education	1	1	
HE250 Personal Health			3
Elective		0-6	3-6
Second Year	4	5	6
Social science sequence (WOSC: HST110, 111, 112)	3	3	3
BA211, 212, 213 Principles of Accounting (SOSC, PSU: 1 term)			
or			
Humanities sequence	3	3	3
Science (PSU 1 term; fill out year with humanities)	4	4	4
Physical education	1	1	1
Electives (SOSC: MTH010 or BA232)	6	6	6

Education (Elementary)

(college transfer)

If you are interested in becoming an elementary school teacher, Chemeketa recommends that you enroll in a program which may be transferred to the college or university from which you plan to earn your baccalaureate degree. Although you may not be required to choose a specific major at some colleges, each college will encourage students to select from a list of recommended majors. After two years of study at Chemeketa, students may transfer to a college or university to complete requirements for a baccalaureate degree.

Teacher education programs at Oregon colleges and universities are being changed as this catalog goes to press. It appears that some Oregon colleges and universities will require four years of study, while other schools will require you to complete five years before you may be certified to teach in Oregon's public schools. Admission to teacher education programs will vary from college to college, but all programs will require you to earn satisfactory scores in the California Basic Education Skills Test (CBEST) and attain a specified grade point average (GPA) in all college work. The required GPA will vary according to the college but probably will be a minimum of 2.75.

Plan to enroll in courses that meet the general education requirements of the college or university to which you plan to transfer. For more information, contact Chemeketa's counseling center.

Education (Secondary)

(college transfer)

If you plan to become a junior or senior high school teacher, Chemeketa recommends that you enroll in a college transfer program for the subject you plan to teach. After two years of study at Chemeketa, students may transfer to a college or university to complete requirements for a baccalaureate degree.

Teacher education programs at Oregon colleges and universities are being changed as this catalog goes to press. It appears that some Oregon colleges and universities will require four years of study, while other schools will require you to complete five years before you may be certified to teach in Oregon's public schools. Admission to teacher education programs will vary from college to college, but all programs will require you to earn satisfactory scores in the California Basic Education Skills Test (CBEST) and attain a specified grade point average (GPA) in all college work. The required GPA will vary according to the college but probably will be a minimum of 2.75. In addition, you will be required to pass a national test in each subject you plan to teach.

Plan to enroll in courses that meet the general education requirements for the school to which you plan to transfer. For more information, contact Chemeketa's counseling center.

Educational Aide

see Instructional Assistant

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: Electronic 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 counseling center in building 2 on the Salem campus (399-5120), or the electronics program coordinator, 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 coordinator'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).

Computer Electronics Technology Option

As a graduate of this option, you may begin a career with a company that manufactures, installs, or maintains 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, \$836; class fee, \$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 Science degree by successfully completing these required 108 credit hours:

Course	Title	Credit Hours
Term 1		
COM051	Communication Skills I*	3
CS103	Introduction to Microcomputers	4
ELT051	Electronics Theory I	4
ELT058	Electronics Orientation	2
ELT061	Electronics Problems I	1
MTH081	Technical Mathematics I*	4
Term 2		
ELT052	Electronics Theory II	4

ELT054	Transistor Fundamentals	5
ELT062	Electronics Problems II	1
ELT066	Digital Fundamentals	4
MTH082	Technical Mathematics II*	4

Term 3

COM053	Technical Report Writing*	3
ELT053	Electronics Theory III	4
ELT055	Semiconductor Devices	3
ELT064	Pulse Circuits Fundamentals	3
ELT071	Linear IC Fundamentals	4

Term 4

ELT065	Electronics Circuit Analysis	4
ELT067	Digital Circuit Applications	3
ELT091	Programming Concepts I	4
PH081	Applied Physics*	4
PSY246	Introduction to Industrial Psychology*	3

Term 5

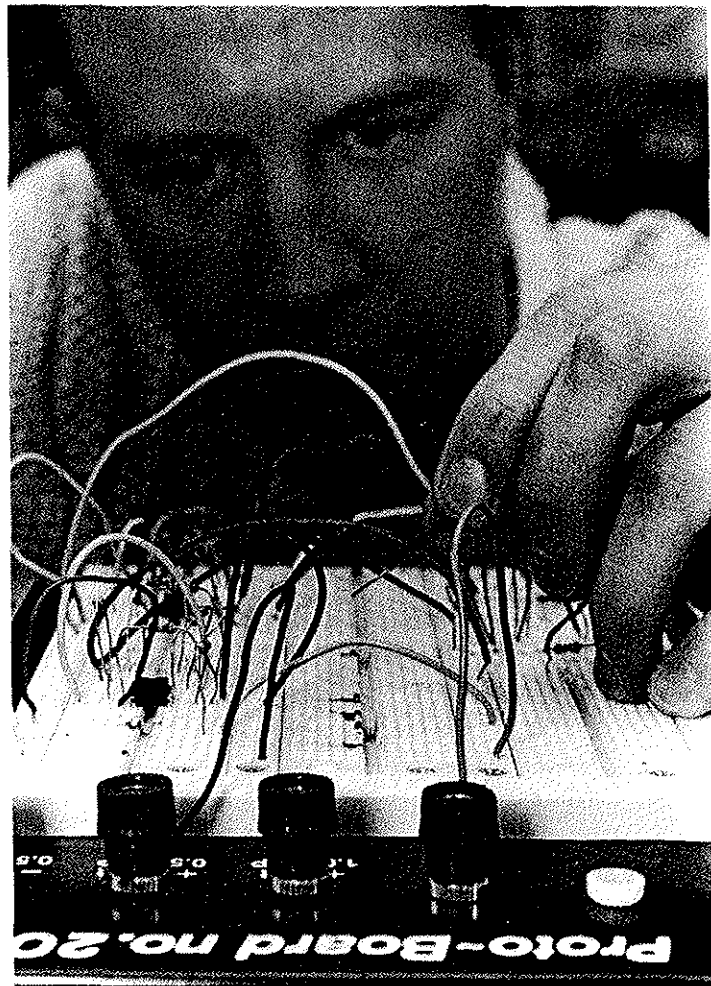
COM052	Communication Skills II*	3
ELT068	Microcomputer Systems	5
ELT072	Linear IC Applications	3
ELT090	Computer Peripherals	4
PH082	Applied Physics*	4

Term 6

ELT070	Video Display Systems	5
ELT092	Programming Concepts II	4
ELT093	Data Communications	4
ELT097	Advanced Computer Architecture	5

*Approved course substitutions:

MTH101 may be substituted for MTH081
MTH102 may be substituted for MTH082
PH201 or PH211 may be substituted for PH081
PH202, PH203, PH212 or PH213 may be substituted for PH082
PSY201 may be substituted for PSY246
SP111 plus FE205 may be substituted for COM052
WR121 may be substituted for COM051
WR227 may be substituted for COM053



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 Chemeketa graduate, you may choose to transfer to a school such as Oregon Institute of Technology to complete the course work required for a bachelor's degree in electronics engineering technology or industrial management. If you wish to transfer, declare your intent before the first term and work closely with the electronics 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, \$791; class fee, \$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 Science degree by successfully completing these required 104 credit hours:

Course	Title	Credit Hours
Term 1		
COM051	Communication Skills I****	3
DRF091	Basic CAD for Electronics	2
ELT051	Electronics Theory I	4
ELT058	Electronic Orientation	2
ELT061	Electronic Problems I	1
MTH081	Technical Mathematics I****	4
Term 2		
ELT052	Electronics Theory II	4
ELT054	Transistor Fundamentals	5
ELT062	Electronic Problems II	1
ELT066	Digital Fundamentals	4
MTH082	Technical Mathematics II****	4
Term 3		
COM053	Technical Report Writing****	3
ELT053	Electronics Theory III	4
ELT055	Semiconductor Devices	3
ELT064	Pulse Circuit Fundamentals	3
ELT071	Linear IC Fundamentals	4
Term 4		
COM052	Communication Skills II****	3
ELT065	Electronic Circuit Analysis	4
ELT067	Digital Circuit Applications	3
PH081	Applied Physics	4
	Computer programming elective*	3
Term 5		
ELT068	Microcomputer Systems	5
ELT072	Linear IC Applications	3
ELT076	Antennas and Transistor Lines	2
ELT077	Telecommunications	3
PH082	Applied Physics	4
Term 6		
ELT070	Video Display Systems	5
ELT075	Advanced Industrial Electronics	4
MTH083	Technical Mathematics III****	4
	or	
	The second class in an approved computer programming sequence**	
PSY246	Introduction to Industrial Psychology****	3
	Electronics elective***	3

*Computer programming electives which meet college's computer course requirement:

CS133B	Introduction to Programming, BASIC	4
CS261	Computer Science I—PASCAL	4
ELT091	Programming Concepts I (recommended)	4

**Approved computer programming sequence:

CS262	Computer Science II—PASCAL	4
ELT092	Programming Concepts II (recommended)	4

***Approved electronic electives:

ELT074	FCC License Preparation	3
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 coordinator.)	

****Approved course substitutions:

MTH101	may be substituted for MTH081.
MTH102	may be substituted for MTH082.
MTH200 or MTH106	may be substituted for MTH083.
PH201 or PH211	may be substituted for PH081.
PH202, PH203, PH212 or PH213	may be substituted for PH082.
PSY201	may be substituted for PSY246.
SP111 plus FE205	may be substituted for COM052.
WR121	may be substituted for COM051.
WR227	may be substituted for COM053.
DRF072	may be substituted for DRF091.

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, and 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, Roger White (399-5068).

In addition to tuition, estimated costs for students who complete the entire program are books, \$709; class fee, \$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 Science degree by successfully completing these required 101 credit hours:

Course	Title	Credit Hours
Term 1		
COM051	Communication Skills I*	3
DRF091	Basic CAD for Electronics	2
ELT051	Electronics Theory I	4
ELT058	Electronics Orientation	2
ELT061	Electronic Problems I	1
MTH081	Technical Mathematics I*	4
Term 2		
ELT052	Electronics Theory II	4
ELT054	Transistor Fundamentals	5
ELT062	Electronic Problems II	1
ELT066	Digital Fundamentals	4
MTH082	Technical Mathematics II*	4

Term 3	
COM053	Technical Report Writing*.....3
ELT053	Electronics Theory III.....4
ELT055	Semiconductor Devices.....3
ELT064	Pulse Circuit Fundamentals.....3
ELT071	Linear IC Fundamentals.....4

Term 4	
COM052	Communications Skills II*.....3
ELT067	Digital Circuit Applications.....3
ELT091	Programming Concepts I.....4
PH081	Applied Physics*.....4
PSY246	Introduction to Industrial Psychology.....3

Term 5	
DRF086	Power Transmissions Designs.....3
ELT068	Microcomputer Systems.....5
MFG079	Industrial Systems.....5
PH082	Applied Physics*.....4

Term 6	
ELT072	Linear IC Applications.....3
ELT075	Advanced Industrial Electronics.....4
DRF087	Flexible Manufacturing.....3
ELT280	Approved Cooperative Work Experience**.....6-9

***Approved course substitutions:**

MTH101 may be substituted for MTH081.
MTH102 may be substituted for MTH082.
MTH200 or MTH106 may be substituted for MTH083.
PH201 or PH211 may be substituted for PH081.
PH202, PH203, PH212 or PH213 may be substituted for PH082.
SP111 plus FE205 may be substituted for COM052.
WR121 may be substituted for COM051.
WR227 may be substituted for COM053.
DRF072 may be substituted for DRF091.
PSY201 may be substituted for PSY246.

**Students must notify the Electronics CWE advisor four terms prior to taking CWE. This is necessary so that a CWE training site can be selected and reserved for you.

Emergency Medical Technology

The Emergency Medical Technology program offers continuing education for your personal development and career advancement, and entry level training if you want to become an Emergency Medical Technician (EMT). Efforts are made to keep the program up-to-date with current community practices and with new technology.

You may select individual courses to meet your needs, or you may work toward an Associate of Science degree.

Trained workers may be employed by police and fire departments, ambulance companies, and industries.

Students take training in three areas: clinical skills defined by state law as levels of certification (EMT I, III, IV), organizational skills (management of finance, personnel, supplies, and equipment), and public interactive skills (laws, public agencies, and community relations). The program emphasizes the relationship of EMTs to other health care and emergency services providers and the role and responsibilities of the EMT in the community. You are required to earn a grade of C or better in all medically related courses.

Of interest is 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 coordinator, you may enroll in three credit hours of EMT280 Cooperative Work Experience, as a substitute for approved electives. To participate, you must have a valid driver's license, current EMT I certification and valid malpractice liability insurance approved by the program coordinator. For more information, look under Cooperative Work Experience in the catalog index.

To be recommended to the Board of Medical Examiners for the EMT III certification examination, you must complete satisfactorily these courses: EMT061 Emergency Medical Technician III, Part A; EMT062 Emergency Medical Technician III, Part B; EMT063 Emergency Medical Technician III, Part C; four hours of EMT280 Cooperative Work Experience; and EMT055 Malpractice Issues or MED055 Medical Law and Ethics.

To be recommended for EMT IV examinations, you must complete satisfactorily these courses: EMT064 Emergency Medical Technician IV, two hours of EMT280 Cooperative Work Experience, EMT068 Extrication for EMTs, and EMT055 Malpractice Issues or MED055 Medical Law and Ethics. For more information on current regulations regarding eligibility in Oregon or other states, contact the appropriate state agencies.

Satisfactory completion of clinical courses will help you prepare for certification examinations administered by the Emergency Medical Services section of the Oregon State Board of Health and by the State Board of Medical Examiners.

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, \$757; class fees, \$136; equipment and supplies, \$242. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
BI231	Human Anatomy and Physiology.....	4
EMT050	Emergency Medical Technology I.....	8
EMT075	Introduction to Emergency Medical Services.....	4
Term 2		
BI232	Human Anatomy and Physiology.....	4
EMT060	Emergency Medical Technician II.....	6
MED055	Medical Law and Ethics.....	3
MTH100	Intermediate Algebra.....	4
Term 3		
BI233	Human Anatomy and Physiology.....	4
EMT069	EMT Rescue.....	3
EMT080	Emergency Medical Technology III Part I.....	5
EMT081	Emergency Medical Technology III Part I Clinical.....	2
PE231	Human Performance.....	3

Term 4	
EMT082	Emergency Medical Technology III Part 25
EMT083	Emergency Medical Technology III Part 2 Clinical3
EMT280B	Cooperative Work Experience (MICU)2
SP111	Fundamentals of Speech3
WR121	English Composition—Exposition3
Term 5	
CS121	Computer Environment3
EMT070	Emergency Communication and Patient Transport3
EMT084	Emergency Medical Technology IV Part 15
EMT085	Emergency Medical Technology IV Part 1 Clinical3
EMT280B	Cooperative Work Experience (MICU)2
	Technical elective*3
Term 6	
AH080	Crisis Intervention3
EMT086	EMT IV Part 25
EMT087	EMT IV Part 2 Clinical2
EMT280B	Cooperative Work Experience (MICU)2
MS259	Death and Dying3
*Technical electives (three hours required):	
AH050	Health Care Delivery1
EMT069	EMT Rescue3
EMT079	Disaster Planning and Management3
HE262	Cardiopulmonary Resuscitation Instruction2
FRP064	Hazardous Materials Technician I3
MED064	Introduction to Medical Science3
BA074	Public Relations in Business3
BA101	Business Environment4
BA206	Business Management Principles3
BA211	Financial Accounting I4
BA224	Personnel Management3
BA226	Business Law I3
ED201	American Sign Language—Beginning I3

EMT280	Cooperative Work Experience up to.....3
FRP050	Introduction to Fire Protection3
FRP065	Hazardous Materials Technician II (Part A)4
HE250	Personal Health3
HE268	Pharmacodynamics in Health Care3
HS101	Alcohol Use, Misuse, and Addiction3
HS150	Self-Awareness and Interpersonal Skills3
HS154	Community Resources3
MED066	Medical Reimbursement Management3
MTH103	Probability and Statistics4

Engineering

(college transfer)

Chemeketa offers required lower division transfer courses in mathematics, science, liberal arts, computer and engineering sciences, and health and physical education for students interested in a career in engineering. After one or two years of study at Chemeketa, students may transfer to an accredited college or university to complete a program of study leading to a Bachelor of Science degree.

The first and second years of the college transfer engineering program follow closely the pre-engineering program at Oregon State University and are parallel to programs of other accredited colleges or universities offering Bachelor of Science degrees. If you plan to apply for admission to the professional engineering program at OSU, you must meet certain pre-engineering course requirements. Requirements vary by engineering field. Before you enroll, consult with the program coordinator for pre-engineering.

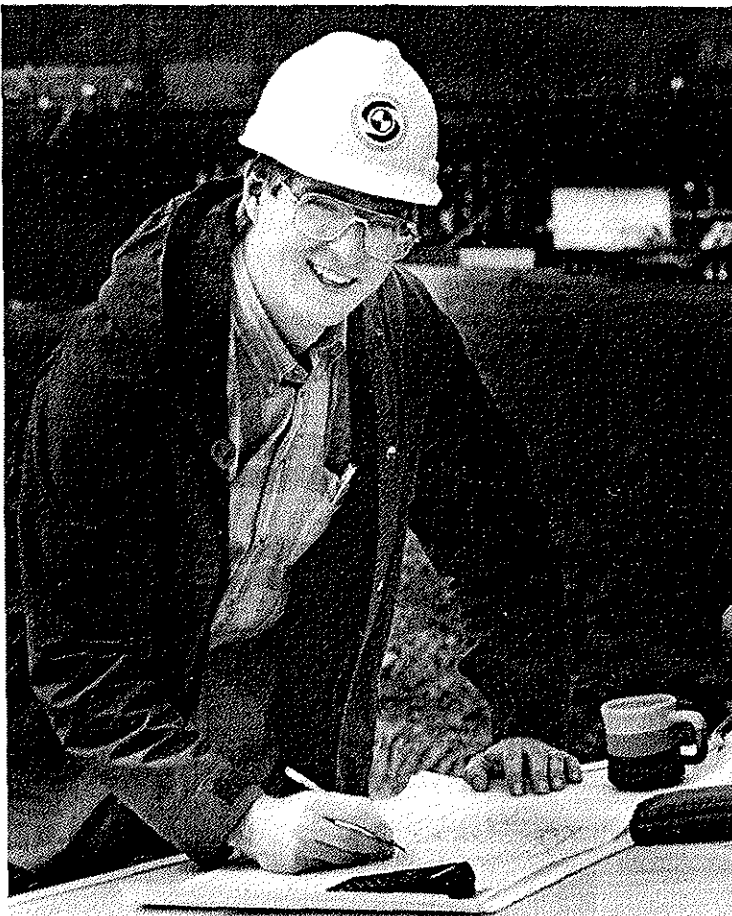
To enroll in this curriculum, you should be prepared to take MTH200 Calculus. If your high school or other preparatory studies did not include trigonometry, you may not enroll in MTH200 and courses with an ENGR prefix, until you have met the trigonometry and other prerequisites. You may wish to enroll in the one-year preparatory program.

In addition to tuition, estimated costs for students who complete the entire Chemeketa pre-engineering program are books, \$843; class fees, \$137; equipment and supplies, \$210. Contact the financial aid office to find out if you qualify for help with these costs.

Chemeketa also offers Associate of Science degrees in Civil-Structural Engineering Technology, Electronic Engineering Technology (an option of Electronics Technology), and Mechanical Design (an option of Drafting Technology), for students interested in a two-year program of study.

The following recommendations are based on information available as this catalog goes to press:

Course	Title	Credit Hours
Term 1		
GE101	Engineering Orientation	2
GE115	Graphics.....	3



MTH201	Calculus*	5
PH211	General Physics for Engineers	5
	Physical education elective	1

Term 2		
GE102	Engineering Computations	3
MTH241	Linear Algebra	4
PH212	General Physics for Engineers	5
WR121	English Composition—Exposition	3
	Physical education elective	1

Term 3		
GE103	Engineering Computations	3
MTH203	Calculus	4
PH213	General Physics for Engineers	5
WR227	Technical Writing	3
	Physical education elective	1

Term 4		
CH104	General Chemistry	5
ENGR201	Electrical Fundamentals I	4
ENGR211	Statics	4
MTH221	Applied Differential Equations	4

Term 5		
CH105	General Chemistry	5
ENGR202	Electrical Fundamentals II	4
ENGR213	Strength of Materials	4
SP111	Fundamentals of Speech	3

Term 6		
CH106	General Chemistry	5
ENGR203	Electric Control Fundamentals	4
ENGR212	Dynamics	4
MTH203	Calculus	4

*Students without GE104 and GE105 will be required to take ENGR200. Students not prepared to take MTH201 may not be able to complete the course of study in two years. MTH200 is offered as a summer course.

Note: Requirements vary by engineering field. Before you enroll, consult with the program coordinator for pre-engineering.

One-year preparatory program

If you do not have the mathematical background to begin calculus, you may follow this one year of study before enrolling in the pre-engineering program.

In addition to tuition, estimated costs for students who complete the entire Chemeketa one-year preparatory program are books, \$318; class fees, \$37; equipment and supplies, \$210. Contact the financial aid office to find out if you qualify for help with these costs.

Course	Title	Credit Hours
Term 1		
GE101	Engineering Orientation	2
GE105	Engineering Applications II	1
GE115	Graphics	3
MTH101	College Algebra	5
WR121	English Composition—Exposition	3
	Physical education elective	1
Term 2		
GE102	Engineering Computations	3
MTH102	Trigonometry	5
SP111	Fundamentals of Speech	3
	Physical education elective	1
Term 3		
GE103	Engineering Computations	3
MTH200	Calculus	5
WR227	Technical Writing	3
	Physical education elective	1

Note: Requirements vary by engineering field. Consult with the program coordinator for pre-engineering.

English

(college transfer)

These courses are recommended for students who plan to transfer college credits into a major program in English at the University of Oregon, Oregon State University, Portland State University, Eastern Oregon State College, or Southern Oregon State College or into a major program in English or humanities at Western Oregon State College. You may complete the requirements for the baccalaureate degree within two additional years.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$525; class fees, \$36. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
	1	2	3
First Year			
WR121, 122, 123 English Composition	3	3	3
Literature sequence	3	3	3
Science sequence	4	4	4
Foreign language sequence	4	4	4
Physical education	1	1	1
Electives	0-3	0-3	0-3
Second Year			
ENG201, 202, 203 Shakespeare	3	3	3
HST110, 111, 112 History of World Civilization	3	3	3
Social science sequence (PSY201, 202, 203 for teachers)	3	3	3
Foreign language sequence (second year)	4	4	4
Physical education	1		1
HE250 Personal Health	3		
Electives (SP111 for teachers)	2-3		2-3

Farm Business Management

The three-year 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 considerations 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

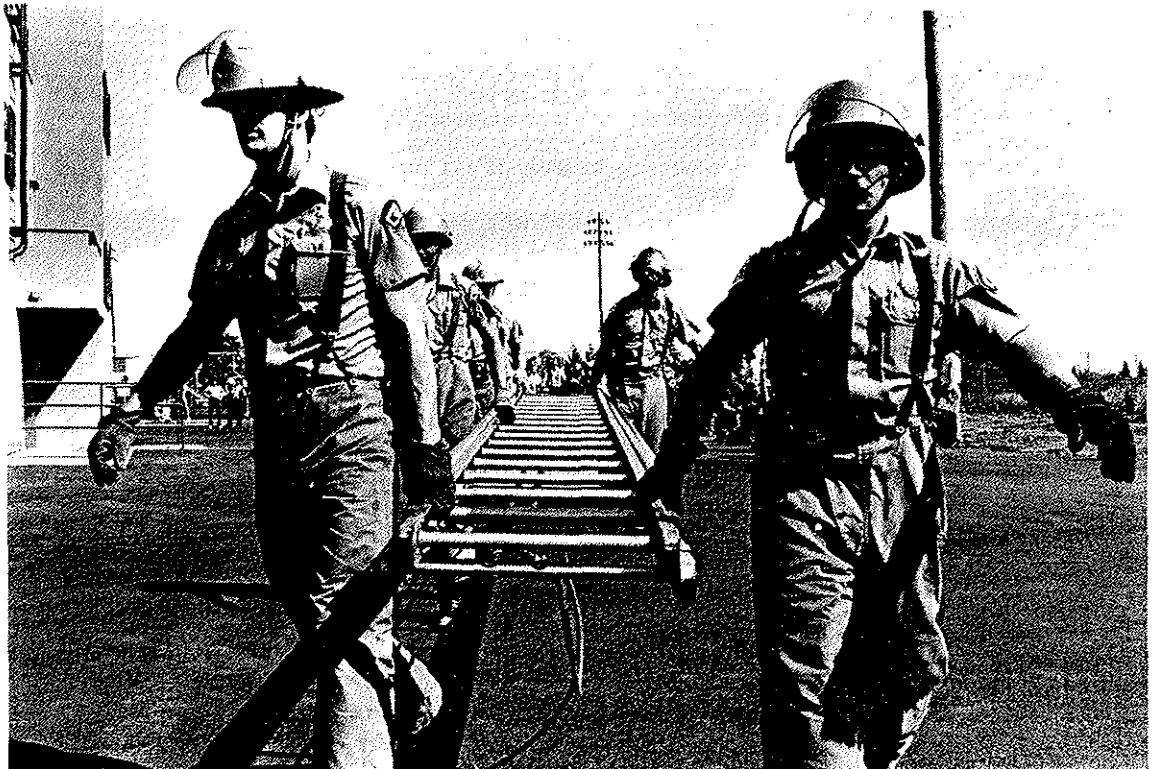
Emphasizes advanced estate planning, income tax management strategies, use of supplemental records, use of computers in farm management, advanced cash flow analysis, and roles government agencies and programs play in farm management.

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 career 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, \$774; 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 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	3
GS104	Physical Science	4
CH104	General Chemistry	5
PH201	General Physics	4
PE231	Human Performance-Fitness for Contemporary Living	3
	General education elective	3
Term 2		
EMT052	Emergency Medical Technology Part B	1
FRP052	Fire Incident Related Experience	3
FRP057	Fire Science	3
GS105	Physical Science	4
CH105	General Chemistry	5
PH202	General Physics	4
MTH100	Intermediate Algebra	4
MTH101	College Algebra	5
WR121	English Composition—Exposition	3
Term 3		
CS121	Computer Environment	3
FRP053	Fire Incident Related Experience	3
FRP054	Fire Service Hydraulics (IFSTA-Revised)	2
FRP058	Fire Pump Construction and Operation	3
FRP069	Fire Department Leadership	3
SP111	Fundamentals of Speech	3
Term 4		
FRP061	Fire Incident Related Experience	3
FRP064	Hazardous Materials Technician I	3
FRP074	Fire Investigation	3
	Approved elective*	6
Term 5		
FRP056	Fire Service Rescue Practices	4
FRP062	Fire Incident Related Experience	3
FRP065	Hazardous Material Technician II Part A	4
	Approved electives*	3
Term 6		
FRP063	Fire Incident Related Experience	3
PSY101	Psychology of Human Relations	3

WR227	Technical Writing	3
	Approved electives*	6

***Approved Electives (15 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 Technology I, Part C	1
EMT060	Emergency Medical Technician II	6
EMT061	Emergency Medical Technician III, Part A	5
EMT062	Emergency Medical Technician III, Part B	6
EMT063	Emergency Medical Technician III, Part C	5
FRP066	Building Construction for Fire Suppression	3
FRP068	Hazardous Materials Technician II (Part B)	4
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	Natural Cover Fire Protection	2
FRP082	Evidence Photography for Fire and Arson Investigators	3
FRP083	Water Distribution Systems	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

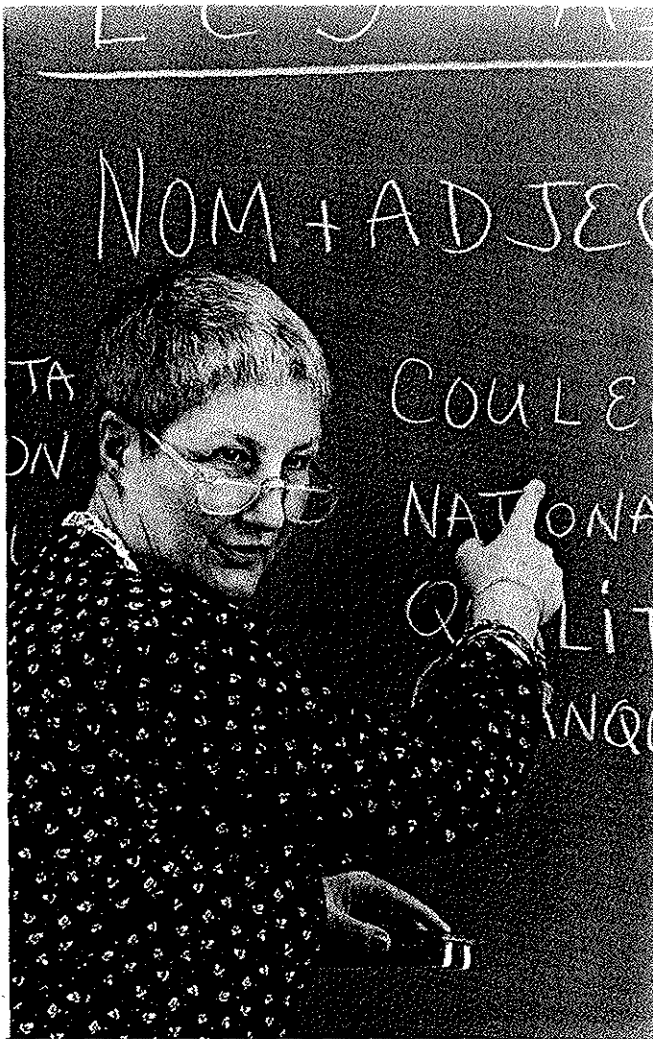
Graduates enrolled in this option may be hired by public fire departments, industrial businesses, and insurance companies as fire prevention specialists.

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 coordinator, 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, \$739; 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 Science degree by successfully completing these required 98 credit hours:

Course	Title	Credit Hours
Term 1		
CS121	Computer Environment	3
FRP050	Introduction to Fire Protection	3
FRP055	Elementary Science for Firefighters	3
GS104	Physical Science	4
PH201	General Physics	4
CH104	General Chemistry	5
WR121	English Composition—Exposition	3
	General education elective	3



Term 6	
BLD067	Nonstructural Plan Review3
FRP085	Industrial Fire Protection3
FRP086	Advanced Detection and Protection Systems3
FRP280C	Cooperative Work Experience3
	Approved electives*3

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

FRP066	Building Construction for Fire Suppression3
FRP068	Hazardous Materials Technician II (Part B)4
FRP069	Fire Department Leadership3
FRP070	Fire Fighting Tactics and Strategy3
FRP077	Fire Service Instructor Training2
FRP079	Natural Cover Fire Protection2
FRP082	Evidence Photography for Fire and Arson Investigators3
FRP280C	Cooperative Work Experience3

Foreign Languages

(college transfer)

These courses are recommended for students who plan to transfer college credits into a major program in foreign languages at the University of Oregon, Portland State University, or Oregon State University; into a major program in Spanish at Southern Oregon State College; or into a program to prepare to be a foreign language teacher at Western Oregon State College, Southern Oregon State College, or Eastern Oregon State College. You may complete requirements for a baccalaureate degree within two additional years.

Although you may begin your study of a language in college, it is more common and desirable for you to begin your studies with two to four years of work in high school, as you will be required to take 30 to 45 hours in the language beyond your second year. 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. You should not plan to transfer more than 24 lower division hours of credit in any one language.

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 coordinator, you may enroll in 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 Chemeketa program are books, \$531; class fees, \$36. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations apply to students who are beginning a study of a language. The curriculum is based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

Term 2	
FRP057	Fire Science or GS105 Physical Science or PH202 General Physics4
CH105	General Chemistry5
FRP060	Fundamentals of Fire Prevention3
FRP071	Fire Protection Systems and Extinguishers3
MTH100	Intermediate Algebra4
MTH101	College Algebra5
SP111	Fundamentals of Speech3
Term 3	
BLD060	Fire Protection for Buildings3
FRP081	Fire Prevention Inspection3
FRP087	Fire Insurance Fundamentals3
FRP280C	Cooperative Work Experience3
PSY101	Psychology of Human Relations3
WR227	Technical Writing3
Term 4	
BDL051	Building Codes I3
FRP072	Fire Codes and Ordinances3
FRP074	Fire Investigation3
FRP080	Hazardous Materials for Inspectors3
FRP083	Water Distribution Systems3
	Approved electives*3
Term 5	
BLD052	Building Codes II3
BLD081	Mechanical Codes I3
FRP067	Hazardous Materials Regulations3
FRP073	Fire Fighter's Law2
FRP280C	Cooperative Work Experience3

	Term		
	1	2	3
First Year			
WR121, 122, 123 English			
Composition	3	3	3
Humanities sequence	3	3	3
Science sequence	4	4	4
Foreign language sequence	4	4	4
Physical education	1	1	
HE250 Personal Health	3		
Electives	0-3	0-3	0-6
Second Year	4	5	6
Foreign language sequence (second year)	4	4	4
Social science (HST110, 111, 112 History of World Civilization recommended)	3	3	3
Social science or humanities sequence (PSY201, 202, 203 for teachers)(PSU, U of O)	3-5	3-5	3-5
Physical education	1	1	1
Electives (SP111 for teachers)	0-3	0-3	0-3

Forest Technology

The Forest Technology curriculum includes instruction in the basic knowledge and technical skills required of forest technicians. There are job opportunities in log scaling, timber management, fire control, recreation, timber stand improvement, and forest engineering.

You may select individual courses to meet your needs, or you may work toward an Associate of 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 coordinator, you may enroll in FOR280 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, \$640; class fees, \$77; equipment and supplies, \$155. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
COM051	Communication Skills I	
	or	
WR121	English Composition—Exposition	3
DRF054	Drafting I	2
FOR051	General Forestry	3
FOR052	Tools and Equipment	2
FOR053	Introduction to Engineering Computers and Calculators	1
MTH052	Introduction to Algebra and Geometry	3
	or	
MTH070	Beginning Algebra	4
PSY101	Psychology of Human Relations	3
Term 2		
COM052	Communication Skills II	

	or	
SP111	Fundamentals of Speech	3
DRF072	Introduction to Computer Drawing	3
ES071	Multimedia First Aid	1
FOR061	Tree Identification I	2
FOR066	Forest Products	4
FOR073	Forestry Seminar I	1
MTH053	Introduction to Trigonometry with Geometry	3

Term 3		
FOR057	Forestry Plane Surveying I	4
FOR062	Tree Identification II	2
FOR067	Forest Sciences	3
FOR068	Forest Photogrammetry	3
FOR076	Timber Cruising I	4

Term 4		
FOR058	Forestry Plane Surveying II	5
FOR071	Fire Protection and Control	4
FOR081	Logging Practices	4
FOR088	Methods of Supervision	3

Term 5		
FOR078	Scaling Practices	4
FOR083	Forestry Reports	3
FOR085	Forestry Contracts	3
FOR091	Silviculture	3
FOR093	Forestry Seminar II	1

Term 6		
AUM091	Power Systems	4
FOR077	Timber Cruising II	4
FOR096	Forest Road Survey	4
PH052	Practical Physics	4



Forestry

(college transfer)

Students who complete these courses may qualify to enter, at the sophomore level, the professional curricula in forestry or the program in resource recreation management at the School of Forestry at Oregon State University. If you plan to enter a professional program of forestry at OSU or another institution, you should transfer immediately after you complete the one-year pre-forestry program at Chemeketa. If you complete this program, and follow with at least three years at a professional school of forestry, you may earn a baccalaureate degree.

The program outlined below is recommended if you begin your study at Chemeketa. The program takes full advantage of course work available here to provide the broad base of transfer courses. The program does not necessarily parallel programs recommended for students who begin their work at a four-year institution.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$394; class fees, \$108. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
First Year	1	2	3
BOT201, 202 General Botany or BI101, 102, 103 General Biology	4	4	4
CH104, 105, 106 General Chemistry	5	5	5
Mathematics (per placement test)	4	4	4
WR121, 122, 123, or 227 English Composition	3	3	3
Physical education	1	1	1
Electives	0-4		

General Studies

(college transfer)

The general studies curriculum emphasizes the humanities, the sciences, or social sciences. After you complete the Associate of Arts degree program, you may transfer college credit hours into a general studies program at a four-year institution. You generally may complete the requirements for a baccalaureate degree within two additional years.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$940; class fees, \$72. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

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

	Term		
First Year	1	2	3
WR121, 122, 123, or 227 English Composition	3	3	3
Social science sequence	3-4	3-4	3-4
Mathematics or science sequence	4-5	4-5	4-5
Physical education	1	1	
HE250 Personal Health			3
Electives (foreign language if Bachelor of Arts degree desired)	3-4	3-4	0-4
Second Year	4	5	6
Humanities sequence	3	3	3
Second sequence in humanities (for humanities emphasis) or Mathematics or science (for mathematics-science emphasis) or Social science (for social science emphasis)	3-5	3-5	3-5
Physical education	1	1	1
Electives (see an advisor for options—may include up to 12 career program credit hours)	8-10	8-10	8-10

Geography

(college transfer)

These courses are recommended for students who plan to transfer college credits into a major program in geography at the University of Oregon, Southern Oregon State College, Portland State University, Oregon State University, or Western Oregon State College. You may complete requirements for a baccalaureate degree within two additional years.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$850; class fees, \$24. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
First Year	1	2	3
WR121, 122, 123, or 227 English Composition	3	3	3
GEOG105, 106, 107 Introductory Geography	3	3	3
G201, 202, 203 Geology (not required at SOSOC) or humanities sequence (SOSOC)	4	4	4
G204, 205, 206 Geology Laboratory			

(not at SOSC)	1	1	1
Mathematics (per placement test)	3-4	3-4	3-4
Physical education	1		1
HE250 Personal Health Electives	0-3	0-3	0-6
Second Year	4	5	6
Science sequence(SOSC, PSU, U of O)	4-5	4-5	4-5
Social science sequence (SOSC: EC201, 202, 203)	3	3	3
Humanities sequence	3	3	3
BI101, 102, 103 or social science sequence (PSU) or foreign language (U of O) or BI101, 102, 103 (OSU)	3-4	3-4	3-4
Physical education	1	1	1
Electives	0-3	0-3	0-3

University, Portland State University, the University of Oregon, or Western Oregon State College. All of these programs lead to teacher certification in health.

The OSU program also offers major options in community health, environmental health, school health and safety, and safety studies. The PSU program, combined with PSU's certificate program in public health studies, prepares you in community health. At the U of O, you may specialize in community health, gerontology, traffic safety, school health, and comprehensive health.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$500; class fees, \$115. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

Geology

(college transfer)

These courses are recommended for students who plan to transfer college credits into a major program in geology at the University of Oregon, Oregon State University, Southern Oregon State College, or Portland State University. You may complete requirements for the baccalaureate degree within two additional years.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$610; class fees, \$96; equipment and supplies, \$65. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
First Year	1	2	3
WR121, 122, 123, or 227 English Composition	3	3	3
BI101, 102, 103 General Biology	4	4	4
CH104, 105, 106 or CH204, 205, 206 General Chemistry	5	5	5
MTH106 (OSU environmental health major)	4		
HE252 First Aid		3	
FN225 Nutrition			4
Physical education	1	1	1
Electives	0-3	0-3	0-3
Second Year	4	5	6
U of O, PSU, WOSC			
PSY201, 202, 203 General Psychology	3	3	3
SOC204, 205, 206 General Sociology	3	3	3
Humanities sequence (U of O, WOSC—literature sequence)	3	3	3
PHL201, 202, 203 Philosophy (PSU: any one course)	3		
SP111 Fundamentals of Speech (PSU, WOSC)			3
Physical education	1	1	1
HE250 Personal Health (U of O, WOSC)			3
Electives	0-6	3-6	0-6
Second Year—OSU	4	5	6
PSY201, 202, 203 General Psychology	3	3	3
SOC204, 205, 206 General Sociology	3	3	3
PS202 American Government (school health, community health major)			
or			

Health, Health Education

(college transfer)

These courses are recommended for students interested in completing a major program in health or health education at Oregon State

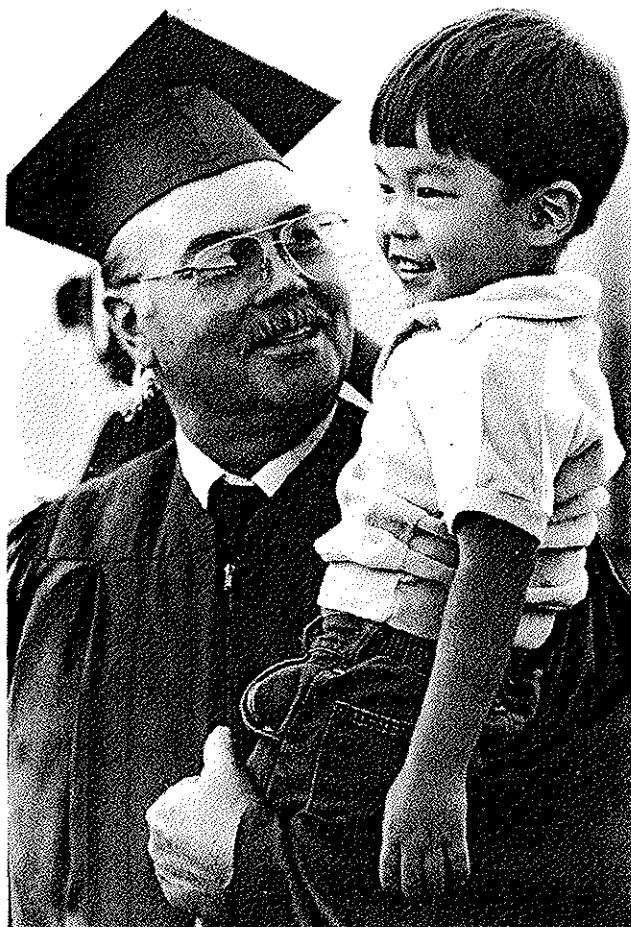
(environmental health major)			3
CH226 Organic Chemistry			
(environmental health major)	4		
PH201, 202, 203 General			
Physics (environmental health major)	4	4	4
SP111 Fundamentals of Speech			3
HE250 Personal Health			3
Electives	0-9	0-9	0-6

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 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.

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, \$250; 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	First Aid	1
HE261	Cardiopulmonary Resuscitation	1
MED051	Medical Terminology I.....	3
MED055	Medical Law and Ethics	3
OA121	Keyboarding*.....	3
MED056	Medical Assisting Basic Procedures.....	4
Term 2		
BI072	Body Structure and Function II.....	3
FE206	Job Search Techniques	1
MED052	Medical Terminology II.....	3
MED054	Medical Office Procedures	4
MED060	Medical Transcription	3
MED057	Medical Assisting, Advanced Procedures.....	5
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,S,W, or CS121 may be substituted for this requirement.

Unit Clerk

The Unit Clerk program prepares you 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, \$174; class fees, \$48; 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
MED053	Medical Terminology III	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,S,W, or CS121 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 or a medical transcriptionist, or you may continue your education in medical record technology and administration programs at other colleges.

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 health information and medical record 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, 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, \$277; 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	Multimedia First Aid	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,S,W, or CS121 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 Science degree by successfully completing the required 100 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 47 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 coordinator for further information.

In addition to tuition, estimated costs for students who complete the entire second year are books, \$348; 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 Operations.....	4
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	Advanced Medical Services Science.....	3
MED083	Introduction to Health Care Monitoring Systems.....	3
MTH052 or higher	Introduction to Algebra and Geometry.....	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 or higher	Effective Listening.....	3
COM051 or higher	Communication Skills I.....	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	Briefhand I.....	4
SP114	Interpersonal Communication.....	3
WR227	Technical Writing.....	3

History

(college transfer)

These courses are recommended for students who plan to transfer college credits into a major program in history at the University of Oregon, Oregon State University, Portland State University, Eastern Oregon State College, Southern Oregon State College or Western Oregon State College. You may complete requirements for the baccalaureate degree within two additional years.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$675; class fees, \$36. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press.

Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
	1	2	3
First Year			
WR121, 122, 123 English Composition	3	3	3
HST110, 111, 112 History of World Civilization	3	3	3
General education—science sequence	4	4	4
Humanities or foreign language sequence	3-4	3-4	3-4
Physical education	1		1
Electives	0-3	0-3	0-3
Second Year			
HST201, 202, 203 History of the United States	3	3	3
General education—humanities sequence (U of O, EOSC, SOSC) or humanities or social science sequence (OSU) or humanities sequence (PSU) or PSY201, 202, 203 General Psychology (PSU)	3	3	3
Social science sequence other than history, or second year foreign language	3-4	3-4	3-4
Physical education	1	1	1
Electives	0-3	0-3	0-3

Home Economics

(college transfer)

These courses are recommended for students attending Chemeketa who plan to transfer into a major program in home economics at Oregon State University. You may complete requirements for the baccalaureate degree with three additional years of work at OSU.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$390. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
	1	2	3
First Year			
WR121 English Composition	3		
MTH100 Intermediate Algebra		4	
ART115, 116 Basic Design	2	2	
Social science or Humanities electives (see OSU catalog)	3	3	3
SP111 Fundamentals of Speech			3
CH104, 105, 106 General Chemistry	5	5	5
Physical education	1	1	
Electives*	0-3	0-3	2-6

*College transfer home economics courses are listed in the course descriptions section of this catalog under these categories: Clothing/Textiles, Foods/Nutrition, and Human Development and Family Studies.

Hospitality Systems

Chemeketa offers a full range of courses and programs in food, travel and tourism, lodging, and recreation and leisure. Professional Cooking requires three terms (nine months) and Hospitality Systems Management requires six terms (18 months).

If you wish to work toward a bachelor's degree, see the Hotel, Restaurant, and Tourism Management college transfer program.

Professional Cooking

The Professional Cooking program includes three terms of classroom instruction and intensive hands-on laboratory experience in classical cuisine. The program offers preparation for students planning to enter the food service industry and continuing education for those who are already employed in the profession and who want to increase their knowledge and skills.

As a graduate you may find work in hotels, restaurants, country clubs, resorts, hospitals, and other large food complexes. You may wish to continue your education through an apprenticeship program or at one of the nation's prominent culinary institutes.

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 coordinator, you may enroll in FS280 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, \$275; class fees, \$105. 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 55 required credit hours:

Course	Title	Credit Hours
Term 1		
FS050	Professional Cooking I.....	10
FS061	Sanitation and Safety.....	2
HSM080	Introduction to Hospitality Industry.....	3
FS060	Basic Nutrition.....	2
FS071	Beverage Management.....	2
Term 2		
FS051	Professional Cooking II.....	10
FS055	Dining Room Management.....	2
FS062	Menu Planning.....	2
FS063	Hospitality Mathematics.....	2
FS070	Purchasing and Stores Control.....	3
Term 3		
FS052	Professional Cooking III.....	10
BA205	Human Relations in Business.....	3
OA084	Business English I.....	3
FE205	Job Search Techniques.....	1

Hospitality Systems Management

The six-term Hospitality Systems Management curriculum focuses on the four components of today's hospitality industry: food, travel and tourism, lodging, and recreation and leisure. 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 coordinator 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,



\$350; 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 Science degree by successfully completing 96 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 Mathematics	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		
FS071	Beverage Management	2
FS072	Food Service Facilities Design	3
HSM086	Leisure in America	3
SP060	Basic Food and Nutrition	2
SP130	Business and Professional Speaking	3
FE205	Job Search Techniques	1
Term 5		
BA051	Accounting Procedures I or Financial Accounting I	4
HSM083	Hotel, Restaurant and Travel Law	3
TR054	Travel Agent Basics	3
HSM087	Foundations in Resource Recreation Management	3
BA224	Personnel Management	3
Term 6		
BA052	Accounting Procedures II or Financial Accounting II	4
CS103	Introduction to Microcomputers	4
FS073	Hospitality Systems Management	3
WR227	Technical Report Writing	3
FS280C	Cooperative Work Experience	3

Hotel, Restaurant, and Tourism Management

(college transfer)

The courses listed below are a two-year program of interdisciplinary study for students planning to transfer credits into the Hotel, Restaurant, and Tourism Management program at Oregon State University. In this coordinated program, OSU may accept 104 credit hours earned at Chemeketa. In two additional years at OSU, you may earn a Bachelor of Science degree.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$570; class fees, \$48. Contact the

financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with the program director and with an advisor at OSU.

Course	Title	Credit Hours
Term 1		
BI101	General Biology	4
HRTM104	Introduction to Travel and Tourism	3
HSM080	Introduction to the Hospitality Industry	3
MTH101	College Algebra	5
WR121	English Composition—Exposition	3
Term 2		
BI102	General Biology	4
HRTM105	Introduction to the Foodservice Industry	3
HSM081	Meeting, Planning and Convention Management	3
MTH103	Probability and Statistics	4
WR122	English Composition—Logic and Style	3
Term 3		
BI103	General Biology	4
HRTM106	Introduction to the Lodging Industry	3
MTH106	Elementary Calculus	4
SP112	Fundamentals of Persuasion	3
WR123	English Composition—Research Writing	3
Term 4		
BA232	Introduction to Business Statistics	3
CS131	Introduction to Data Processing	3
EC201	Principles of Economics	3
HSM086	Leisure in America	3
PSY101	Psychology of Human Relations	3
SP130	Business and Professional Speaking	3
Term 5		
BA211	Financial Accounting I	4
CS103	Introduction to Microcomputer Operations	4
EC202	Principles of Economics	3
HSM083	Hotel, Restaurant, and Travel Law	3
TR054	Travel Agent Basics	3
Term 6		
BA212	Financial Accounting II	4
BA226	Business Law	3
BI234	Microbiology	4
EC203	Principles of Economics	3
FN225	Nutrition	4

Human Services

The Human Services Program offers training for entry-level positions in human service agencies.

You may enroll in the Gerontology option, the Social Services option, or the Alcohol and Drug option. All options combine academic work with five terms of supervised field work. By enrolling in our CPL120 Credit for Prior Learning Resume course, you may be able to earn credit for learning you acquired through your job, non-credit classes, community or volunteer service, individual study, or travel.

Gerontology Option

The Gerontology option trains men and women who plan to work as case workers, activity directors, social service workers, etc., in social service

agencies, long-term care facilities, and other programs for elderly citizens. The program includes courses in interviewing, counseling, and intervention.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$240; class fees, \$10. Contact the financial aid office to find out if you qualify for help with these costs.

An Associate of Science Degree is awarded upon successful completion of the required 98 hours. At least 25 hours of practicum are required.

Course	Title	Credit Hours
Term 1		
HS150	Self Awareness and Interpersonal Skills.....	3
HS154	Community Resources	3
HS167	Gerontology	3
HS170	Introduction to Practicum	3
WR121	English Composition—Exposition	3
Term 2		
HS152	Stress Management.....	1
HS155	Interviewing Theory and Techniques	3
HS168	Mental Health and Aging.....	3
HS291G- HS296G	Practicum—Human Services	3-8
SP112	Fundamentals of Persuasion or Business and Professional Speaking.....	3
SP130	Approved Gerontology elective.....	1
Term 3		
HS101	Alcohol Use, Misuse and Addiction.....	3
HS260	Group Dynamics	3
HS261	Counseling the Older Adult.....	3
HS291G- HS296G	Practicum—Human Services	3-8
MTH052 or higher	Introduction to Algebra and Geometry	3
Term 4		
HS265	Intervention Strategies I.....	3
HS291G- HS296G	Practicum—Human Services	3-8
PSY201	General Psychology	3
SOC204	General Sociology	3
	Computer science elective.....	3
Term 5		
HS266	Intervention Strategies II.....	3
HS291G- HS296G	Practicum—Human Services	3-8
PSY202	General Psychology	3
SOC205	General Sociology	3
	Approved Gerontology elective*	3
Term 6		
HS291G- HS296G	Practicum—Human Services	3-8
PSY237	Growth and Development	3
	Approved Ethnic studies elective**	3
	Approved Gerontology elective*	3
	Humanities/fine arts elective or Science/applied science elective	3
*Approved Gerontology electives (6 hours total). Include hours selected from the following:		
AH205	Biomedical Ethics.....	3
ES071	Multimedia First Aid	1
HE261	Cardiopulmonary Resuscitation.....	1
HS165	Activity Director Training for Long Term Care	3
HS199I	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

****Approved Ethnic studies electives:**

ANTH207	Cultural Anthropology.....	3
ANTH208	Cultural Anthropology.....	3
ANTH209	Cultural Anthropology.....	3
HST257	Introduction to Ethnic History— American Indian	3
HST258	Introduction to Ethnic History— Black American.....	3
HST259	Introduction to Ethnic History— Chicano	3
SPAN101- SPAN103	First Year Spanish Terms I, II, III	4
SPAN201- SPAN203	Second Year Spanish Terms I, II, III	4
SSC150	Ethnic Cultures of the Willamette Valley	3

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, \$240; class fees, \$10. Contact the financial aid office to find out if you qualify for help with these costs.

An Associate of Science degree is awarded upon successful completion of the required 98 credit hours. At least 25 hours of practicum are required

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		
ES071	Multimedia First Aid.....	1
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	Approved Gerontology elective.....	1
Term 3		
HS101	Alcohol Use, Misuse and Addiction	3
HS260	Group Dynamics	3
HS291S- HS296S	Practicum—Human Services	3-8
MTH052 or higher	Introduction to Algebra and Geometry	3
PSY237	Growth and Development	3
Term 4		
HS265	Intervention Strategies I.....	3
HS291S- HS296S	Practicum—Human Services	3-8
SOC204	General Sociology	3
	Approved elective*	3
	Computer science 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		
HE261	Cardiopulmonary Resuscitation	1
HE267	Intervention Strategies III	3
HS291S- HS296S	Practicum—Human Services	3-8
	Approved Ethnic studies elective**	3
	Approved elective*	3
	Humanities/fine arts elective or Science/applied science 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, etc. with the approval of the academic advisor.

****Approved Ethnic studies electives:**

ANTH207	Cultural Anthropology.....	3
ANTH208	Cultural Anthropology.....	3
ANTH209	Cultural Anthropology.....	3
HST257	Introduction to Ethnic History— American Indian	3
HST258	Introduction to Ethnic History— Black American	3
HST259	Introduction to Ethnic History— Chicano	3
SPAN101- SPAN103	First Year Spanish, Terms I, II, III	4
SPAN201- SPAN203	Second Year Spanish, Terms I, II, III	4
SSC150	Ethnic Cultures of the Willamette Valley.....	3

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, \$240; class fees, \$10. Contact the financial aid office to find out if you qualify for help with these costs.

An Associate of Science Degree is awarded upon successful completion of the required 98 hours. At least 25 hours of practicum are required.

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		
HS152	Stress Management.....	1
HS155	Interviewing Theory and Techniques.....	3
HS201	Family Alcoholism	3
HS291A- HS296A SP112	Practicum—Human Services	3-8
	Fundamentals of Persuasion or Business and Professional Speaking.....	3
Term 3		
HS102	Drug Use, Misuse and Addiction.....	3
HS260	Group Dynamics	3

HS291A- HS296A	Practicum—Human Services	3-8
MTH052 or higher	Introduction to Algebra and Geometry	3
PSY201	General Psychology	3
Term 4		
HS202	Counseling the Chemically Dependant Client I.....	3
HS265	Intervention Strategies I	3
HS291A- HS296A SOC204	Practicum—Human Services	3-8
	General Sociology.....	3
	Computer science elective	3

Term 5

HS203	Counseling the Chemically Dependant 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 Dependant Client III.....	3
HS291A- HS296A PSY237	Practicum—Human Services	3-8
	Growth and Development	3
	Approved Ethnic studies elective*	3
	Humanities/fine arts elective or Science/applied science elective.....	3

***Approved Ethnic studies electives:**

ANTH207	Cultural Anthropology.....	3
ANTH208	Cultural Anthropology	3
ANTH209	Cultural Anthropology.....	3
HST257	Introduction to Ethnic History— American Indian	3
HST258	Introduction to Ethnic History— Black American.....	3
HST259	Introduction to Ethnic History— Chicano	3
SPAN101- SPAN103	First Year Spanish, Terms I, II, III	4
SPAN201- SPAN203	Second Year Spanish, Terms I, II, III	4
SSC150	Ethnic Cultures of the Willamette Valley.....	3

Industrial Technology and Apprenticeship

Industrial Technology

Chemeketa Community college grants an Associate of Science degree in industrial technology. Journeymen may earn credit for on-the-job training and relating instruction. 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.
3. Complete general education requirements for an Associate of Science degree. (See page 16 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.

Term 2

ES071	Multimedia First Aid	1
ED110	Psychology of Learning	3
ED123	Classroom Techniques in Reading and Language.....	3
ED210	Practicum.....	6
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

You may earn an Associate of Science degree after you successfully complete 91 credit hours. These include the 49 credit hours listed under the one-year option; 33 credit hours of courses required for all options; and nine additional hours in the option you elect. Before you select elective courses consult with the program coordinator.

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 education, humanities/fine arts, math, physical education, science or social science elective numbered 050 or higher	3
	Elective	9

Classroom Assistant Options

Select nine credit hours in the specialization you have chosen.

Kindergarten-Primary Specialization

MTH191	Mathematics for Elementary Teachers.....	3
MTH192	Mathematics for Elementary Teachers.....	3
MTH193	Mathematics for Elementary Teachers.....	3
ECE062	Development in Childhood II.....	3
ECE070	Environments for Young Children	3
ECE071	Creative Activities.....	3
ECE072	Learning Experience for Young Children.....	4
ECE074	Children's Literature.....	3
ECE075	Music for Young Children.....	3
ED208	Tutoring Techniques for Elementary Physical Education.....	3
HDFS225	Prenatal and Infant Development	3
HDFS250	Developmental Kindergarten	3

Intermediate Elementary Specialization (4th-6th Grade) See advisor.

Middle-Senior High Specialization

	Social Science sequence	9
	Humanities sequence	9

Instructional Assistant

The Instructional Assistant program offers the training required to become an 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 Science degree or a Certificate of Completion.

First-year students take a core of required courses, including practicums. Classes are in four general areas: instruction, non-instructional support, human relations, and communication and computer-assisted instruction. You are also required to demonstrate certain competencies in writing, speaking, and typing.

Second-year students specialize in working with children at certain grade levels (kindergarten-primary, intermediate elementary, or middle-senior high) or with bilingual students, 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, \$300; class fees, \$30. 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

Bilingual-Bicultural Option

Select nine credit hours.

ED257	Second Language Teaching Techniques for Paraprofessional I.....	3
ED258	Multicultural Education and Paraprofessional II.....	3
ED259	Bilingual Methodology.....	3
	Foreign language course.....	4
SSC150	Ethnic Cultures of the Willamette Valley.....	3

Developmental Disabilities Option

Select nine credit hours in the specialization 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

Select nine credit hours.

ED252	Applied Behavior Modification.....	3
ED281	Introduction to Vocational-Technical Educators.....	3
ED282	Teaching Techniques for Vocational Trainers.....	3
ED292	Occupational Analysis and Curriculum Development.....	3

Journalism

(college transfer)

These courses are recommended for students who plan to transfer college credits into a journalism major program at the University of Oregon. If you complete this program and meet the grade requirements, you may complete requirements for a baccalaureate degree within two more years. See Chemeketa's journalism advisor for information on the requirements.

J224 Introduction to Journalism, J225 Advertising/Public Relations, J226 Layout/Production, J215 Publications Lab, and J216 Newswriting, are offered at Chemeketa. You may wish to enroll in them as electives. Journalism courses taken at other institutions are not required by the University of Oregon, but may be transferred as electives.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program

are books, \$600. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Prior to enrollment, consult with Chemeketa's counseling center or an advisor at the University of Oregon.

	Term		
	1	2	3
First Year			
WR121, 122, 123 English Composition	3	3	3
Literature sequence	3	3	3
Mathematics or science sequence	4	4	4
Foreign language or Electives	3-4	3-4	3-4
HE250 Personal Health			3
J224 Introduction to Journalism or J225 Advertising/Public Relations or J226 Layout/Production or Electives	0-3	0-6	0-6
Second Year	4	5	6
History sequence	3	3	3
Literature sequence	3	3	3
EC201, 202, 203 Principles of Economics	3	3	3
Foreign language or Social science sequence	3-4	3-4	3-4
J215 Publications Lab or J216 Newswriting or Electives	3	2-4	2-4

Technical Journalism

(college transfer)

These courses are recommended for students who plan to transfer college credits into a technical journalism major program at Oregon State University. You may complete requirements for a baccalaureate degree within three more years.

You are required to have a technical minor as part of this major program. The minor consists of 27 to 36 credit hours of work. This minor may be in aerospace studies, agriculture, applied economics, applied safety studies, business administration, civil engineering technology, forestry, health sciences, home economics, military science, naval science, oceanography, pharmacy, or science.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$350. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at OSU.

	Term		
	1	2	3
First Year			
WR121 English Composition	3		
J224 Introduction to Journalism, J225 Advertising/Public Relations			
J226 Layout/Production	3	3	3
J216 Newswriting		3	
Science sequence with laboratory	4	4	4
Social science sequence other than history	3	3	3
Literature or history sequence	3	3	3
Physical education	1	1	1
Electives		3-4	3-4

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 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 coordinator, 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, \$1,028; class fees, \$36; equipment and supplies, \$75. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Science degree by successfully completing these required 98 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 Operations	4
MTH100	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 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 MTH100 or higher math placement.

**Placement in math and English determined by testing. MTH062 may be substituted for MTH100. College transfer classes may be substituted.

***Choose from PSY100, 101, 201, 202, 203; SOC204, 205, 206; HST110, 111, 112; HST201, 202, 203; GEOG199.

****Requires WR121 prerequisite.

Manufacturing Engineering Technologies

The Manufacturing Engineering Technologies program offers training in manufacturing skills. Employees may become involved in research and development, inspecting and quality control, producing prototypes, performing routine manufacturing or completing simple to complex repairs. You may enroll in the three-term Manufacturing Operations option, the six-term Manufacturing Technologies option, the six-term Computer-Aided Design/Computer-Aided Manufacturing (CAD/CAM) option, or the six-term Manufacturing Engineering Technology transfer option. You may also enroll in the six-term Welding Fabrication program. (If you are interested in a one-year program, see Welding Technology.) You may select individual courses to meet your needs, or you may work toward an Associate of 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 coordinator, 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.

Term 3

MFG066	Manufacturing Fundamentals III.....	5
MFG073	Applied Manufacturing Math	3
MFG076	Manufacturing Cutting Tools.....	5
MFG097	Manufacturing Working Relations	3

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 positions.

In addition to tuition, estimated costs for students who complete the entire program are books, \$342; class fees, \$175; equipment and supplies, \$100. 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 48 required credit hours.

Course	Title	Credit Hours
Term 1		
MFG063	Print Reading	5
MFG064	Manufacturing Fundamentals I	5
MFG068	Manufacturing Measuring Inspection and Quality Control	3
MTH052	Introduction to Algebra and Geometry	3
Term 2		
MFG065	Manufacturing Fundamentals II	5
MFG072	Manufacturing Materials and Processes	3
MFG093	CNC Fundamentals	5
MTH053	Introduction to Geometry with Trigonometry	3

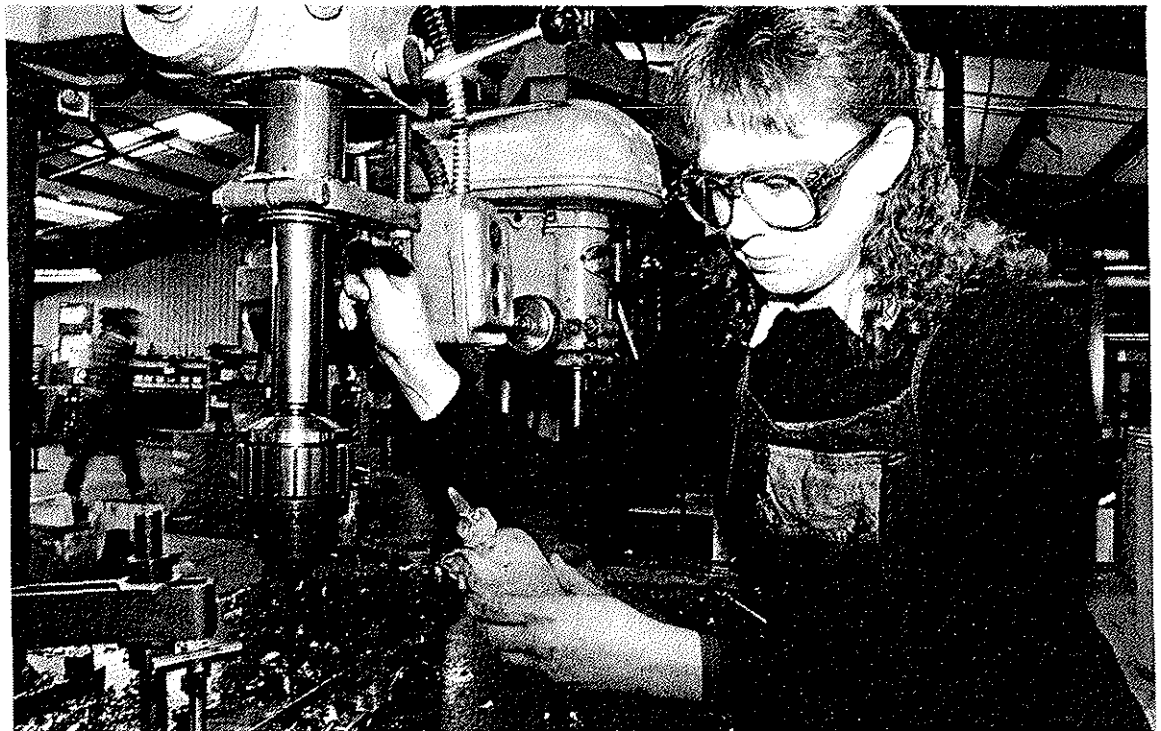
Manufacturing Technologies Option

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 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 and using jigs, fixtures, and patterns.

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, \$584; class fees, \$380; 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 Science degree by successfully completing these 96 required credit hours:

Course	Title	Credit Hours
Term 1		
MFG063	Print Reading.....	5
MFG064	Manufacturing Fundamentals I.....	5
MFG068	Manufacturing Measuring, Inspection and Quality Control.....	3
MTH052	Introduction to Algebra and Geometry.....	3
Term 2		
MFG065	Manufacturing Fundamentals II.....	5
MFG072	Manufacturing Materials and Processes.....	3
MFG093	CNC Fundamentals.....	5
MTH053	Introduction to Trigonometry with Geometry.....	3
Term 3		
MFG066	Manufacturing Fundamentals III.....	5
MFG073	Applied Manufacturing Math.....	3
MFG076	Manufacturing Cutting Tools.....	5
MFG097	Manufacturing Working Relations.....	3
Term 4		
DRF073	Computer Aided Design.....	3
PH081	Applied Physics.....	4
MFG081	Advanced Manufacturing I.....	5
MFG094	CNC Programming.....	4
Term 5		
COM051	Communication Skills I or English Composition—Exposition.....	3
WR121	English Composition—Exposition.....	3
MFG079	Industrial Systems.....	5
MFG082	Advanced Manufacturing II.....	5
MFG095	CAM Applications.....	4
Term 6		
COM053	Technical Report Writing or Technical Writing.....	3
WR227	Technical Writing.....	3
MFG083	Advanced Manufacturing III.....	5
MFG096	CAD/CAM Integration.....	4
PSY246	Industrial Psychology.....	3

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, in programming principles, and in evaluating software problems. Then you may 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, \$1,043; class fees, \$209; 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 Science degree by successfully completing these required 97 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	
MTH101	College Algebra.....	5
WR121	English Composition—Exposition or Communication Skills I.....	3
Term 2		
DRF052	Machine Drafting I.....	3
DRF068	Geometric Tolerancing.....	1
DRF073	Computer Aided Design.....	3
MFG093	CNC Fundamentals.....	5
MTH082	Technical Mathematics II.....	4
	or	
MTH102	Trigonometry.....	5
Term 3		
CVL080	Applied Mechanics.....	3
DRF074	Descriptive Geometry.....	3
DRF075	CAD-Mechanical.....	2
MTH083	Technical Mathematics III.....	4
	or	
MTH200	Calculus.....	5
PSY246	Introduction to Industrial Psychology or Humanities or Social science elective.....	3
Term 4		
CVL082	Strength of Materials I.....	4
DRF071	Machine Design Lab I.....	3
ELE061M	Electric Circuits.....	4
MFG094	CNC Programming.....	4
Term 5		
DRF066	Tool Design Lab.....	3
DRF086	Power Transmission.....	3
ELE062M	Industrial Electronics.....	3
MFG095	CAM Applications.....	4
PH081	Applied Physics.....	4
PH201	General Physics.....	4
Term 6		
COM053	Technical Report Writing or Technical Writing.....	3
WR227	Technical Writing.....	3
DRF087	Flexible Manufacturing Systems.....	3
DRF093	Technical Software Applications.....	3
ELE063M	Industrial Computer Concepts.....	4
MFG096	CAD/CAM Integration.....	4

Welding Fabrication Program

The Welding Fabrication program is for persons who want to acquire the technical knowledge and skills required of 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. They have a working knowledge of shop blueprints and welding symbols, jig fabrication, and assembly processes.

As a graduate you may qualify for several types of positions in business and industry such as machinery fabrication, structural fabrication, welding fitting and layout, automatic and semi-automatic welding, automatic flame cutter operation, millwright welding, plant maintenance, and quality control and development.

The program offers 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.

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 coordinator, you may enroll in WFB280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

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, \$512; 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 Science degree by successfully completing these required 98 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 Fundamentals	5
WFB087	Fabrication Practices III	3
Term 5		
COM051	Communication Skills I	3
MFG057	Machining Fundamentals II	3
MFG079	Industrial Systems	5
MFG094	CNC Programming	4
Term 6		
COM052	Communication Skills II	3
MFG097	Manufacturing Working Relations	3
PSY100	Introduction to Psychology	3
WFB088	Fabrication Practices IV	3
WFB096	Shop Projects	2

Manufacturing Engineering Technologies

(college transfer)

This option is for students who plan to transfer to Oregon Institute of Technology (OIT) to complete the requirements for a Bachelor of Science degree in manufacturing engineering technology. Career opportunities for OIT graduates include becoming a supervisor of analysts, planners, and quality controllers; designing tools; planning plant layouts; handling materials; and overseeing plant safety. You might also become a technical field representative or technical report writer, teach technical education, or establish your own business. OIT has a program similar to Chemeketa's Cooperative Work Experience which allows you to earn college credits for work you do on a job related to your academic work.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$986; class fees, \$204; equipment and supplies, \$140. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
DRF051	Machine Drafting I	3
MFG064	Machining Fundamentals I	5
MTH101	College Algebra	5
WR121	English Composition—Exposition	3
Term 2		
DRF052	Machine Drafting II	3
MFG065	Machining Fundamentals II	5
MFG072	Manufacturing Materials and Processes	3
MFG093	CNC Fundamentals	5
Term 3		
DRF072	Introduction to Computer Drawing	3
MFG066	Manufacturing Fundamentals III	5
MTH102	Trigonometry	5
WR122	English Composition—Logic and Style	3
Term 4		
DRF073	Computer Aided Design	3
GE101	Engineering Orientation	2
MTH200	Calculus	5
PH201	General Physics	4
WFB081	Elements of Metallurgy	3
Term 5		
CH104	General Chemistry I	5
MFG079	Industrial Systems	5
PH202	General Physics	4
Term 6		
CS133F	FORTAN IV	4
PSY246	Introduction to Industrial Psychology	3
SP111	Fundamentals of Speech	3
WFB082	Heat Treatment of Steel	3
WR227	Technical Writing	3

Mathematics

(college transfer)

These courses are recommended if you plan to transfer college credits into a major program in mathematics at the University of Oregon, Oregon State University, Portland State University, Eastern Oregon State College, Southern Oregon State College, or Western Oregon State College. If you complete a basic sequence in calculus by the end of your second year, normally you may finish the requirements for the baccalaureate degree within two more years.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$600; class fees, \$72; equipment and supplies, \$200. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
	1	2	3
First Year			
WR121, 122, 123, or 227			
English Composition	3	3	3
Humanities sequence	3	3	3
Non-mathematical science (OSU, PSU, SOSC) or foreign language or non-mathematical or social science (U of O, EOSC)	3-4	3-4	3-4
Mathematics (per placement test)	4	4	4
Physical education	1	1	
HE250 Personal Health		3	
Electives	0-3	0-3	3
Second Year	4	5	6
Mathematics	4	4	4
Second non-mathematical science sequence	4	4	4
Social science (EOSC: Non-mathematical science if social science taken first year)	3-4	3-4	3-4
Physical education	1	1	1
Electives	3-4	3-4	3-4



institution. See information under Nursing (college transfer).

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 admission. We recommend that you contact the Admissions Office (399-5006), 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,

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 which grants baccalaureate degrees. Chemeketa offers general education courses which apply to a Bachelor of Science program. If you are a licensed practical nurse who wants to continue your education, you may take general education courses which may be transferred to a four-year

\$450; class fees, \$90; equipment and supplies, \$330. 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 52 credit hours. You must earn grades of C or better in all required courses.

Course	Title	Credit Hours
Term 1		
AH050	Health Care Delivery Systems	1
BI232	Human Anatomy and Physiology	4
NUR106	Nursing.....	10
PSY201	General Psychology.....	3
Term 2		
BI233	Human Anatomy and Physiology	4
PSY237	Growth and Development	3
NUR108	Nursing.....	10
Term 3		
BI234	Medical Microbiology	4
NUR109	Nursing.....	10
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 which 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 who complete the entire program are books, \$50; class fees, \$45; equipment and supplies, \$118. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate of Science degree by successfully completing 99 required credit hours, including the 52 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		
CS121	Computer Environment.....	3
NUR204A	Trends and Issues in Nursing	1
NUR206	Nursing.....	11
Term 5		
NUR204B	Trends and Issues in Nursing	1
NUR208	Nursing.....	11
	Humanities elective.....	3
	Sociology elective	3
Term 6		
NUR209	Nursing.....	8
	Social science elective	3
	General 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 coordinator, 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 Health Sciences University School of Nursing in Portland offers a Bachelor of Science degree in nursing. To apply for admission to the four-year program you must complete the courses below at an accredited college or university or community college. Admission to the professional nursing program is competitive. Application materials and information concerning the National League for Nursing, Pre-nursing, and Guidance examination, required of all students with no previous preparation in nursing, are available at the Registrar's Office, OHSU, Portland, OR 97201.

Registered Nurses Seeking Baccalaureate Degrees

The OHSU School of Nursing provides an opportunity for registered nurses, including those completing Chemeketa's registered nurse program, to complete requirements for a baccalaureate degree in nursing. A part-time or full-time program of study is available.

Pre-professional course requirements are 45 credit hours of course work which must include one course in nutrition, one course in mathematics, and one year of general chemistry. For information regarding earning credit through the College Level Examination Program (CLEP) contact registrars' offices of all colleges and universities. Registered nurses are strongly encouraged to complete the basic science requirements (anatomy and physiology, biochemistry, microbiology) before entering the baccalaureate program.

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

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's

counseling center and an advisor at the institution to which you plan to transfer.

look under Cooperative Work Experience in the catalog index.

	Term		
First Year	1	2	3
WR121 English Composition		3	
CH104, 105, 106 or CH204, 205, 206 General Chemistry	5	5	5
FN225 Nutrition			4
MTH100 Intermediate Algebra	4		
Physical education	1	1	1
Humanities sequence	3	3	3
Social science sequence	3	3	3
Electives	0-3	3	3

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. You may enroll any Monday when openings exist. 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, \$271; class fees, \$64; 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 and proficiency statement by successfully completing the required credit hours listed below. If you enroll weekly, you may earn a proficiency statement.

Courses required for a Certificate of Completion:

Course	Title	Credit Hours
OA051	Civil Service Exam Preparation	3
OA061A	Electronic Calculators A	1
OA201P	Word Processing Procedures I —WordPerfect.....	3
	or	
OA200	Introduction to Information Processing.....	3
	or	
OA067	Word Processor Operations.....	2
OA084	Business English I.....	3
OA089	Filing.....	2
OA090	Bookkeeping	3
OA099AB	Proofreading/Editing A,B	2
OA116	Office Procedures	3
OA121AB	Keyboarding A,B	2
OA122A	Skillbuilding A.....	1
OA123ABC	Formatting A,B,C.....	3
OA225A	Machine Transcription IA.....	1

Optional Courses:

OA058AB	Shorthand Refresher I,II.....	2 ea.
OA061BC	Electronic Calculators B,C	1 ea.
OA091	Computerized Bookkeeping and Payroll Procedures	4
OA099C	Proofreading/Editing C	1
OA101	Office Careers Survey	1
OA114	Briefhand I.....	4
OA121C	Keyboarding C	1
OA225BC	Machine Transcription IB,IC	1 ea.
OA280	Cooperative Work Experience	6 max.
FE205	Job Search Techniques.....	1
9745A	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: information processing, bookkeeping, and general clerical. These areas of specialization provide training for those interested in working as word processing operators, general office clerks, receptionists, typists, file

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 for the area of specialization chosen.

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 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 coordinator, you may enroll in OA280, Cooperative Work Experience, and earn college credit hours. For more information,

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 information processing required courses are books, \$358; class fees, \$89; equipment and supplies, \$40. For students who complete the bookkeeping required courses: books, \$395; class fees, \$72; equipment and supplies, \$35. For students who complete the general clerical required courses: books, \$379; class fees, \$65; equipment and supplies, \$35. 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		
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 (Information Processing)		
OA061	Electronic Calculators	2
OA085	Business English II.....	3
OA089	Filing	2
OA123	Formatting.....	3
OA201P	Word Processing Procedures I—WordPerfect or	3
OA201W	Word Processing Procedures I—Wang	3
OA099	Proofreading/Editing	3
Term 3 (Information Processing)		
BA214	Business Communications.....	3
OA070	Office Microcomputer Applications.....	4
OA124	Advanced Formatting.....	3
OA225ABC	Machine Transcription IA,IB,IC	3
	Elective*	3
Term 2 (Bookkeeping)		
OA061	Electronic Calculators	2
OA085	Business English II.....	3
OA089	Filing	2
OA123	Formatting.....	3
BA051	Accounting Procedures I.....	4
MTH062	Applied Business Math	3
Term 3 (Bookkeeping)		
BA214	Business Communications.....	3
OA070	Office Microcomputer Applications.....	4
OA091	Computerized Bookkeeping and Payroll Procedures.....	4
BA052	Accounting Procedures II.....	4
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
	or	
OA201W	Word Processing Procedures I—Wang	3
	Business elective	3
Term 3 (General Clerical)		
BA214	Business Communications.....	3
OA070	Office Microcomputer Applications.....	4
OA099	Proofreading/Editing	3
	Business elective	3
	Elective*	3
*Suggested electives (depending upon interest and background):		
FE205	Job Search Techniques.....	1
OA086	Personal and Professional Development.....	3
OA225ABC	Machine Transcription IA,IB,IC	3
OA280	Cooperative Work Experience	2-3
PSY102	Assertiveness Training.....	3

Two-Year Programs

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 also may benefit from this training. You may select individual courses to meet your needs, or you may work toward an Associate of Science degree.

The program has six options: engineering, executive, information processing, legal, medical, and office accounting.

You may earn an Associate of 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, \$841; 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 Science degree by successfully completing these required 96 credit hours:

Course	Title	Credit Hours
Term 1		
CVL045	Engineering Orientation	1
MTH061	Business Mathematics	3
MTH070	Beginning 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
OA201W	Word Processing Procedures I—Wang	3
	or	
OA201P	Word Processing Procedures I —WordPerfect	3

Term 4		
BA101	Business Environment	4
BA244	Records Management	3
DRF059	Print Reading	2
OA225ABC	Machine Transcription IA,IB,IC	3
OA170	Business elective	3

Term 5		
BA211	Financial Accounting I or Accounting Procedures I	4
BA051	Office Management	3
BLD059	Materials of Construction	2
CVL071	Contracts and Specifications	3
OA070	Office Microcomputer Applications	4

Term 6		
OA117	Executive Office Simulation	3
	Business elective (OA280 Cooperative Work Experience recommended)	3
	Social science elective	3
	Humanities or science elective	3
SP111	Fundamentals of Speech or Interpersonal Communication	3

Executive Option

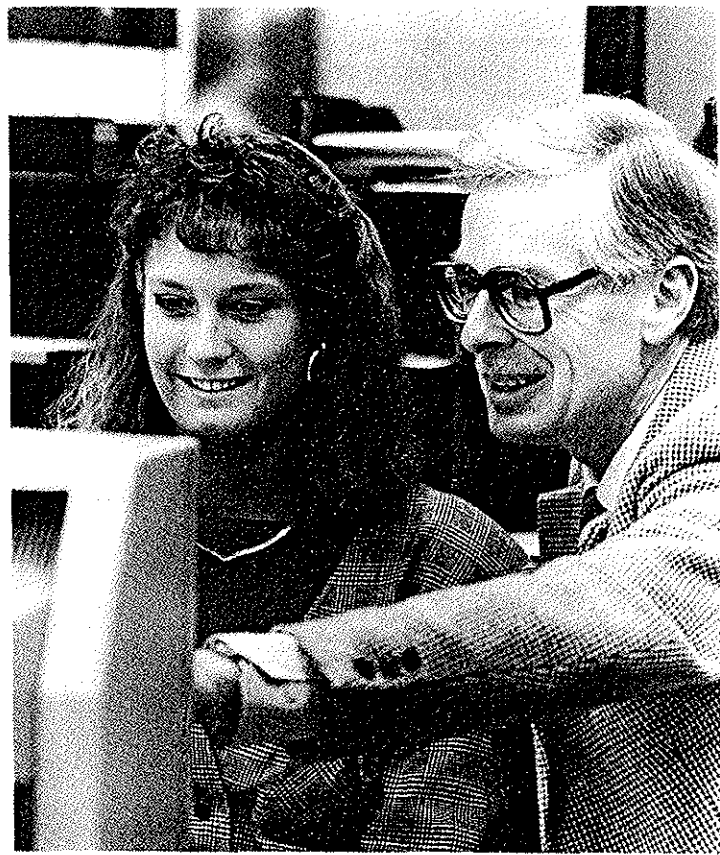
The Executive option prepares you for a variety of positions as a secretary, administrative assistant, or other administrative support staff person. This work requires you to be able to organize a variety of tasks, accept responsibility, show initiative while a member of a team, and work well with others. You should be skilled in areas such as English usage, keyboarding, transcribing from machine or shorthand 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, \$815; class fees, \$168; 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 Science degree by successfully completing these required 98 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 Mathematics	3
OA085	Business English II	3
OA111	Shorthand I or Briefhand I	4
OA123	Formatting	3
OA201W	Word Processing Procedures I—Wang or Word Processing Procedures I —WordPerfect	3
Term 3		
BA214	Business Communications	3
OA061	Electronic Calculators	2
OA089	Filing	2



OA112	Shorthand II or Briefhand II	4
OA072	Word Processing Applications	3
OA124	Fundamentals of Speech or Interpersonal Communication	3
SP111		
SP114		

Term 4		
BA211	Financial Accounting I or Accounting Procedures I	4
BA051	Records Management	3
BA244	Outline of Economics or Principles of Economics	3
EC115	Shorthand III or Briefhand III	4
EC201	Machine Transcription IA,IB,IC	3
OA113		
OA073		
OA225ABC		

Term 5		
BA212	Financial Accounting II or Accounting Procedures II	4
BA052	Business Law	3
BA226	Office Management	3
BA251	Office Microcomputer Applications	4
OA070	Shorthand/Briefhand Skillbuilding	3
OA211		
Term 6		
OA062	Reprographics	3
OA117	Executive Office Simulation	3
	Business elective (OA280 Cooperative Work Experience recommended)	3
	Humanities or 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, \$800; 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 Science degree by successfully completing these required 96 credit hours:

Course	Title	Credit Hours
Term 1		
MTH061	Business Mathematics	3
OA084	Business English I.....	3
OA116	Office Procedures	3
OA122	Keyboard Skillbuilding.....	3
OA200	Introduction to Information Processing	3
Term 2		
OA061	Electronic Calculators	2
OA062	Reprographics.....	3
OA085	Business English II.....	3
OA089	Filing	2
OA123	Formatting.....	3
OA201P	Word Processing Procedures I —WordPerfect	3
OA201W	Word Processing Procedures I—Wang	3
Term 3		
BA214	Business Communications.....	3
OA099	Proofreading/Editing	3
OA201P	Word Processing Procedures I —WordPerfect	3
OA201W	Word Processing Procedures I—Wang	3
OA205	Desktop Publishing	3
	Business Elective.....	3
Term 4		
BA101	Business Environment	4
BA244	Records Management.....	3
OA124	Word Processing Advanced Formatting.....	3
OA225ABC	Machine Transcription IA,IB,IC	3
	Business elective	3
Term 5		
BA211	Financial Accounting I or	4
BA051	Accounting Procedures I.....	4
BA251	Office Management.....	3
OA070	Office Microcomputer Applications.....	4
OA202	Word Processing Procedures II.....	3
OA204	Advanced WordPerfect.....	3
	Business elective	3
Term 6		
OA117	Executive Office Simulation	3
OA226AB	Machine Transcription II.....	2
SP111	Fundamentals of Speech or	3
SP114	Interpersonal Communication.....	3
	Business elective (OA280 Cooperative Work Experience recommended)	3
	Humanities or science elective	3
	Social science 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 taking shorthand or briefhand dictation, and machine transcription, typing legal documents and correspondence, managing legal files, answering telephones, and keeping office records. 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, \$768; class fees, \$180; 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 Science degree by successfully completing these required 97 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 Mathematics	3
OA085	Business English II.....	3
OA111	Shorthand I or	4
OA114	Briefhand I.....	4
OA123	Formatting.....	3
OA201W	Word Processing Procedures I—Wang or	3
OA201P	Word Processing Procedures I —WordPerfect.....	3
Term 3		
BA214	Business Communications.....	3
BA226	Business Law	3
OA061	Electronic Calculators.....	2
OA075	Legal Office Procedures I.....	3
OA089	Filing.....	2
OA112	Shorthand II or	4
OA072	Briefhand II.....	4
Term 4		
BA244	Records Management.....	3
OA076	Legal Office Procedures II.....	3
OA113	Shorthand III or	4
OA073	Briefhand III.....	4
OA225ABC	Machine Transcription IA,IB,IC.....	3
SP111	Fundamentals of Speech or	3
SP114	Interpersonal Communication	3
Term 5		
BA211	Financial Accounting I or	4
BA051	Accounting Procedures I.....	4
BA251	Office Management.....	3
OA070	Office Microcomputer Applications.....	4
OA077	Legal Machine Transcription I.....	3
OA211	Shorthand/Briefhand Skillbuilding	3
Term 6		
OA062	Reprographics	3
OA117	Executive Office Simulation.....	3
	Business elective (OA280 Cooperative Work Experience recommended)	3
	Social Science elective.....	3
	Humanities or 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, \$848; class fees, \$153; 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 Science degree by successfully completing these required 96 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 Mathematics	3
OA061	Electronic Calculators	2
OA085	Business English II	3
OA089	Filing	2
OA123	Formatting	3
Term 3		
BA214	Business Communications	3
ES071	Multimedia First Aid	1
MED055	Medical Law and Ethics	3
OA062	Reprographics	3
OA099	Proofreading/Editing	3
OA201W	Word Processing Procedures I—Wang or	
OA201P	Word Processing Procedures I—WordPerfect	3
Term 4		
BA101	Business Environment	4
BA211	Financial Accounting I or	
BA051	Accounting Procedures I	4
BA244	Records Management	3
BI071	Body Structure and Function I	3
OA225ABC	Machine Transcription IA,IB,IC	3
Term 5		
BA251	Office Management	3
BI072	Body Structure and Function II	3
OA070	Office Microcomputer Applications	4
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	
SP114	Interpersonal Communication	3

In addition to tuition, estimated costs for students who complete the entire program are books, \$820; class fees, \$108; 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 Science degree by successfully completing these required 97 credit hours:

Course	Title	Credit Hours
Term 1		
BA051	Accounting Procedures I	4
MTH061	Business Mathematics	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
OA085	Business English II	3
OA091	Computerized Bookkeeping and Payroll Procedures	4
OA122	Keyboard Skillbuilding	3
Term 3		
BA053	Accounting Procedures III	4
OA061	Electronic Calculators	2
OA089	Filing	2
OA099	Proofreading/Editing	3
OA123	Formatting	3
OA201W	Word Processing Procedures I—Wang or	
OA201P	Word Processing Procedures I—WordPerfect	3
Term 4		
BA214	Business Communications	3
BA244	Records Management	3
OA070	Office Microcomputer Applications or	
CS103	Introduction to Microcomputer Operations	4
OA225ABC	Machine Transcription IA,IB,IC	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	
SP114	Interpersonal Communication	3
	Business elective (OA280 Cooperative Work Experience recommended)	3
	Humanities or science elective	3
	Social science elective	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.

Philosophy

(college transfer)

These courses are recommended for students who plan to transfer college credits into a major program in philosophy at the University of Oregon, Oregon State University, or Portland State University. You may complete requirements for a baccalaureate degree within two additional years.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$650; class fees, \$72. Contact the



financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
	1	2	3
First Year			
WR121, 122, 123 English			
Composition	3	3	3
Humanities sequence	3	3	3
Science or mathematics sequence	3-4	3-4	3-4
Social science sequence	3	3	3
Physical education	1	1	1
Electives	3	3	3
Second Year			
HST110, 111, 112 History of World Civilization	3	3	3
PHL201, 202 Problems of Philosophy, PHL203 Elemental Ethics	3	3	3
Science or foreign language sequence	3-4	3-4	3-4
Humanities sequence	3	3	3
Computer science elective	3		
HE250 Personal Health		3	
Electives	3		3

Physical Education

(college transfer)

Students who wish to become physical education instructors, athletic coaches, recreational directors, or dance majors should begin their professional course work during their first college year in order to complete requirements for a baccalaureate degree in four years. The courses below may be transferred into a professional physical education and/or teacher preparation program offered by State of Oregon four-year institutions.

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 coordinator, you may enroll in 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 Chemeketa program are books, \$500; class fees, \$150. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
	1	2	3
First Year			
WR121, 122, 123 English			
Composition	3	3	3
BI101, 102, 103 General Biology	4	4	4
PE194 Professional Activities	2	2	2
PE131 Introduction to Physical Education	3		
SP111 Fundamentals of Speech	3		
HE252 First Aid			3
Humanities sequence	3	3	3
Electives	0-3	0-3	0-3
Second Year			
PE294 Professional Physical Education	2	2	2
PSY201, 202, 203 General Psychology	3	3	3
Social science sequence	3	3	3
HE250 Personal Health	3		
FE280A Cooperative Work Experience			4
Electives (PE185 Weight Training, Badminton, or Racquetball; HE204 Nutrition, Weight Control, and Physical Fitness recommended)	0-6	0-6	0-6

One-Year Pre-Professional Program

A one-year pre-professional program is designed for two different groups of students: those who must transfer to a four-year institution before completing requirements for an Associate of Arts degree and those who are interested in alternative careers in physical education or recreation.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$200; class fees, \$72. Contact the financial aid office to find out if you qualify for help with these costs.

	Term		
First Year	1	2	3
WR121 English Composition	3		
BI101, 102, 103 General Biology	4	4	4
Science or social science sequence	3-5	3-5	3-5
Humanities sequence	3	3	3
PE194 Professional Activities or PE294 Professional Physical Education	2	2	2
Electives	0-3	3-6	3-6

Physics

(college transfer)

These courses are recommended for students who plan to transfer college credits into a major program in physics at Oregon State University, the University of Oregon, or Portland State University. If you are prepared to start calculus when you enter Chemeketa, you should transfer after one year. Consult with an advisor who will help you select the proper courses.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$610; class fees, \$96; equipment and supplies, \$65. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
First Year	1	2	3
Mathematics (per placement test)	4	4	4
CH204, 205, 206 General Chemistry	5	5	5
WR121 English Composition	3		
Humanities or social science sequence	3	3	3
CS261 Computer Science I—PASCAL		4	
English requirement			3
Physical education/health	1-3	1	1
Second Year	4	5	6
Mathematics	4	4	4
PH211, 212, 213 General Physics for Engineers and Scientists	4	4	4
Humanities or social			

science sequence	3	3	3
English requirement			3
Biological science requirements/electives	4	4	
Physical education, if required	1	1	1

Political Science

(college transfer)

These courses have been approved by Oregon State University and Southern Oregon State College for students who plan to transfer college credits into a major program in political science. You may complete requirements for a baccalaureate degree within two additional years.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$875; class fees, \$36. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
First Year	1	2	3
WR121, 122, 123 English Composition	3	3	3
Humanities sequence	3	3	3
PS201, 202 American Government and PS203 State and Local Governments	3	3	3
Electives	3-6	3-6	3-6
Science sequence	3-4	3-4	3-4
Physical education	1		1
HE250 Personal Health		3	
Second Year	4	5	6
Physical education	1	1	1
Mathematics, science, or humanities sequence	3-6	3-6	3-6
Social science sequence other than political science	3	3	3
Electives (future teachers should include PSY201 and 202 General Psychology and SP111 Fundamentals of Speech)	6	3-6	6-9

Pre-Professional Study (medicine, dentistry, veterinary medicine)

(college transfer)

Admission into professional schools of medicine, dentistry, and veterinary medicine is highly competitive, and pre-professional studies must include stipulated courses in basic sciences and general education. If you enter a pre-professional program you should plan to transfer to an

accredited, four-year institution after completing one year at Chemeketa.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$610; class fee, \$36; equipment and supplies, \$65. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
First Year	1	2	3
WR121 English Composition and approved communication skills courses	3	3	3
CH104, 105, 106 or CH204, 205, 206 General Chemistry	5	5	5
Mathematics (per placement test)	4	4	4
Humanities or social science sequence	3	3	3
Physical education	1		1
HE250 Personal Health Electives		3	3

Psychology

(college transfer)

These courses are recommended for students who plan to transfer college credits into a major program in psychology at the University of Oregon, Oregon State University, Eastern Oregon State College, Portland State University, Western Oregon State College, or Southern Oregon State College. You may complete requirements for the baccalaureate degree within two additional years.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$875; class fees, \$72. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
First Year	1	2	3
WR121, 122, 123 English Composition	3	3	3
Humanities sequence	3	3	3
PSY201, 202, 203 General Psychology	3	3	3
Science sequence	3-4	3-4	3-4
Physical education	1		1
HE250 Personal Health Electives	3	0-4	0-6
Second Year	4	5	6
Science or social science sequence	3-4	3-4	3-4
Social science (ANTH101 Human			

Evolution, 102 Archeology, 103 Introduction to Cultural Anthropology or SOC204, 205, 206 General Sociology (recommended)	3	3	3
Humanities sequence (foreign language recommended)	3-4	3-4	3-4
Physical education	1	1	1
Electives (OSU: BA232 Introduction to Business Statistics recommended; U of O: MTH100 Intermediate Algebra recommended)	6	6	6

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 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 subdivision firms, real estate brokerages, and appraising offices.

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 coordinator, 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, \$881; 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 Science degree by successfully completing these required 97 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 Operations	4
EC115	Outline of Economics or	
EC201	Principles of Economics.....	3
MTH070	Beginning 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 or 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 or	
GEOG199	The Urban Environment.....	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.

Silicon Technology

The short-term Silicon Technology program includes training both in theory and specific skills for men and women seeking careers in the silicon manufacturing industry. The curriculum features self-paced learning laboratories and individualized instruction.

Through a cooperative effort by the college and the Siltec Corporation, a laboratory facility on Chemeketa's Salem campus simulates three production departments:

The crystal growing department, using on-site high technology equipment, grows, and further processes, cylindrical silicon ingots.

The slicing department slices processed silicon ingots into wafers, which then undergo a series of quality control operations and checks.

In the polishing department, wafers are polished to a mirror-like finish on one side. They are then

cleaned, quality checked, and shipped to customers.

Small Business Management

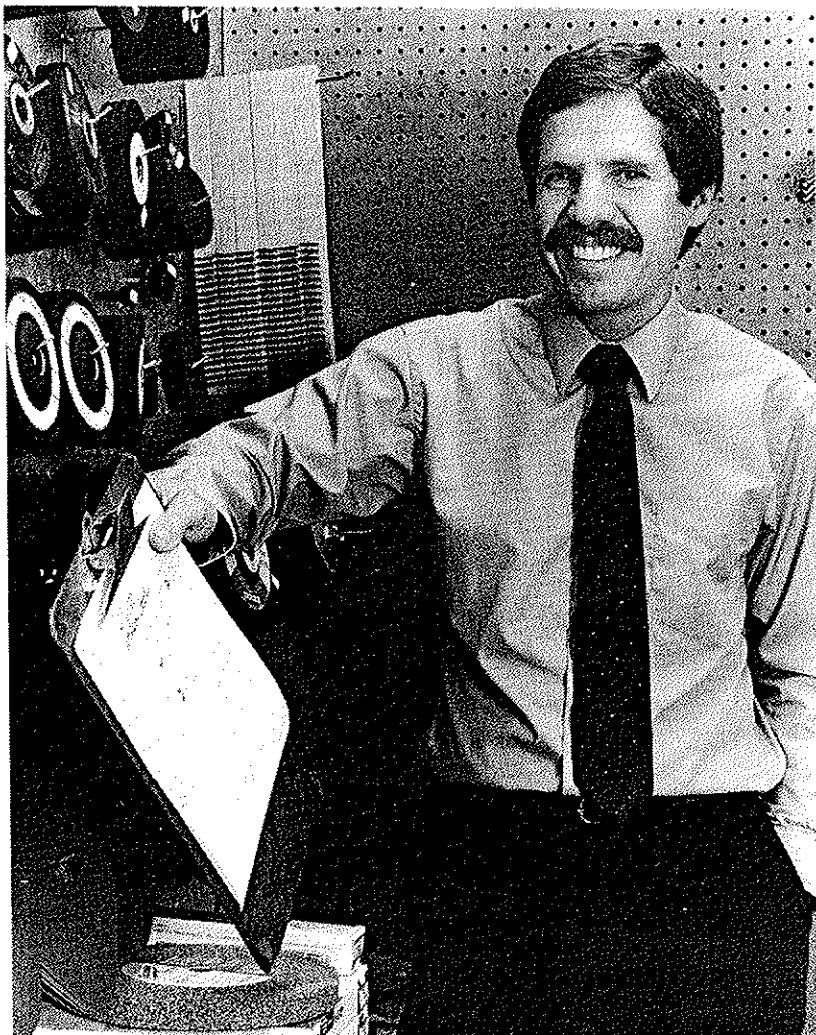
Small Business Management is a three-year program for owners and their spouses who operate small businesses and have access to the financial records of the business. The purpose is to teach record-keeping, decision-making, and management skills.

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



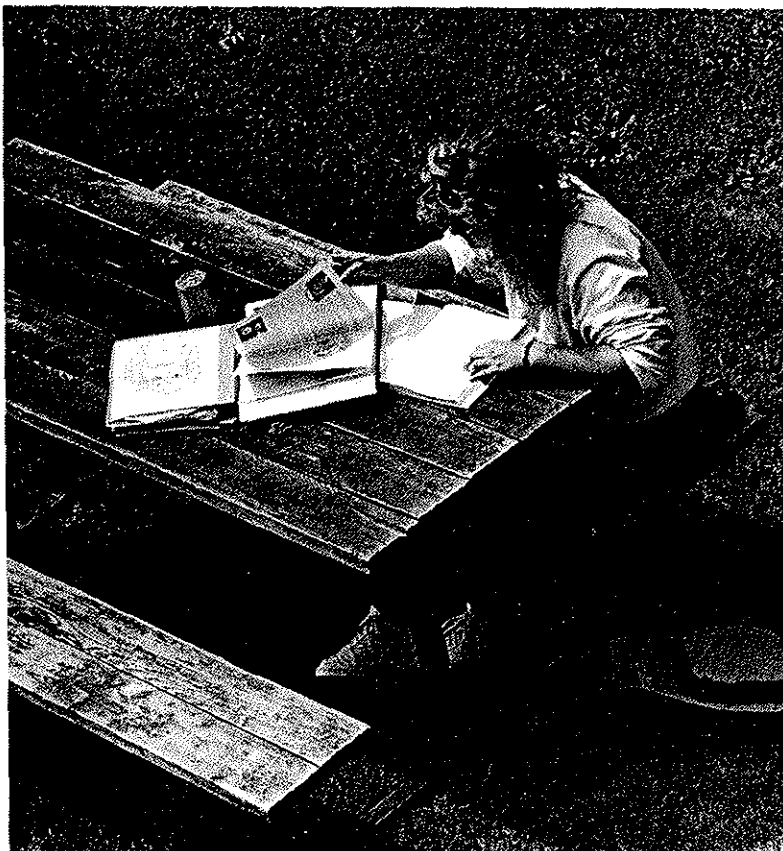
business, the uses of business and home records, the importance of inventories, and how to keep business accounts current. Also covers balance sheets and monthly summaries, cash flow and cash flow projections, employer's records, social security and income taxes, unemployment compensation, workers' compensation 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; 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)

These courses are recommended for students who plan to transfer college credits into a major program in sociology at the University of Oregon, Oregon State University, Portland State University, Southern Oregon State College, or a program in anthropology and sociology at Eastern Oregon State College. If you enroll in the SOSC program you may complete areas of specialization in sociology, anthropology, or social work. At EOSC, you may specialize in sociology, anthropology, or social welfare.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$780; class fees, \$36. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	Term		
	1	2	3
First Year			
WR121, 122, 123 English Composition	3	3	3
Humanities sequence	3	3	3
Science sequence (EOSC: MTH103 recommended)	4	4	4
SOC204, 205, 206 General Sociology	3	3	3
Physical education	1	1	
HE250 Personal Health		3	
Electives	3	0-6	0-6
Second Year	4	5	6
EC201, 202, 203 Principles of Economics	3	3	3
Humanities or science (second sequence)	3-4	3-4	3-4
Social science sequence (EOSC: ANTH101 Human Evolution, 102 Archeology, 103 Introduction to Cultural Anthropology; SOSC: ANTH207, 208, 209 Cultural Anthropology)	3	3	3
Physical education	1	1	1
Electives (PSU: MTH103 Probability and Statistics recommended; PSU, OSU: MTH100 Intermediate Algebra competency recommended; SOSC: SP111 Fundamentals of Speech recommended)	6	6	6

Speech

(college transfer)

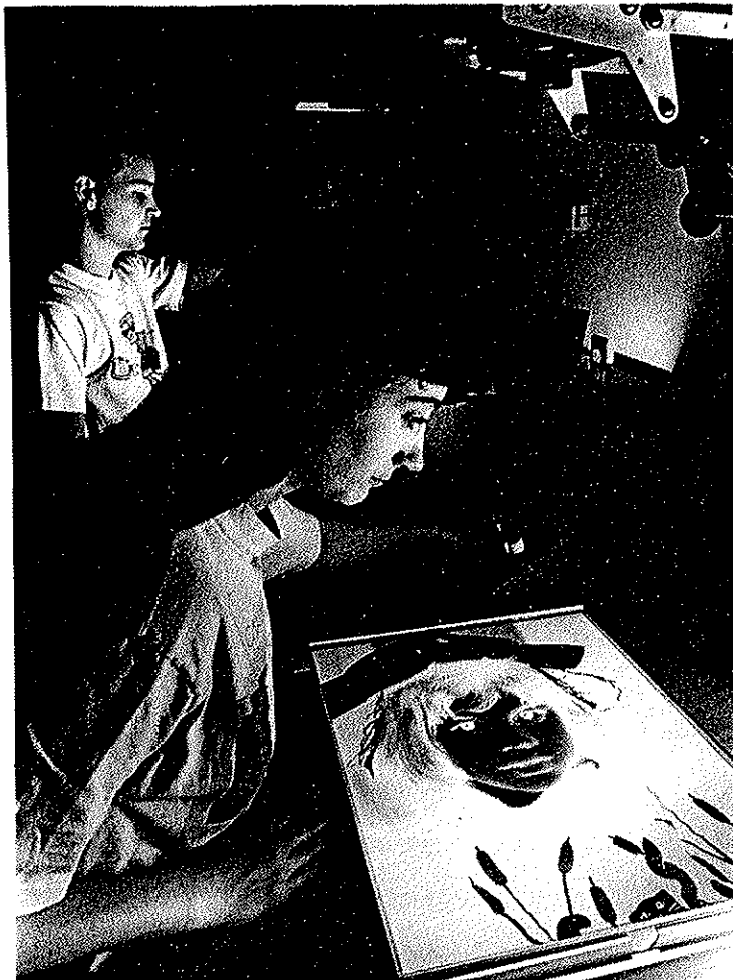
These courses are recommended for students who plan to transfer college credits into a major program in speech at the University of Oregon, Oregon State University, Portland State University, or Southern Oregon State College. By following the program outlined below, you may

complete requirements for a baccalaureate degree within two additional years.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, \$590. Contact the financial aid office to find out if you qualify for help with these costs.

The following recommendations are based on information available as this catalog goes to press. Before you enroll, consult with Chemeketa's counseling center and an advisor at the institution to which you plan to transfer.

	1	2	3
First Year			
WR121, 122, 123 English Composition	3	3	3
SP111, 112, 113 Fundamentals of Speech	3	3	3
Computer study		3	
Humanities sequence	3	3	3
First year foreign language or general education-science	4	4	4
Physical education	1	1	
HE250 Personal Health			3
Electives	0-3	0-3	3
Second Year			
Social science sequence	3	3	3
Second year foreign language (BA students)	4	4	4
General education-science (BA students) or humanities or social science (BS students)	3-4	3-4	3-4
Physical education	1	1	1
Electives	2-6	4-9	4-9



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 to operate a variety of graphic equipment including process cameras, printing presses, densitometers, enlargers, and phototypesetters.

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 coordinator.

You will 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 coordinator, you may enroll in VC280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

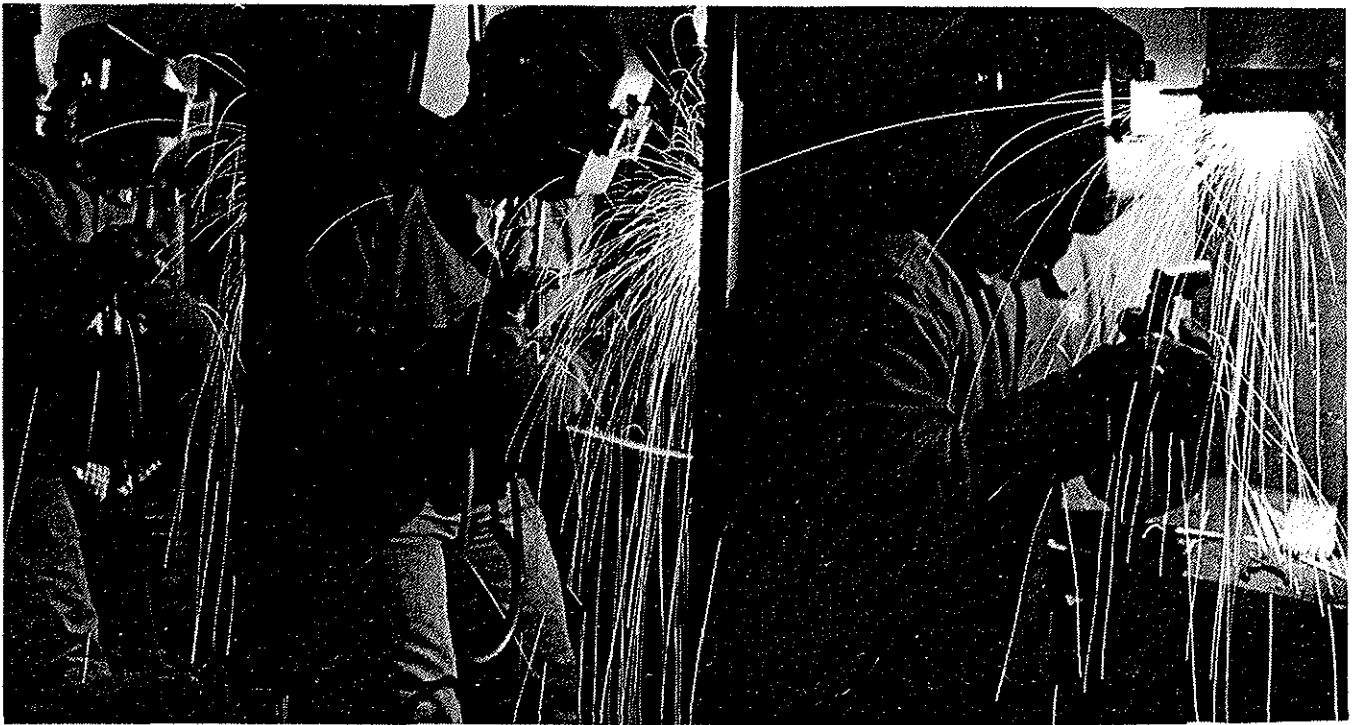
This program has special admission requirements and enrollment limits. For additional information, contact the Admissions Office (399-5006).

In addition to tuition, estimated costs for students who complete the entire program are books,

\$375; class fees, \$18; 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 Science degree by successfully completing these 92 required credit hours:

Course	Title	Credit Hours
Term 1		
CS100	Beginning Microcomputer Use	1
COM051	Communication Skills I	3
MTH051	Basic Mathematics	3
	General education elective*	3
Select one:**		
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
Select one (see term 1):**		
	VC051, VC052, VC053	6
Term 3		
PSY100	Introduction to Psychology	3
	General education elective*	3
Select one (see term 1):**		
	VC051, VC052, VC053	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 coordinator. Terms 4, 5, and 6 are suggested as follows:

Term 4	
VC068	Intermediate Technical Photography.....6
VC071	Special Problems.....3
Select one:**	
VC061	Advanced Graphic Design or Image Conversion and Image Carriers for Offset Lithography or Advanced Presswork6
VC062	
VC063	
Term 5	
	Communication, health education, humanities/fine arts, math, physical education, science or social science general education elective*3
Select one:	
	VC061, VC062, VC063 (see term 4).....6
	VC071, VC072, Special Problems in Graphic Communication3-5
VC083	Cost Accounting for Printers3
Term 6	
	VC071, VC072, VC081, VC082 Special Problems in Graphic Communication**14-17

*See general education requirements, page 16 in catalog or advisor.

**VC051, VC052, VC053, VC061, VC062, VC063, VC071, VC072, VC081, VC082 are offered concurrently each term. You are counseled individually on enrollment.

Welding Technology

The Welding Technology program requires three terms. You may select individual courses to meet your needs or you may work towards a Certificate of Completion.

The Welding 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. (If you are interested in a two-year program, see Welding Fabrication listed under Manufacturing Engineering Technology.)

This program prepares you for a variety of positions in job specialty production and maintenance shops, as oxyacetylene burners, 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, \$123; class fees, \$227; equipment and supplies, \$330. 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

A chalkboard with a grid pattern. The text "Course Descriptions" is written in a cursive script across the middle. The grid lines are faint and some are crossed out.

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 in Science degree. Credits for some of these courses may be transferred to Oregon four-year colleges and universities.

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*.

Accounting, see Business Administration

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. Class fee, \$5. **F, W, Sp, Su**

AH080 Crisis Intervention

3 class hr/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**

AH150 The Nation's Health

3 class hrs/wk, 3 cr.
Explores the issues surrounding the American health care system and the role of medical care in relation to the health of Americans, from historical, ethical, political, economic, social, and personal perspectives. **Offered as needed.**

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.**

Anthropology

ANTH101 Human Evolution

3 class hrs/wk, 3 cr.
Study of the human species and its place in nature. Covers human, physical and cultural human evolutionary development; evolutionary theory and the evidence for human evolution. It includes a study of the hereditary process, the fossil record, primate evolution, human morphology, 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 elaboration 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. **F**

ANTH208 Cultural Anthropology

3 class hrs/wk, 3 cr.

A study of human social organizations, political structures, philosophy, religion, belief systems, art, and creativity. **W**

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. **Prerequisite:** ANTH207 and 208 recommended. **Sp**

ANTH231 Indian Culture of the Pacific Northwest

3 class hrs/wk, 3 cr.

Examines the prehistoric and historic archaeology of the Pacific Northwest. Traces the development of Native American cultural groups from their origins to the present, using archaeological, linguistic, and ethnographic data. **Sp**

ANTH232 Native North Americans

3 class hrs/wk, 3 cr.

Examines the prehistoric cultures found in North America. Compares and contrasts native American cultures that existed in North America prior to European contact and explores the effects of European contact. **Sp**

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.**

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**

ART115, 116, 117 Basic Design

2 class hrs 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: W; 117: Sp**

ART119 Design, Layout, and Pasteup

2 class hrs and 2 lab hrs/wk, 3 cr.

Lettering and layout design including essential pasteup techniques, camera-ready requirements, and tools. **F**

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

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**

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**

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 civilizations 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 hrs 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 hrs and 2 lab hrs/wk, 3 cr.

Principles and concepts of design applied to selected projects. Includes planning, design sketches, functional and aesthetic tests. **Prerequisite:** ART119 and ART221. **Sp**

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**

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. **W, Sp**

ART233 Contemporary Drawing Media

6 lab hrs/wk, 3 cr.

Continuation of ART232 emphasizing development of personal style and expres-

sion, 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 design and craft of stained glass. Techniques include copper foil, leading, cutting, assembling, and soldering. **F, W, Sp**

ART254 Pottery IV—Low-Fire Ceramics

2 class hrs 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 hrs 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 hrs 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.

An introduction to basic painting of traditional subject matter. Stresses disciplined study, observation and representation, composition, attention to detail, use of color, and personal expression. **Prerequisite:** ART231 or consent of instructor. **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 General Sciences

Atmospheric Sciences, see also General Science

ATS101 Rudiments of Meteorology

3 class hrs/wk, 3 cr.

A descriptive treatment of winds, air masses, fronts, clouds, precipitation, storms, and weather forecasting. **Offered as needed.**

Automotive Technology

AUM050 Introduction to Automotive

4 class hrs 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 3 lab hrs/wk, 3 cr.

Methods and procedures used to recondition automotive components. Introduces the student to the duties of an automotive machinist. **Prerequisite:** AUM051 or consent of program coordinator. Class fee, \$12. **Sp**

AUM057 Automotive Brake Systems

2 class hrs and 3 lab hrs/wk, 3 cr.

Theory and service of automotive drum and disk brake systems, manual and power brakes. Service and rebuilding of brake system components. Class fee, \$10. **F**

AUM058 Auto Steering and Suspension

2 class hrs and 3 lab hrs/wk, 3 cr.

Principles of automotive wheel, steering, and suspension systems. Includes front and rear suspension alignment, theory of suspension operation, wheel service and balance, and repair procedures on automotive suspension. Class fee, \$8. **W**

AUM061 Standard Transmission, Clutches, and Differentials

3 class hrs and 6 lab hrs/wk, 5 cr.

Theory and service of automotive power trains. Covers clutches and clutch linkage, drive shafts and universal joints, manual transmissions, rear axles and differentials (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. **W**

AUM063 Automatic Transmissions

3 class hrs and 4 lab hrs/wk, 4 cr.

Fundamentals of automatic transmission operation, including 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 Fuel Systems and Carburetion I

3 class hrs and 3 lab hrs/wk, 4 cr.

Principles of carburetion and carburetor circuits, fuel systems, gasoline and engine variables pertinent to gasoline, one and two-barrel carburetor service and adjustment, and fuel pumps. **Sp**

AUM067 Fuel Systems and Carburetion II

3 class hrs and 4 lab hrs/wk, 4 cr.

An introduction to automotive fuel injection and lectures and demonstrations dealing with one-, two-, and four-barrel, and multiple carburetion systems. Includes diagnosis of problems, operating principles, and accessories, computer control inputs, operation, and adjustments. **Prerequisite:** AUM066 or consent of program coordinator. **F**

AUM068 Automotive Accessory Systems

2 class hrs and 3 lab hrs/wk, 3 cr.

Basic automotive accessory systems, the use of automotive wiring symbols, and various materials used in modern automobiles. **W**

AUM071 Automotive Repair I

1 class hr and 9 lab hrs/wk, 4 cr.

Work experience on prescribed automobile repair jobs using acquired skills. **Prerequisite:** Third term standing or approval of program coordinator. Class fee, \$15. **Sp**

AUM072 Automotive Repair II

1 class hr and 9 lab hrs/wk, 4 cr.

Continuation of AUM071, with more working experience in the auto shop lab making prescribed automobile repairs. **Prerequisite:** Fourth term standing or consent of program coordinator. Class fee, \$15. **Sp**

AUM073 Automotive Repair III

1 class hr and 9 lab hrs/wk, 4 cr.

A continuation of AUM072. **Prerequisite:** Fifth term standing or consent of program coordinator. Class fee, \$15. **W**

AUM076 Automotive Electrical Systems I

3 class hrs and 3 lab hrs/wk, 4 cr.

Basic automotive electrical fundamentals and principles, theory and service of conventional ignition systems, charging systems, starting systems and batteries, meters, gauges, and instruments. **Sp**

AUM077 Automotive Electrical Systems II

3 class hrs and 4 lab hrs/wk, 4 cr.

A continuation of AUM076. Covers testing and diagnosis of charging and cranking systems and conventional and electronic ignitions. Includes oscilloscope testing and meter usage, with introduction to on-board computer systems and testing. Basic electrical principles are reviewed. **Prerequisite:** AUM076 or consent of program coordinator. Class fee, \$5. **W**

AUM081 Tune-up and Diagnosis

3 class hrs 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. Keyst to experience on components and vehicles during lab periods. **Prerequisite:** AUM067 and AUM077 or consent of program coordinator. Class fee, \$15. **Sp**

AUM082 New Automotive Developments

3 class and 3 lab hrs/wk, 4 cr.

Changes in the automotive field, including various emission control devices of major brand automobiles. Covers fuel injection systems, turbocharging, and electronic engine control devices. **Prerequisite:** AUM066, AUM067, AUM076, AUM077. Class fee, \$5. **Sp**

AUM086 Automotive Heating and Air Conditioning

3 class hrs and 3 lab hrs/wk, 4 cr.

Theory and operation of automotive heating and air conditioning systems; methods for service and repair of heating and air conditioning; troubleshooting techniques. Class fee, \$10. **W**

AUM087 Advanced Automotive Engines

3 class hrs and 4 lab hrs/wk, 4 cr.

Technical aspects, theory, design and checking of internal combustion engines and related components; demonstrations of procedures and special tools. **Prerequisite:** AUM052. Class fee, \$12. **F**

AUM091 Power Systems

3 class hrs and 4 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 hrs 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.**

Auto Parts Sales

AUP081 Engine Theory

2 class hrs 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 hrs 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 hrs 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 hrs 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 hrs 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 hrs 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 hrs and 3 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 hrs 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 hrs 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.

Business Administration

BA031 AMA Fundamentals of Modern Marketing

2.5 class hrs/wk, for 5 weeks, 1 cr.

An orientation to marketing. Includes how to determine and integrate market characteristics in devising an overall market strategy. Emphasizes pricing, sales effort, advertising, product design, packaging, distribution, and promotion. **Prerequisite:** Some business training or background, preferably related to marketing. 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 managers 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, without conflict, 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 important 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 techniques and maintaining employee involvement. 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 them, delegating responsibilities, and reviewing their performance; cope with tensions. Includes discussion of practical business ethics. Class fee, \$89. W

BA049 Supervisory Techniques and Procedures I

2.5 class hrs/wk, for 5 weeks, 1 cr.

First of two practical, skill-building courses for prospective first-line supervisors in both the public and private sectors of business. Class fee, \$49. 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 Fund 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, general fixed asset group of accounts, and summary of funds and groups. **Prerequisite:** BA212 or consent of instructor. **F, Sp**

BA055 Fund 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.

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, \$69. **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 hrs 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 merchandising concepts and practices covered in introductory course in marketing. **Prerequisite:** BA223. **Offered as needed.**

BA074 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**

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.**

BA083 AMA Computer Basics for Management

2.5 class hrs for 6 weeks, 1 cr.

A comprehensive understanding of the uses and workings of the computer presented in clear, nontechnical language. Focuses on information needed to establish a positive working relationship with a company's electronic data processing (EDP) experts. Class fee, \$69. **W**

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.**

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 supervisory, 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.

Covers transaction records, adjustments, financial statements, worksheets, closing entries, and accounting for merchandising concerns, cash and accounts receivable, notes and interest. For accounting program students and students planning to transfer to four-year institutions. **Prerequisite:** MTH061, MTH062, MTH070. **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. **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,

managerial use of cost accounting data; use of budget and performance reports, as related to cost accounting. **Prerequisite:** BA211, BA212 and BA213. **F, W**

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. **Prerequisite:** BA101. **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**

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:** MTH100. **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. **Sp**

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; development 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 insurance, 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 automated 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. These include 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**

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 contractual 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**

BA268 Fundamentals of Bank Data Processing

3 class hrs/wk, 3 cr.

A comprehensive study of data processing application to banking. Especially for non-data processing students. Cites examples and analogies to help students grasp the subject. Covers data communications concepts, hardware and software applications,

programming concepts, and data processing technology. **Prerequisite:** BA269. **F**

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 operating performances of business enterprises. Includes financial statement analysis and accounting, business funds flow, 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 AJUM280.

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, perfec-

tion, and default. Case studies illustrate important legal points related to banking practices. **Prerequisite:** BA269. **Sp**

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**

BAN054A New Deposit Instruments

3 class hrs/wk for 5 weeks, 1 cr.

An overview of various kinds of deposit accounts and how they meet the individual needs of customers. Provides background information on regulations. **Prerequisite:** Completion of BA269 and current enrollment in the Banking and Finance program or current employment in a financial institution. **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, concepts of secure transactions; how to calculate interests 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, 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**

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.**

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**

BAN068 Time Management Seminar

3 class hrs/wk for 5 weeks, 1 cr.

Key techniques, strategies and principles of time management. How to pinpoint key strengths and weaknesses and begin any needed corrective action. **Prerequisite:** Current employment in bank management or previous banking experience or training. **Offered as needed.**

BAN071A Financial Performance of Banks

3 class hrs/wk for 5 weeks, 1 cr.

Analyzes banks' earning power and studies profit-making management decisions. **Prerequisite:** BA211. **Offered as needed.**

BAN071B Retail Management (Banking)

3 class hrs/wk for 5 weeks, 1 cr.

How to gain expertise and knowledge necessary to become effective managers of a retail bank. Provides practical ideas for improving communication skills, managing human resource activities, conducting performance appraisals, improving time management, and leading effectively. **Offered as needed.**

BAN071C Sales Management

3 class hrs/wk for 5 weeks, 1 cr.

Responsibilities of sales managers which include setting goals and increasing sales. How to create, encourage, and reward active selling. Examines tracking, measuring, and rewarding. **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**

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 Chemeketa'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.**

BAN076 Teller Performance Appraisals

3 class hrs/wk for 5 weeks, 1 cr.

Understanding the components of a teller performance appraisal system and learning how to conduct appraisals. **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.**

BAN083 Federal Regulation of Banking

3 class hrs/wk, 3 cr.

An overview of significant changes that have occurred in banking regulations. Looks at the "why" and "what" of federal bank supervision. Emphasizes the influence on bank operations of federal government's fiscal and monetary policy decisions. **Prerequisite:** BA269 or current enrollment in Banking and Finance program or current employment with a financial institution. **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. Employs financial statement analysis techniques used in making commercial loan decisions. **Prerequisite:** BA212, BA269 or on-the-job banking experience. **F**

BAN091 Computer Crime

3 class hrs/wk for 5 weeks, 1 cr.

Investigation and control of computer crime. How to identify areas of vulnerability, conduct investigations, assess crime damage, and establish controls to minimize computer crime. **Offered as needed.**

BAN092A Bank Cards

3 class hrs/wk, 3 cr.

Introduces the world of credit cards. The role and importance of the bank card in the American society, bank card systems operations, payment systems, credit and collection policies, card holders' and merchants' security, and legislative and regulatory developments. **Prerequisite:** BA269 and current enrollment in the Banking and Finance program, or current employment in a financial institution. **Offered as needed.**

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.

Biology

BI060 Basic Science Principles

2 class hrs and 2 lab hrs/wk, 3 cr.

Introductory concepts of physics, chemistry, 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 hrs 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. Class fee, \$8. **F**

BI072 Body Structure and Function II

2 class hrs and 2 lab hrs/wk, 3 cr.

A continuation of BI071. **Prerequisite:** BI071. Class fee, \$8. **W**

BI101 General Biology

3 class hrs and 3 lab hrs/wk, 4 cr.

Diversity of organisms, ecological concepts, effects, and consequences of human alteration on natural ecosystems. For students not majoring in biology. BI101 need not be taken in sequence with BI102 and BI103. Course includes field trips. Class fee, \$12. **F, Sp, Su**

BI102 General Biology

3 class hrs and 3 lab hrs/wk, 4 cr.

Genetics, evolution, and behavior. See BI101. Class fee, \$12. **F, W, Su**

BI103 General Biology

3 class hrs and 3 lab hrs/wk, 4 cr.

Cell biology, plant and animal physiology, human biology. Includes field trip. See BI101. Class fee, \$12. **W, Sp, Su**

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. **Sp**

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 hrs and 3 lab hrs/wk, 4 cr.

Examines in-depth 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, studies tissues, and integumentary, skeletal, and nervous systems. **Prerequisite:** CH101 or equivalent, or one year of high school chemistry or consent of instructor. Class fee, \$12. **F, W, Sp, Su**

BI232 Human Anatomy and Physiology

3 class hrs and 3 lab hrs/wk, 4 cr.

Second of a three-term sequence. Studies muscle, circulatory, respiratory, and digestive systems. **Prerequisite:** BI231 or consent of instructor. Class fee, \$12. **F, W, Sp, Su**

BI233 Human Anatomy and Physiology

3 class hrs and 3 lab hrs/wk, 4 cr.

Third of a three-term sequence. Study of endocrine, urinary, and reproductive systems; and fluid, electrolyte, and pH balance. Introduces human genetics. **Prerequisite:** BI232 or consent of instructor. Class fee, \$12. **F, W, Sp, Su**

BI234 Microbiology

3 class hrs 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. Class fee, \$12. **F, W, Sp, Su**

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, 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**

BLD056 Techniques of Inspection

2 class hrs and 4 lab hrs/wk, 3 cr.

Introduces everyday procedures and problems of a typical building inspector. Covers fundamental skills necessary to conduct building inspections. Class fee, \$10. **Sp**

BLD058 Zoning Enforcement and Administration

3 class hrs/wk, 3 cr.

The purpose and intent of land use regulations including formulation and enforcement of zoning ordinances and regulations. **W**

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 nonstructural. 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; manufacturing and fabrication processes. **Prerequisite:** BLD051 or consent of program coordinator. Class fee, \$10. **W**

BLD066 Structural Plan Review

2 class hrs 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 hrs and 3 lab hrs/wk, 3 cr.

Introduces techniques of examining non-structural 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**

BLD073 Energy Technology for the Inspector

3 class hrs/wk, 3 cr.

For code enforcement officers. Basic fundamentals of energy technology and solar design and concepts of passive and active solar systems. Emphasizes code provisions relating to solar installation. **Sp**

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 Electrical Codes II

3 class hrs/wk, 3 cr.

The National Electrical Code as it applies to special occupancies, special equipment, special conditions, and communication systems. **Prerequisite:** BLD091 or consent of instructor. **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.

Botany**BOT201 General Botany**

3 class hrs and 3 lab hrs/wk, 4 cr.

First of a three-term sequence. Principles of plant biology. Covers plant ecology, chemistry and structure of cells, membrane transport, photosynthesis, and respiration. Class fee, \$12. **F**

BOT202 General Botany

3 class hrs and 3 lab hrs/wk, 4 cr.

A continuation of BOT201. Covers plant genetics and evolution. Includes structure and life history of viruses, bacteria, fungi, and algae. Class fee, \$12. **W**

BOT203 General Botany

3 class hrs and 3 lab hrs/wk, 4 cr.

A continuation of BOT201 and 202. Covers life history and structure of mosses, ferns, conifers and flowering plants. Includes growth, development, uptake and transport and identification of native plants. Class fee, \$12. **Sp**

Chemistry**CH101 Chemistry for Allied Health**

3 class hrs 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 aqueous system. **Prerequisite:** High school algebra or MTH070. Class fee, \$8. **F, W, Sp, Su**

CH102 Chemistry for Allied Health

3 class hrs and 2 lab hrs/wk, 4 cr.

Continuation of CH101. Emphasizes chemical relationships to biological systems. Includes solutions and their properties, acids, bases, and organic chemistry. **Prerequisite:** CH101. Class fee, \$8. **W**

CH103 Chemistry for Allied Health

3 class hrs 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 hrs and 3 lab hrs/wk, 5 cr.

First term of a three-term sequence for students preparing for science-related fields. Includes scientific methods, standards for measurement, chemical and physical properties of matter, elements and compounds, atomic theory and structure, the periodic table, chemical bonding, and inorganic nomenclature. Three lectures, one lecture-discussion, and one laboratory period per week. **Prerequisite:** MTH070 or equivalent. Class fee, \$12. **F, W**

CH105 General Chemistry

4 class hrs and 3 lab hrs/wk, 5 cr.

A continuation of CH104. Covers quantitative composition, chemical equations, stoichiometry, the gaseous state of matter, properties of liquids, solutions, acids, bases, and salts, and chemical equilibrium. Three lectures, one lecture-discussion, and one laboratory period per week. **Prerequisite:** CH104, or equivalent. Class fee, \$12. **W, Sp**

CH106 General Chemistry

4 class hrs 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. Presents effects of chemistry on daily living. Covers nuclear and radio chemistry (nuclear power genera-

tion and its problems), chemical principles, organic chemistry, acids and bases, carbohydrates, the energy crisis, and possible solutions. Class fee, \$8. F

CH116 Consumer Chemistry

3 class and 2 lab hrs/wk, 4 cr.

Second of a three-term sequence. Covers energy alternatives for the future; air and water pollution; hazardous waste disposal; garden chemistry; insect control; brewing, winemaking, and distilling alcoholic beverages; baking; dairy products; preserving food, and fats and oils. Class fee, \$8. W

CH117 Consumer Chemistry

3 class and 2 lab hrs/wk, 4 cr.

Third in a three-term sequence. Discusses chemistry of home products, dental chemistry, immunochemistry, drugs and the treatment of disease, analgesics, antacids, tranquilizers, steroids, and birth control. Class fee, \$8. Sp

CH140 Physiological Chemistry

3 class hrs/wk, 3 cr.

Chemistry of the human body, metabolic processes, heredity, body poisons, and radiation. For students in allied health fields. **Prerequisite:** CH101, CH150, or CH104. W, Sp

CH150 Preparatory Chemistry

3 class hrs/wk, 3 cr.

For students who expect to enroll in 200 level chemistry courses but lack background in math and chemistry to do so. Includes math skills development, dimensional analysis, problem-solving techniques, as well as basic chemical principles. **Prerequisite:** Concurrent enrollment in MTH100. F, Su

CH204 General Chemistry

4 class hrs and 3 lab hrs/wk, 5 cr.

A professional course for students majoring in science and related professional fields. Includes atomic structure, stoichiometry, bonding, atomic and molecular orbital theory, oxidation-reduction, chemical reactions, gas laws, and the liquid state. **Prerequisite:** One year of high school chemistry and MTH100. Class fee, \$12. F, W

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, Sp

CH206 General Chemistry

4 class hrs 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. F, Sp

CH226 Organic Chemistry

3 class and 3 lab hrs/wk, 4 cr.

Introduces the basic principles of organic chemistry. For students majoring in the life sciences or preparing for a career in an allied health field. Covers covalent bonding and geometry of molecules, alkanes, cycloalkanes, unsaturated hydrocarbons, stereochemistry, alcohols, ethers, aldehydes and ketones. **Prerequisite:** CH106 or CH206. Class fee, \$12. F

CH227 Organic Chemistry

3 class and 3 lab hrs/wk, 4 cr.

Includes benzene and the aromatics, carboxylic acids, esters, amides, anhydrides, amines, and carbohydrates. **Prerequisite:** CH226. Class fee, \$12. W

CH228 Organic Chemistry

3 class and 3 lab hrs/wk, 4 cr.

The biological application of the concepts covered in CH226 and CH227. Includes lipids, amino acids and proteins, nucleic acids, and spectroscopy. **Prerequisite:** CH227 or consent of instructor. Class fee, \$12. Sp

Criminal Justice

CJ062 Basic Evidence Photography

3 class hrs/wk, 3 cr.

Methods for investigators to improve the quality and efficiency of evidence photography, and use a broad spectrum of photographic knowledge to further the science of forensic photography. F, W, Sp

CJ063 Advanced Evidence Photography

3 class hrs/wk, 3 cr.

In-depth study and practice of techniques used in forensic photography. Covers available resources, equipment, emergency field processing, and physical preparation of court photo evidence. Includes specific types of evidence photography, crime scene detail, traffic and hit and run detail, night and day location surveillance and latent print photography (field and lab). **Prerequisite:** Completion of FRP082 Evidence Photography for Fire and Arson Investigators with grade of B or better and an active member of a recognized police or fire department or similar organization (forest service, etc.). Class fee, \$25. **Offered as needed.**

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.

An orientation to the history and philosophy of law enforcement. Examines the roles and responsibilities of line officers including role conflict, professionalization, use of discretion; enforcement practices; and career opportunities. **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.**

CJ195A-E Independent Study in Criminal Justice

Variable hrs. and cr.

Independent research projects and written and oral reports in the criminal justice field. **Prerequisite:** Consent of an instructor to act as a project sponsor. **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.**

CJ202 Violence and Aggression

3 class hrs/wk, 3 cr.

Causes and extent of violence in the family and preventive measures available in the community. **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 solving. **Prerequisite:** Consent of instructor. **Offered as needed.**

CJ210 Introduction to Criminal Investigation

3 class hrs/wk, 3 cr.

History and theory of fundamentals of criminal investigation from crime scene to court room. Includes scientific techniques, psychology of offenders and recent pertinent court decisions. **Offered as needed.**

CJ215 Criminal Justice Administration

3 class hrs/wk, 3 cr.

A survey of administrative theory and practices of criminal justice agencies. Public administration of criminal justice including organizational theory, management, and policy making. Special emphasis on agencies in law enforcement and corrections. **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.

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, accurate writing. **Prerequisite:** COM051, OA085 or consent of instructor. Class fee, \$2. **F, W, Sp**

COM091 Technical Communicator, Term 1

3 class hrs/wk, 3 cr.

First of three-term in-depth sequence on technical writing, interacting, editing, illustrating, and hands-on word processing. COM091 Covers an introduction to the field of technical communication, audience awareness, format, and writing. **Prerequisite:** WR121 and WR227 or COM053. **F, W**

COM092 Technical Communicator, Term 2

3 class hrs/wk, 3 cr.

Continuation of COM091. Covers problem solving and analysis, interpersonal skills, and writing. **Prerequisite:** COM091 or consent of instructor. **W, Sp**

COM093 Technical Communicator, Term 3

3 class hrs/wk, 3 cr.

Continuation of COM092. Covers editing, illustrating, word processing, new technology,

and writing. **Prerequisite:** COM092 or consent of instructor. **Sp, Su**

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. **Offered as needed.**

Computer Science

CS050 Computer Center Operations

3 class hrs 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 of a data center use of an IBM 4381 computer. **W, Sp**

CS060 Techniques of User Training

2 class/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 hrs and 3 lab hr/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**

CS070 Fundamentals of Computer Programming I

4 class hrs/wk, 4 cr.

Beginning course in basic programming logic which emphasizes structured flowcharting to solve business problems. **F**

CS071 Fundamentals of Computer Programming II

4 class hrs/wk, 4 cr.

Continuation of CS070. Emphasizes logic related to handling tables, maintaining sequential files, and random files. **Prerequisite:** CS070. **W**

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:** CS071 and CS263. Class fee, \$12. **Sp**

CS076 Data Communications

2 class hrs/wk, 2 cr.

Concepts of data communication and real time data collection. Includes systems re-

lated to programming and operations management. **W**

CS081 COBOL III

3 class hrs and 6 lab hrs/wk, 5 cr.

An advanced course in ANS COBOL. Coding and documenting complete business application packages. Includes efficiency coding, file backup and restore procedures, systems planning, modular programming, VSAM files, systems documentation, data management techniques, independent research, and problem solving. **Prerequisites:** CS091 and CS274. Class fee, \$12. **W**

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 hrs and 3 lab hr/wk, 4 cr.

Program design and testing techniques which may improve a programmer's debugging skills. **Prerequisite:** CS233C. Class fee, \$12. **F, W**

CS091 On-Line Programming Techniques

3 class hrs and 6 lab hrs/wk, 5 cr.

Studies on-line computer software. Includes coding on-line programs using CICS. **Prerequisite:** CS233C. Class fee, \$12. **F, W**

CS093 Structured Maintenance

3 class hrs/wk, 3 cr.

An in-depth and practical study of software rehabilitation and preventative maintenance. **Prerequisite:** CS233C or consent of instructor. **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 Operations

3 class hrs and 3 lab hr/wk, 4 cr.

How to use a microcomputer in an office. Covers operation, use of purchased program packages (a word processor, a spreadsheet, and a database), and maintenance of computer files. **Prerequisite:** CS100 or equivalent. 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. Spread sheet packages may vary from term to term. **Prerequisite:** CS103. Class fee, \$12. **F, W, Sp**

CS104Q Worksheets—Quattro

3 class hrs and 3 lab hr/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. Course does not include hands-on computer lab experience. **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

3 class hrs and 6 lab hrs/wk, 5 cr.

Introduces IBM System Assembler language, using standard and decimal instruction sets. **Prerequisite:** CS131. Class fee, \$12. **F**

CS133B Introduction to Programming BASIC

4 class and 1 lab hr/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. **Prerequisite:** CS070, CS131 or equivalent. Class fee, \$12. **F, W, Sp, Su**

CS133C COBOL I

3 class hrs and 3 lab 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:** CS070, CS131. 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 CS261 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 hrs and 3 lab hr/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 CS263 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 Evaluation**

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. **F**

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**

CS173 Computer Science III—PASCAL

4 class hrs/wk, 4 cr.

Continuation of CS262. An introduction to the applications of abstract data type including stacks, queues, tables, trees and heaps. **Prerequisite:** CS262. **Sp**

CS228 Computer Augmented Accounting

3 class hrs/wk, 3 cr.

An introduction to microcomputers in accounting applications, electronic data processing (EDP) accounting systems and cycles. EDP applications for general ledger, accounts receivable, accounts payable, payroll, cash receipts, depreciation, data base management, and other selected accounting systems. **Prerequisite:** BA057, BA256, and CS104. Class fee, \$12. **Offered as needed.**

CS233A Assembler II

3 class hrs 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 hrs 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

3 class hrs and 6 lab hrs/wk, 5 cr.

Intermediate course in ANS COBOL. Codes and documents business-oriented programs. Emphasizes table processing and indexing, sort features, subprograms, segmentation, and sequential and indexed sequential files. **Prerequisite:** CS133C, CS071, and CS263. Class fee, \$12. **Sp**

CS233I Prolog

3 class hrs 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 hrs 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 hrs 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 hrs 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**

CS235 Microcomputer Graphics II

3 class hrs and 3 lab hrs/wk, 4 cr.

Covers drawing three-dimensional shapes and moving and changing two-dimensional graphs and three-dimensional graphs and objects. **Prerequisite:** CS068. Class fee, \$12. **Offered as needed.**

CS236 Advanced Languages for Microcomputers

2 class hrs and 3 lab hrs/wk, 3 cr.

Covers structured programming and the effects different high-level programming languages have on different 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 hrs and 3 lab hrs/wk, 4 cr.

Coding and documentation of microcomputer programs; special considerations and requirements of interactive programs. **Prerequisite:** CS233B and CS271. Class fee, \$12. **Offered as needed.**

CS238 Advanced Software Design

3 class hrs and 3 lab hrs/wk, 4 cr.

Continuation of specialized packages, may vary from term to term. **Prerequisite:** Consent of instructor. 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**

CS261 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

structure and modularity. **Prerequisite:** MTH100 or MTH082 or equivalent. **F**

CS262 Computer Science II—PASCAL

4 class hrs/wk, 4 cr.

Continuation of CS261. Introduction to the defined data structures: set, enumerated, subrange, array, record, file, and linked structures. Applications include sorting, searching, inserting, and deleting. **Prerequisite:** CS261. **W**

CS263 Computer Organization

4 class hrs/wk, 4 cr.

Hardware and software components of modern computer systems and introduction to job control language and Assembler language. **Prerequisite:** CS131 or CS261. **W**

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 Microcomputer Assembler

3 class hrs and 3 lab hrs/wk, 4 cr.

Covers steps microprocessors must follow to accomplish their tasks. Includes how to write instructions in Assembler language. **Prerequisite:** CS131 or equivalent and CS263. Class fee, \$12. **F**

CS274 Systems Analysis II

3 class hrs/wk, 3 cr.

Fundamentals of automated data system—sand procedures. Techniques and principles of systems analysis, forms, design and control, systems economics, feasibility studies, and installation of electronic data processing systems. **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.

Clothing/Textiles

CT199 Basic Clothing for the Consumer

1 class hr 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.**

Civil Technology

CVL040 Introduction

to Civil-Structural Engineering

3 class hrs 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

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 Engineering Technician Orientation

2 class and 3 lab hrs/wk, 3 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:** Second course high school algebra with exposure to trigonometry. **Sp**

CVL054 Engineering Fundamentals

2 class hrs and 3 lab 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.

Soil classifications and how they are used in the construction field. Covers strength of soils, consolidation of soils in fills, construction site investigation, and soil reports. **Prerequisite:** MTH052 or MTH081. Class fee, \$5. **F**

CVL060 Plane Surveying I

2 class hrs and 6 lab hrs/wk, 4 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, Sp**

CVL061 Plane Surveying II

3 class hrs 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:** MTH082 and CVL060. Class fee, \$10. **W**

CVL062 Survey Computations

2 class and 3 lab hrs/wk, 3 cr.

A study of the various survey computations, their methods of solution, and the computational equipment used for the solutions. **Prerequisite:** CVL053, CVL061, and MTH082. **Sp**

CVL063 Route Surveying

2 class hrs and 6 lab hrs/wk, 4 cr.

A review of survey practices studied prior to this term. Includes practice in staking rights-of-way, grades, curbs, waterlines, and buildings, with survey instruments. **Prerequisite:** CVL062 and MTH082. Class fee, \$10. **Sp**

CVL066 Surveying for Drafters

2 class hrs 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**

CVL071 Contracts and Specifications (CVL079)

3 class hrs/wk, 3 cr.

Demonstrates, defines, and describes the language and practices used in the preparing of contracts and attendant specifications. Practical problems teach the application of these practices. How to change specification types and formats. Emphasis is on Construction Specification Institute techniques and formats. **F**

CVL073 Construction Estimating

2 class and 3 lab hrs/wk, 3 cr.

Estimating amounts and costs of materials and labor costs of various types of construction. **Sp**

CVL080 Applied Mechanics

2 class hrs and 3 lab 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 taken concurrently, or equivalent. **Sp**

CVL082 Strength of Materials

3 class and 3 lab 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:** MTH083 or equivalent and CVL080 or consent of instructor. **W**

CVL084 Soil Mechanics

3 class and 3 lab hrs/wk, 4 cr.

Study of soil characteristics and classification systems. Acquaints students with problems concerning soil use in construction. Students conduct soil tests and evaluate results. **Prerequisite:** CVL080 and MTH081. Class fee, \$5. **W**

CVL087 Hydraulics

3 class hrs and 2 lab 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 MTH083 or consent of instructor. **W**

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, harmful effects to the environment, methods of prevention; and treatment and cure. Includes domestic and industrial water supply, storage, treatment, and distribution, and waste collection, storage, treatment, and disposal. **Prerequisite:** MTH081, CVL087. **F, Sp**

CVL090 Timber Construction and Design

2 class and 3 lab 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:** CVL082, MTH083 or equivalent. **W**

CVL091 Steel Construction and Design

2 class and 3 lab 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. **W**

CVL092 Concrete Construction and Design

2 class and 3 lab hrs/wk, 3 cr.

A study of reinforced concrete design and construction practices, including the design and control of concrete mixtures. Structural design calculations emphasize the strength design method and include fundamental construction concepts for rectangular beams, T-beams, slabs, columns, and footings. Includes field testing of concrete and visits to construction sites. **Prerequisite:** MTH083 or equivalent, and CVL082. Class fee, \$10. **Sp**

CVL280 Cooperative Work Experience

see AUM280.

Dance, see Physical Education

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.

Personal regimen, housekeeping, terminology, materials, instruments, and equipment for dental assistants. Qualifications for dental assistants. **Prerequisite:** Current enrollment in Dental Assisting Program or consent of instructor. **F**

DEN052 Dental Anatomy and Physiology

3 class hrs 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 inner-

vation; 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. Class fee, \$15. **F**

DEN060 Dental Sciences II

3 class hrs 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 hr and 7 lab hrs/wk, 3 cr.

Includes mixing filling materials, preparing impression materials for use, and processing impressions. Chairside assisting at the Oregon Health Sciences University Dental School. **Prerequisite:** Successful completion of Term One in Dental Assisting program. Class fee, \$5. **W**

DEN062 Expanded Functions I

2 class hrs 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; rubber dam placement and removal. **Prerequisite:** DEN051, DEN052. 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:** DEN053. 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 mannequins. Exposed films are processed and evaluated. **Prerequisite:** DEN052, DEN051. Class fee, \$15. **W**

DEN070 Dental Office Management

2 class hrs 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 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 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:** DEN062. 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 Dental Assisting Program. **Su**

DEN081 Dental Office Practicum III

.5 class and 8 lab hrs/wk, 4.5 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 in 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, taking alginate impressions, cement and placing and removing rubber dams. **Prerequisite:** Current employment as a dental assistant, or consent of instructor. Class fee, \$5. **Offered as needed.**

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 draft-

ing and practical pictorial communication. **F, W, Sp, Su**

DRF051 Machine Drafting I

1 class hr and 5 lab hrs/wk, 3 cr.
Fundamentals of drafting including basic drawing techniques. Emphasizes applications of drafting instruments, orthographic projection, and freehand lettering techniques. Covers these drafting practices: geometric construction, multiview projection, isometric drawing, application of welding symbols, section views, auxiliary views, and dimensioning. Problems are based on machine parts. Class fee, \$5. **F, W, Sp**

DRF052 Machine Drafting II

1 class hr and 5 lab hrs/wk, 3 cr.
Advanced machine drafting applications. Emphasizes functional drafting principles in order to produce drawings which incorporate sectional, auxiliary, assembly, and orthographic views. Includes dimensioning, use of technical pens, tolerancing, and screw threads. **Prerequisite:** DRF051 or equivalent. Class fee, \$5. **W, Sp, Su**

DRF054 Drafting I

4 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. Class fee, \$5. **F, W, Sp, Su**

DRF055 Architectural Design

8 lab hrs/wk, 3 cr.
Problem solving in production of architectural design solutions to program assignments. **Prerequisite:** DRF051 or DRF054 or consent of program coordinator. Class fee, \$5. **W**

DRF056 Architectural Drafting I

1 class hr and 7 lab hrs/wk, 4 cr.
Basic architectural drafting techniques and methods. Covers architectural lettering, layout, arrangements, symbols, and conventional construction methods used in residential or light commercial buildings. At least one sheet of drawings will be done on the computer. **Prerequisite:** DRF051, DRF054, or consent of instructor. Class fee, \$5. **W, Sp**

DRF056A Architectural Drafting I—A

3 lab hrs/wk, 1 cr.
Basic architectural drafting techniques. 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 I—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 I—C

1 class hr 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

4 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

4 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

8 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 program coordinator. 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 lab hrs/wk, 1 cr.
Computation and presentation of technical data using engineering calculators to solve typical problems in mechanical, civil, tool design and related areas. **Prerequisite:** MTH081 or MTH052 and DRF051 or consent of instructor. **F**

DRF066 Tool Design Lab I

8 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, Su**

DRF068 Geometric Tolerancing

1 class hrs/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 coordinator. **W**

DRF069 Pipe and Flow Systems

3 lab hrs/wk, 1 cr.
The detailing of a variety of piping and industrial flow systems. Covers schematic diagrams and pictorial layouts, heating applications, normal pipe and flow system drawings, and the elements of flow systems design. **Prerequisite:** DRF052 or consent of program coordinator. Class fee, \$5. **Sp, Su**

DRF070 CAD Pipe Systems

1 class hr 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 coordinator. Class fee, \$5. **Sp, Su**

DRF071 Machine Design Lab I

8 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, DRF074, MFG057 or consent of instructor. Class fee, \$5. **F**

DRF072 Introduction to Computer Drawing

2 class hrs and 3 lab hrs/wk, 3 cr.
Computer-aided drawing for students with no computer or drafting experience. Provides hands-on microcomputer experience using AUTOCAD software. Course work includes standard graphics commands. Peripheral devices include graphics tablet and pen plotters. Projects selected for general interest. Class fee, \$5. **F, W, Sp**

DRF073 Computer Aided Design

2 class hrs and 3 lab hrs/wk, 3 cr.
Drafting application of Micro CAD systems. Projects include multiview drawings, schematic diagrams, symbols, and section drawings. Computer aids include mirroring, translation, automatic dimensioning, layering and grids. Peripheral devices include graphics tablets, and pen plotters. **Prerequisite:** DRF072 or equivalent. Class fee, \$5. **F, W, Sp, Su**

DRF074 Descriptive Geometry

1 class hr and 5 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 CAD—Mechanical

1 class hr and 3 lab hrs/wk, 2 cr.
Microcomputer-based CAD software to generate auxiliary and sectional view drawings. Includes auto dimensioning, hatching, and projection of views at an angle. Provides intensive use of CAD techniques to rotate and translate copy. **Prerequisite:** DRF051 or DRF073 or consent of instructor. Class fee, \$5. **W, Sp**

DRF076 Photogrammetry

8 lab hrs/wk, 3 cr.
An introduction to mapping procedures and development of aerial photo interpretation skills. Includes introduction to planimetric and topographic methods and equipment. **Prerequisite:** DRF081 or consent of program coordinator. **Offered as needed.**

DRF078 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.

DRF079 CADD Electronics

2 class hrs 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 coordinator. Class fee, \$5. **Sp**

DRF081 Mapping and Platting

1 class hr and 7 lab hrs/wk, 4 cr.

Introduces basic components of maps, subdivisions, and plats with particular emphasis on drafting skills and techniques. Includes an introduction to aerial photo interpretation.

Prerequisite: DRF052 or consent of instructor. Class fee, \$5. **Sp**

DRF082 Civil Engineering Drafting

8 lab hrs/wk, 3 cr.

Introduction to typical drafting room problems of consulting engineering firms. Studies typical drawings from plan-profile sheets, construction details, piping details, and standards related to an overall set of plans. Preparation of selected civil engineering drawings using CAD. **Prerequisite:** DRF081 or consent of program coordinator. Class fee, \$5. **W**

DRF083 Project Development

8 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 Project Graphics

4 lab hrs/wk, 2 cr.

Plot plans, working drawings, and plotting field data used in forestry applications. **Prerequisite:** DRF054 or consent of program coordinator. **Offered as needed.**

DRF086 Power Transmission Design

2 class hrs and 3 lab hrs/wk, 3 cr.

A study of power transmission systems. Components apply to industrial automated systems. Includes study of drivers; hydraulic, pneumatic, electric, and power transmission equipment: chain, sprockets, V belts, bearings, speed reducers. Emphasizes analyses of system requirements, sizing of machine elements, and selection of components from industrial catalogs. **Prerequisite:** CVL080, MTH082 or consent of program coordinator. **W**

DRF087 Flexible Manufacturing Systems

2 class hrs 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

8 lab hrs/wk, 3 cr.

Use of structural design data for production of structural working drawings. Includes drafting and coordinating plans and details for a specific structure. Emphasizes layouts, procedures, and terms standard to the construction industry. **Prerequisite:** Second term standing or consent of instructor. Class fee, \$5. **F, Su**

DRF090 Electronic Drafting

8 lab hrs/wk, 3 cr.

Electrical drafting for drafting majors. Includes schematic and wiring diagrams, block and flow diagrams, PC board layout, charts, and graphs. **Prerequisite:** Second year

standing in drafting or consent of program coordinator. Class fee, \$5. **W, Su**

DRF091 Basic CAD for Electronics

4 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 freehand lettering, isometric drawings, dimensioning practices, and electronic schematic drafting. 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**

DRF094 Applied Dynamics

2 class hrs and 5 lab hrs/wk, 4 cr.

Rigid bodies in motion and the effects of various forces acting on these bodies. **Prerequisite:** CVL080 and MTH082 or consent of program coordinator. **Offered as needed.**

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**

DRF096 Computer-Integrated Manufacturing (CIM) Applications

2 class hrs and 3 lab hrs/wk, 3 cr.

Computer-integrated manufacturing (CIM) applications of spreadsheet computer programs. Covers CIM terminology, bar code data gatherings, group technology, process scheduling, statistical quality control, estimating, and inventory management. **Prerequisite:** MFG094 or consent of instructor. **Sp**

DRF280 Cooperative Work Experience

see AUM280.

Economics**EC115 Outline of Economics**

3 class hrs/wk, 3 cr.

Concepts and theories relating to large and small economic problems of the world. **F, W, Sp**

EC201 Principles of Economics

3 class hrs/wk, 3 cr.

Basic economics and a study of macro economic theory. Covers the public sector, unemployment, inflation, taxation, national income accounting and income distribution, money, banking, fiscal and monetary policy. **F, W**

EC202 Principles of Economics

3 class hrs/wk, 3 cr.

Micro economics 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**

Early Childhood Education, see also Human Development and Family Studies**ECE051,052,053 Exploring the Child Development Associate (CDA)**

3 class hr/wk, 1-3 cr.

Reviews Child Development Associate credentials. Includes an evaluation of competencies and training needs and development of a portfolio. A three-term sequence: **ECE051:** Introduces CDA requirements, studies areas healthy learning environments. **ECE052:** Studies physical, cognitive, and language areas. **ECE053:** Studies self-concept and individual strength, social and group management, and home center and staff competency. **Offered as needed.**

ECE060 Introduction to Early Childhood Education

2 class hrs and 2 lab hrs/wk, 3 cr.

Basic philosophies, types of programs for children and career possibilities in early childhood education. Field trips to pre-schools, nursery schools, kindergartens, day care centers, Head Start, and parent cooperatives. **F, occasionally Sp**

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 Development in Childhood II

3 class hrs/wk, 3 cr.

Continuation of HDFS225. Basic principles of growth and development, ages three through eleven. Emphasizes physical, intellectual, emotional, and social development. **W**

ECE063 Nanny: Infant-Toddler Practicum

3 class hrs/wk, 3 cr.

Gives students an opportunity to gain an understanding of appropriate and respectful practices with infants and toddlers through direct observation and some supervised interactions. **Offered as needed.**

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 Observing and Recording in the Pre-school

3 class hrs/wk, 3 cr.

Historical development of child study and observation. Value and use of observations as teaching tool. Emphasizes self-awareness as related to the study of children. Weekly lecture-discussions and observations at child development centers. **F**

ECE067 Observing and Guiding Behavior

3 class hrs/wk, 3 cr.

Continuation of ECE066. Emphasizes role of teachers, guidance, classroom management techniques, and use of recording and reporting. Weekly observations at child development centers. **W**

ECE070 Environments for Young Children

3 class hrs/wk, 3 cr.

Planning and evaluating environments for preschool children. Includes play, room arrangements, outdoor areas, equipment selection and sources, children's furniture, and "scrounging" for materials. **Prerequisite:** Second year standing or consent of instructor. **F**

ECE071 Creative Activities

2 class hrs and 2 lab hrs/wk, 3 cr.

Various media and activities that promote creative growth in young children. Includes understanding and experiencing values of various activities, presenting them to children, and selecting and timing activities. Includes art activities and materials, puppets, finger plays, flannel boards, and nature. **Prerequisite:** ECE061, ECE062 or consent of instructor. Class fee, \$10. **Sp**

ECE072 Learning Experiences for Young Children

4 class hrs/wk, 4 cr.

Developing, presenting, and evaluating various concepts and activities for preschool children. Includes science, creative expression, nature study, language arts (stories, books, finger plays, dramatic play), numbers, space and time, field trips and visitors, and sensory perception. **Prerequisite:** ECE061 and ECE062 or consent of instructor. Class fee, \$5. **Sp**

ECE074 Children's Literature

3 class hrs/wk, 3 cr.

Literature for preschool children. Includes picture books, stories, poetry, and classic and current literature. Value of types of books, evaluating and choosing books, and ways to share books with young children. **F**

ECE075 Music 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. The value of music for preschool children, simple music theory and terminology, roles of teachers, and use of spontaneous and planned activities. Class fee, \$5. **W**

ECE076 Nanny Curriculum I (Music and Literature)

2 class hrs/wk, 2 cr.

Using music and literature in a home setting. Includes selecting books and music and preparing presentations for children of different ages. Class fee, \$6. **Offered as needed.**

ECE077 Nanny Curriculum II (Creative and Learning Activities)

2 class hrs/wk, 2 cr.

Surveys a variety of art and educational experiences that promote social, emotional, physical, and cognitive development. Emphasis is on activities that can be conducted in a home setting with children of various ages. Class fee, \$6. **Offered as needed.**

ECE079 Child Nutrition

2 class hrs/wk, 2 cr.

Nutrition to meet the needs of preschool children. Development of attitudes and habits toward food and planning meals and snacks. **W**

ECE080 Home, School, Community

3 class hrs/wk, 3 cr.

Establishment and maintenance of school and community programs for parent education. Techniques and skills for developing rapport and communication with parents and families. Conferences, meetings, and community resources as tools for fostering parent-child relations. **Prerequisite:** Second year standing in early childhood education, or consent of instructor. **F**

ECE085 Administration of Child Care Centers

3 class hrs/wk, 3 cr.

Finances, budget, sources of income, standards and regulatory agencies (local, state, federal), personnel, philosophy, staffing patterns, job descriptions, interviewing, evaluation, inservice training, over-all program planning, parent/community attitudes, and relationships. **Prerequisite:** Second year standing or consent of instructor. **Sp**

ECE086, 087, 088 Directing the Day Care Center

1 class hr/wk, 1 cr. each

Provides on-going vocational education for directors of child care facilities. **ECE086:** Budgeting, staff development, grants and alternative funding. **ECE087:** Insurance, staff hiring, staff evaluations. **ECE088:** Developing staff teamwork, conducting effective staff meetings, marketing. **Offered as needed.**

ECE091 Supervised Field Experience I

1 class hr and 6 lab hrs/wk, 3 cr.

Working with young children in organized settings and assisting with supervision of daily activities in a preschool program. **Prerequisite:** ECE061, ECE062, ECE066, and ECE067. Class fee, \$3. **F, W, Sp**

ECE092 Supervised Field Experience II

1 class hr and 9 lab hrs/wk, 4 cr.

Continuation of ECE091. Includes some planning, executing, and evaluating of curriculum materials. **Prerequisite:** ECE091. Class fee, \$5. **F, W, Sp**

ECE096 Directed Participation I

3 class hrs and 12 lab hrs/wk, 7 cr.

Supervised teaching of children in Chemeketa's child development center. **Prerequisite:** ECE092 and second year standing. Class fee, \$5. **F, W, Sp**

ECE097 Directed Participation II

3 class hrs and 15 lab hrs/wk, 8 cr.

A continuation of ECE096 with different age group. **Prerequisite:** ECE096 and second year standing. Class fee, \$10. **F, W, Sp**

ECE280 Cooperative Work Experience

see AUM280.

Education

ED051 Teaching Basic Reading and Writing to Older Non-Readers

1 class hr and 2 lab hrs/wk, 2 cr.

Workshop and tutoring experience in teaching basic reading and writing skills to older nonreaders. Covers problems and implications of illiteracy, the Laubach method of basic language skills instruction, writing simple stories using a controlled vocabulary, and conducting tutorial teaching sequences. **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**

ED113B-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 hr 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.

Introductory 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). Review and provides practice in VCR operation and techniques. **W**

ED199A Spanish Language Development for the Spanish Speaker

3 class hrs/wk, 3 cr.

First of three courses to help Spanish-speaking instructional assistants improve their communication skills and develop their language 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 American Sign Language and deaf culture and proficiency in receptive and expressive skills. **Prerequisite:** ED201, ED202 or equivalent. **Sp**

ED205A Tutoring Principles and Practices

1 class and 2 lab hrs/wk, 2 cr.

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 skill 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.

Introduction to role and work of instructional assistants. Provides observation in educational settings. **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 hr and 15 lab hrs/wk, 6 cr.

Field experience in a variety of classroom activities directly related to instructing and supervising children in school settings. Application of knowledge, methods, and skills gained from education courses. Seminars cover classroom experience, problem solving, techniques, and materials. **Prerequisite:** Demonstrated competency in RD010; SKD013A,B,C; WR040; MTH090A,B,C. **F, W, Sp**

ED211 Advanced Practicum

1 class hr and 15 lab hrs/wk, 6 cr.

Practical experience for instructional assistant students in their area of specialization. **Prerequisite:** ED210. **F, W, Sp**

ED212 Practicum: Specialized Education

1 class hr 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, Su**

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. **Sp, Su**

ED257 Second Language Teaching Techniques for Paraprofessionals I

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 II

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 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. **Su**

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.

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.**

ED292 Occupational Analysis and Curriculum Development

3 class hrs/wk, 3 cr.

A study and application of job analysis in contemporary and emerging occupations in industry, trades, and services for use in selection, organization, and evaluation of curricula in occupational education. **Offered as needed.**

Electronics

ELE050 Electronic Concepts I

3 class hrs and 4 lab hrs/wk, 4 cr.

For evening and weekend students. Covers passive electrical component theory and identification, DC and AC circuit theory, and test equipment usage. **Prerequisite:** MTH065 or MTH070 or high school algebra. Class fee, \$16. **F, W**

ELE051 Electronic Concepts II

3 class hrs and 4 lab hrs/wk, 4 cr.

For evening and weekend students. Stresses complex DC and AC circuit analysis. The ELE050 and ELE051 sequence may be substituted for the ELT051 and ELT052 sequence. **Prerequisite:** ELE050, MTH100 or

MTH081 or consent of instructor. Class fee, \$16. W

ELE060 Electronics Fundamentals for Nonmajors

3 class hrs and 2 lab hrs/wk, 4 cr. Introduces direct current and alternating current devices and circuits, test equipment, and theory. Progresses into solid state devices, their construction, theory of operation, symbols, and basic circuits. Emphasizes practical applications. **Prerequisite:** MTH065 or MTH070 or high school algebra. Class fee, \$8. F, W

ELE061/ELE061M Electric Circuits

3 class hrs and 3 lab hrs/wk, 4 cr. First in a three course industrial electronics sequence. Covers passive electrical component theory and identification, DC and AC circuit theory, test equipment and atomic theory applied to electricity. ELE061 and ELE061M are equivalent courses. **Prerequisite:** MTH065 or MTH070 or high school algebra or consent of instructor. Class fee, \$12. F

ELE062/ELE062M Industrial Electronics

3 class and 3 lab hrs/wk, 3 cr. Second in a three course sequence of industrial electronics courses. 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. W

ELE063/ELE063M Industrial Computer Concepts

3 class hrs and 3 lab hrs/wk, 4 cr. Third in a three course sequence. 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. Sp

ELT048 Fundamentals of Electronics

3 class hrs and 2 lab hrs/wk, 4 cr. Introduces direct current and alternating current devices and circuits, test equipment, and theory. Progresses through solid state devices, their construction, theory of operation, symbols, and basic circuits. Emphasizes practical applications for students exploring electronics as a career or those needing a general knowledge of electronics. Class fee, \$8. F, W

ELT051 Electronic Theory I

3 class hrs and 3 lab hrs/wk, 4 cr. First of three-term sequence. Covers electric circuit analysis and atomic theory applicable to electronics. Stresses resistive circuits. **Prerequisite:** High school algebra or MTH070 or MTH065. Class fee, \$12. F, W

ELT052 Electronic Theory II

3 class hrs and 3 lab hrs/wk, 4 cr. Second of a three term sequence. Sequence covers electric circuit analysis and atomic theory applicable to passive circuits. Stresses alternating voltage and current, reactive circuit theory, and AC circuit analysis. **Prerequisite:** ELT051 and concurrent trigonometry course or consent of instructor. Class fee, \$12. W, Sp

ELT053 Electronic Theory III

3 class hrs and 3 lab hrs/wk, 4 cr. Continuation of ELT051 and ELT052. Applies fundamental concepts covered in ELT051

and ELT052. **Prerequisite:** ELT052 and trigonometry. Class fee, \$12. F, Sp

ELT054 Transistor Fundamentals

3 class hrs and 6 lab hrs/wk, 5 cr. Principles of the transistor, the basic element of the semiconductor family, and its operation as a circuit element. Principles studied in theory classes are applied in the laboratory. **Prerequisite:** ELT052 should be taken previously or concurrently. Class fee, \$12. W, Sp

ELT055 Semiconductor Devices

2 class hrs 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

1 class hr and 2 lab hrs/wk, 2 cr. Introduces the field of electronics including career opportunities, component identification, soldering, tool identification, safety, and hardware. Class fee, \$8. F, W

ELT061 Electronic Problems I

2 lab hrs/wk, 1 cr. Introduction to electronic problem solving. Emphasizes calculations, scientific notation, formula manipulation, and use of calculators in solving electronics problems. **Prerequisite:** Registration in electronics curriculum. F, W

ELT062 Electronic Problems II

2 lab hrs/wk, 1 cr. Includes procedures and development of skills for dimensional analysis, recognition and use of unit systems, preparation and use of graphs and curves. **Prerequisite:** ELT061 or consent of instructor. W, Sp

ELT064 Pulse Circuit Fundamentals

2 class hrs and 3 lab hrs/wk, 3 cr. An introduction to pulse techniques. Includes theory and operation of clamper circuits and clipper circuits, various multivibrator circuits, and synchronization circuits. **Prerequisite:** ELT054 or consent of instructor. Class fee, \$12. F

ELT065 Electronic Circuit Analysis

2 class hrs and 6 lab hrs/wk, 4 cr. Basic circuits and components of electronics emphasizing design and proving of design concepts. Covers solid state amplifiers, oscillators, power supplies, circuit design and troubleshooting. **Prerequisite:** ELT054. Class fee, \$24. F

ELT066 Digital Fundamentals

3 class hrs and 2 lab hrs/wk, 4 cr. An introduction to logic circuits. Includes binary, octal, and hexadecimal number systems with conversion to decimal, nondecimal arithmetic binary number codes, Boolean algebra principles, logic circuits with emphasis on hardware and simplification. Laboratory work relates to classes. **Prerequisite:** ELT051. Class fee, \$8. W, Sp, Su

ELT067 Digital Circuit Applications

2 class hrs 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. W

ELT068 Microcomputer Systems

3 class hrs and 6 lab hrs/wk, 5 cr. Basics of microcomputer systems, both hardware and software. Covers interfacing

techniques and protocols. **Prerequisite:** ELT066 and a high level programming language or consent of instructor. Class fee, \$12. W

ELT070 Video Display Systems

3 class hrs and 6 lab hrs/wk, 5 cr. Circuit analysis of video display systems. Includes theories of operation and troubleshooting techniques. **Prerequisite:** ELT054 or consent of instructor. Class fee, \$24. F, Sp

ELT071 Linear IC Fundamentals

3 class hrs and 3 lab hrs/wk, 4 cr. Theory of linear ICs and their application to basic circuits. **Prerequisite:** An understanding of passive circuit theory plus a working knowledge of transistor theory and operation. Class fee, \$12. Sp

ELT072 Linear IC Application

2 class hrs and 3 lab hrs/wk, 3 cr. A design and applications course using integrated circuits to study linear electronic circuits. **Prerequisite:** ELT071 or consent of instructor. Class fee, \$12. F, Sp

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. W

ELT075 Advanced Industrial Electronics

3 class hrs 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 and ELT055. Class fee, \$12. W

ELT076 Antennas and Transmission Lines

2 class hrs/wk, 2 cr. Practical and theoretical aspects of transmission lines and antennas. Basic theory of antenna design, radiation patterns, phasing and coupling networks. Emphasizes coaxial and open-wire transmission line for all frequencies. **Prerequisite:** ELT053 or consent of instructor. W

ELT077 Telecommunications

2 class hrs 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 hrs and 3 lab hrs/wk, 4 cr. A study of disks, printers, plotters, etc. plus theories of operation and concepts of interfacing software and hardware. Lab sessions emphasize installation and troubleshooting techniques. **Prerequisite:** Enrollment in second year of Computer Electronics Technology program or consent of instructor. Class fee, \$12. W

ELT091 Programming Concepts I

3 class hrs and 2 lab hrs/wk, 4 cr. An introduction to computer programming and computer operating systems using "C" language and MS/DOS operating system. Emphasizes documentation and structure. **Prerequisite:** MTH081 or consent of instructor. Class fee, \$8. F

ELT092 Programming Concepts II

3 class hrs and 2 lab hrs/wk, 4 cr. A continuation of ELT091. Refines structured programming techniques and applies them to more complex data structures. Em-

phasizes system analysis and programming techniques and documentation. **Prerequisite:** ELT091. Class fee, \$8. **Sp**

ELT093 Data Communication
3 class hrs 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:** Enrollment in second year of the Computer Electronics Technology program or consent of instructor. Class fee, \$12. **W**

ELT097 Advanced Computer Architecture

3 class hrs and 6 lab hrs/wk, 5 cr.
For students with a solid foundation in digital logic, microprocessors, and programming. Explains 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 Fundamentals of Electronics for Computers

3 class hrs and 2 lab hrs/wk, 4 cr.
Fundamental electronics concepts related to computers. For students who need or desire an expanded understanding of the inner workings of a computer. Requires no background in electronics. **Prerequisite:** High school algebra and a knowledge of a high level programming language or consent of instructor. Class fee, \$8. **Offered as needed.**

ELT280 Cooperative Work Experience
see AUM280.

Emergency Medical Technology

EMT050 Emergency Medical Technology I

5 class hrs 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, fire fighters, emergency rescuers, police, mountain rescuers, and industrial emergency care persons. **Prerequisite:** No history of diabetes, epilepsy, or narcotic addiction or alcohol addiction unless students have not lost consciousness for past six months and are currently undergoing medical care. Class fee, \$10. **F, W, Sp**

EMT051 Emergency Medical Technology I, Part A

2 class hrs 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 hrs 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 hrs and 3 lab hrs/wk, 6 cr.
Role and responsibilities of EMT personnel, patient assessment, shock management, fluid therapy, introduction to pharmacology. **Prerequisite:** Acceptance into EMT program; EMT I certification or GED or high school graduate preferred; meet current state requirements. Class fee, \$20. **W**

EMT061 Emergency Medical Technician III, Part A

3 class hrs 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 hrs 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 hrs 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 hrs 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 hr and 1 lab hr/wk, 1 cr.
Introduces techniques and tools of patient extrication, emphasizing application to traffic accidents, as required for paramedic cer-

tification. **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 hr 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 hrs/wk and 2 lab hrs/wk, 3 cr.
Introduction to disasters, including types, planning, triage, management, human behavior, simulation, 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 II 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 IV 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.

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, literary 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, imagery—as well as more elusive elements of the plays—their larger meaning and value systems. 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, 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; 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**

Engineering, see also General Engineering**ENGR200 Engineering Mathematics**

2 class hrs and 2 lab hrs/wk, 3 cr.

Applies mathematic principles of college algebra and trigonometry in solving actual engineering and science problems. **Prerequisite:** MTH101 and MTH102. **F**

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:** MTH201. 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, use of operational amplifiers to perform various functions in circuits with periodic inputs. **Prerequisite:** MTH201, ENGR201, and concurrent enrollment in MTH221. 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:** MTH201, MTH221, ENGR201. Class fee, \$10. **Sp**

ENGR211 Statics

3 class hrs and 2 lab hrs/wk, 4 cr.
Analysis of forces induced in structures and machines by various types of loading. **Prerequisite:** MTH200 and ENGR200 or GE105. **F**

ENGR212 Dynamics

3 class hrs 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, MTH201 and PH211. **Sp**

ENGR213 Strength of Materials

3 class hrs, and 2 lab hrs/wk, 4 cr.
Covers properties of structural materials; analysis of stress and deformation in axially loaded members, circular shafts, and beams, and in statically indeterminate systems containing these components. **Prerequisite:** ENGR211 and MTH201. **W**

English as a Non-Native Language

ENL010 English as a Second Language—Speaking

5 class hrs/wk, 3 cr.
Includes language lab hours in addition to scheduled class hours. Emphasizes verbal and aural skills for non-native English speakers. Includes listening, pronunciation, basic grammar, and organizational skills needed to speak English effectively. **Prerequisite:** STEL test. Class fee, \$2. **F, W, Sp**

ENL015 English as a Second Language—Writing

5 class hrs/wk, 3 cr.
Includes language lab hours in addition to scheduled class hours. Emphasizes writing skills for non-native English speakers. Covers correct sentence structure, punctuation, and paragraph organization. **Prerequisite:** STEL test. Class fee, \$2. **F, W, Sp**

ENL110 English as a Non-Native Language I

3 class hrs and 2 lab hrs/wk, 4 cr.
For students whose first language is not English. Emphasizes advanced comprehension of spoken English, accent improvement, and both formal and informal oral communication for college and business needs. **Prerequisite:** STEL test. Class fee, \$2. **F, Sp**

ENL111 English as a Non-Native Language II

3 class hrs 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. **Prereq-**

uisite: Completion of intake procedure and a score of 38-42 on the STEL test or consent of instructor. Class fee, \$2. **F, W**

ENL112 English as a Non-Native Language III

3 class hrs and 2 lab hrs/wk, 4 cr.
For advanced students whose first language is not English. Emphasizes several different organizational methods for preparing written essays. Includes analysis, classification, comparison, assertion, and substantiation. A preparation for WR121. **Prerequisite:** STEL test. Class fee, \$2. **W, Sp**

Emergency Services

ES071 Multimedia First Aid

8 class hr/wk, 1 cr.
Fundamentals of first aid theories and procedures. Upon satisfactory completion, student receives American National Red Cross Multimedia First Aid card. Meets Occupational Safety and Health Administration and Board of Education requirements. Class fee, \$7. **F, W, Sp, Su**

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 hrs and 3 lab hrs/wk, 3 cr.
History, technique, and art of film. Film viewing and discussion. How to evaluate a variety of stylistic approaches. Class fee, \$12. **F**

FA256 Understanding Movies: The Great Film Directors

2 class hrs and 3 lab hrs/wk, 3 cr.
An analysis of films from the standpoint of the director-creator. Studies works of 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, \$12. **W**

FA257 Understanding Movies: Themes and Genres

2 class hrs and 3 lab hrs/wk, 3 cr.
An examination of a number of films representing a single genre (western, comedies, etc.) or expressing common themes. Focuses on various directors and their diverse styles, techniques, and personal expressions. Class fee, \$12. **Sp**

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.

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 of 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**

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 a forest 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 hr 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, peevées, 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.
Experience using calculators to solve forestry and surveying problems. Hands-on experience using a word processor. **F**

FOR057 Forestry Plane Surveying I

2 class hrs 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:** FOR057, MTH053 or concurrent enrollment. Class fee, \$5. **F**

FOR061 Tree Identification I

1 class hr 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 hr 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, use of scientific names. **Sp**

FOR066 Forest Products

3 class hrs 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 inflicted, damage control techniques, and operational control projects. **Sp**

FOR068 Forest Photogrammetry

2 class hrs 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 hrs 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 in wildfire ignition and dynamics. Followed by 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.

A group and individual research and sharing of information valuable to the student desiring summer employment in forestry-related work. Topics include (but not limited to) employment applications, resumes, job search, interviewing, working conditions, success on a job, current opportunities, and explores technical progress in forestry and related fields. **W**

FOR076 Timber Cruising I

3 class hrs and 4 lab hrs/wk, 4 cr.

Care and use of forestry instruments; measurement and appraisal of trees, stands, and forest sites. Emphasizes mapping, fixed-plot and variable-plot 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 hrs 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 Logging Practices

2 class hrs 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, complete a formal bid document and complete a contract successfully. **W**

FOR087 Wood Structure and Identification

1 class hr and 6 lab hrs/wk, 3 cr.

A study of basic wood structure and gross features of wood. Includes identification of common softwood and hardwood species. **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. **F**

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 coordinator. **W**

FOR096 Forest Road Surveying

2 class hrs and 6 lab hrs/wk, 4 cr.

Principles and practices of forest road surveying, design, and layout. Covers 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 and prior training with surveying equipment employed in leveling and with transit or compass and tape surveys. MTH053, FOR057, and FOR058. Class fee, \$5. **Sp**

FOR280 Cooperative Work Experience

see AUM280.

French

FR101, 102, 103 First Year French, Terms I, II, III

4 class hrs/wk, 4 cr.

Grammar, vocabulary and common expressions. **Prerequisite:** FR102: FR101 or consent of instructor. FR103: FR101, FR102, or one year 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 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**

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, role 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, 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 carried, basic hose practices, basic hose lays, use of protective breathing apparatus, response, district maps, phantom box areas, communication procedures, fire apparatus driving practices. Completion of FRP051, 052, 053, 061, 062, and 063 meets Oregon Fire Standards and Accreditation Board requirements for Fire Fighter I. Class fee, \$15 each. **F, W, Sp**

FRP054 Fire Service Hydraulics

2 class hrs/wk, 2 cr.

Hydraulic laws and formulas which apply to fire service. Studies water at rest and in motion, applies formulas and mental calculations relative to hydraulic problems, discusses groundwater supply problems and water distribution systems. **Prerequisite:** MTH100 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. Class fee, \$5. **F**

FRP056 Fire Service Rescue Practices

2 class hrs 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 hrs and 2 lab hrs/wk, 4 cr.

Physical and chemical properties of substances, acids-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 hrs 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**

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, property owners, fire safety, reporting fire prevention activities, drills, policies, public relations, DEQ regulations. Emphasizes "company inspections." **W**

FRP061, 062, 063. See FRP051, etc.

FRP064 Hazardous Materials Technician I

3 class hrs/wk, 3 cr.

How to handle emergencies involving hazardous materials: Includes recognition of the hazards, responding, intervening, and stabilizing the situation. **Prerequisite:** FRP055 or consent of instructor. **F**

FRP065 Hazardous Materials Technician II (Part A)

3 class and 4 lab hrs/wk, 4 cr.

Continues 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 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 company officer's job, its unique aspects, functions of management, basic principles of management and 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 placement, sectoring and company functions, communications, command procedures. **F**

FRP071 Fire Protection Systems and Extinguishers

3 class hrs/wk, 3 cr.

Portable extinguisher equipment, sprinkler systems, protection systems for special hazard, fire alarm and detection systems, 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, 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 hrs 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 hr and 3 lab hrs/for 4 weeks, 1 cr.

Pre-planning activities for on-airport 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 hrs 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, evaluation techniques), training aids, and devices. **Prerequisite:** Second year status with fire protection agency or consent of instructor. **Offered as needed.**

FRP079 Natural Cover Fire Protection

2 class hrs/wk, 2 cr.

Studies causes, prevention, fire behavior, standing orders, and fire suppression methods of natural cover fires. Focuses on urban interface fire problems. **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.**

FRP083 Water Distribution Systems

3 class hrs/wk, 3 cr.

Main systems—size, gridding, valves, hydrants, pumping stations and reservoir, fire flow requirements for commercial and residential districts, storage tanks, cisterns, and mobile supplies. **Prerequisite:** MTH052 or consent of instructor. **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, 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 between fire defenses, fire losses, and insurance rates, basic insurance principles, fire loss experience, loss ratio, applying the ISO grading schedule, and state regulations of fire insurance. **Offered as needed.**

FRP088 Fire Problem Analysis

1 class hr 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.

Food Service, see also Hospitality Systems Management

FS050 Professional Cooking I

5 class and 27.5 lab hrs/wk, 10 cr.

Introduction to fundamental principles and techniques of food preparation including

cooking, pantry/garde manger and baking. Class fee, \$35. **F, W, Sp**

FS051 Professional Cooking II
5 class and 27.5 lab hrs/wk, 10 cr.
Continuation of FS050. **Prerequisite:** FS050. Class fee, \$35. **F, W, Sp**

FS052 Professional Cooking III
5 class and 27.5 lab hrs/wk, 10 cr.
Continuation of FS051. Advanced principles and techniques of food preparation. Course work is enhanced by 5-week externship to reinforce classroom technique with on-the-job experience. **Prerequisite:** FS050, FS051. Class fee, \$35. **F, W, Sp**

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, legal regulations of federal and state agencies pertaining to restaurant sanitation and USDA requirements. **F**

FS062 Menu Planning
2 class hrs/wk, 2 cr.
Principles of menu planning using the menu as a tool for marketing, merchandising, personnel scheduling, equipment planning, and pricing. Covers single use, permanent, and cycle menus, standard menu terminology, and foreign terms. Includes student projects in menu planning and recipe research for special occasions. **W**

FS063 Hospitality Mathematics
2 class hrs/wk, 2 cr.
Math concepts involved in food service operations. Includes weights and measures, portion control, recipe conversions, standard receipt costs, and menu pricing. **W**

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, 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, 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 indepth 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 week, 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 week, 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 week, 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 hrs 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 week

An indepth 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 week
Preparation of a variety of tarts, cakes, and French pastries. Students will prepare puff pastry dough and variations for both entree and dessert use. Includes 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 hrs/wk, 1 lab hr/wk, 2 cr.
Introduction to bar operation. Aim is for students to develop professional skills. 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 current employees. May interest home bartenders. Class fee, \$20. **Offered as needed.**

FS280 Cooperative Work Experience
see AUM280.

Geology

G142 The Geology of Pacific Northwest Volcanoes, Mountains, and Glaciers.
3 class and 2 lab hrs/wk, 4 cr.

The nature and origin of Northwest mountains and mountain ranges. Includes volcanoes, mountain building, and glacial sculpture. For persons interested in collecting rocks and minerals, rockhounding, mining, and prospecting. Class fee, \$8. **F**

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. **F**

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 these in Oregon. Also studies the ancient landscapes and environments as indicated by fossils. Class fee, \$8. **F**

G145, G145A, G145B Regional Geologic Field Studies
variable 1-3 cr.

Introductory geologic field study of specific Northwest regions. Includes an evening introductory session prior to a weekend field trip with a follow-up evening seminar. Trip worksheets, field diary, and topic term paper may be required. Class fee, \$16 each. **Offered as needed.**

G201 Geology
3 class hrs 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 hrs and 3 lab hrs/wk, 4 cr.
A broad nonquantitative, descriptive survey of geologic landforms. Map interpretation activities applied in laboratory and on field trips. Class fee, \$12. **W**

G203 Geology

3 class hrs and 3 lab hrs/wk, 4 cr.

Earth's history interpreted through geophysics and plate tectonics. Couples with paleontologic laboratory work with field trips. Class fee, \$12. **Sp**

General Engineering, see also Engineering

GE101 Engineering Orientation

1 class hr 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:** MTH101. **F**

GE102 Engineering Computations

2 class hrs and 2 lab hrs/wk, 3 cr.

To acquaint engineering students with the use and the operation of the computer for solutions to analytical problems. Structured programs will be developed and used by students in the computer laboratory. **Prerequisite:** MTH101. **W**

GE103 Engineering Computations

2 class hrs and 2 lab hrs/wk, 3 cr.

Extended applications of computer programming to solve problems in major engineering disciplines. Students develop and use programs. **Prerequisite:** GE102. **Sp**

GE104 Engineering Applications I

3 lab hrs/wk, 1 cr.

Solution of engineering problems using algebra studied concurrently in MTH100. **Prerequisite:** MTH100 concurrently. **F**

GE105 Engineering Applications II

3 lab hrs/wk, 1 cr.

Solution of engineering problems using algebra studied concurrently in MTH101. **Prerequisite:** MTH101 concurrently. **W**

GE115 Graphics

6 lab hrs/wk, 3 cr.

Graphic communication for pre-engineering. Multiview projection, dimensioning techniques, pictorial representation, geometric construction, working drawings, and an introduction to welding drawing. Technical subjects include tolerancing and fasteners. Class fee, \$10. **Offered as needed.**

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, W, Sp**

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. **F, 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**

GEOG199 The Urban Environment

3 class hrs/wk, 3 cr.

Development, evolution, and problems of cities, with special emphasis on Portland and Salem and their metropolitan areas. Focuses on spatial and functional characteristics of cities, and upon problems of human adjustment in the past and present. **Offered as needed.**

GEOG200 Environment and Man

3 class hrs/wk, 3 cr.

Alteration of natural systems and environmental problems created by natural resources and energy development programs. Discusses soils, climate, vegetation, land forms, and water. **Offered as needed.**

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.**

German

GER101, 102, 103 First Year German, Terms I, II, III

4 class hrs/wk, 4 cr.

Covers listening, speaking, and writing skills. Emphasizes comprehension of grammar and word patterns. **Prerequisite:** GER102: GER101 or consent of instructor. GER103: GER102 or one year of high school German or consent of instructor. 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.

Intensive instruction in grammar, vocabulary, and syntax. Also studies contemporary German literature and culture. **Prerequisite:** GER201: GER103 or two years of high school-level German. GER202: GER201 or consent of instructor. GER203: GER202 or consent of instructor. Class fee, \$2 each. **GER201: F; 202: W; 203: Sp**

General Sciences

GS104 Physical Science

3 class hrs 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 hrs 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 hrs 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**

GS110 Earth, Sea, and Sky

3 class hrs/wk, 3 cr.

A survey of the multiple facets of the Earth sciences: astronomy, meteorology, climatology, oceanography, and geology. **Su**

GS110A Earth, Sea, and Sky Lab

3 lab hrs/wk, 1 cr.

An independent-study telecourse lab which allows the student to visit a Northwest national park and planetarium. **Prerequisite:** GS110 or concurrent enrollment. **Su**

GS111 Oceanus

3 class hrs/wk, 3 cr.

A telecourse which focuses on the marine environment as a unique feature of planet Earth. **Offered as needed.**

GS111A Oceanus Lab

3 lab hr/wk, 1 cr.

An independent-study telecourse lab which focuses on the Northwest marine environment as a unique feature of Oregon. **Prerequisite:** GS111 or concurrent enrollment. **Sp**

GS112 Planet Earth

3 class hrs/wk, 3 cr.

A telecourse which introduces students to internationally recognized experts who share their theories, models, and opinions through the use of on-location film footage. **W**

GS112A Planet Earth Lab

3 lab hrs/wk, 1 cr.

An independent-study telecourse lab which allows the student to investigate a classic volcanic eruption, Northwest earth materials and to explore interactive computer geoscience topics. **Prerequisite:** GS112 or concurrent enrollment. **W**

GS121 Introduction to Astronomy

3 class hrs/wk, 3 cr.

A descriptive treatment of astronomy which examines the solar system, other stars, and the galaxy. Observational techniques are explained in the planetarium. **Offered as needed.**

GS207 Astronomy

3 class hrs and 2 lab hrs/wk, 4 cr.

Earth's coordinate system, observational astronomy, the moon and planets, and evolution of our solar system and sun. Lab demonstrations illustrate physical principles of our solar system. **Prerequisite:** MTH070 recommended. Class fee, \$8. **F**

GS208 Astronomy

3 class hrs and 2 lab hrs/wk, 4 cr.

Stellar coordinates, the nature of light and the spectroscope, and the birth and death of stars. Lab demonstrations illustrate physical principles of the stellar system. **Prerequisite:** MTH070 recommended. Class fee, \$8. **W**

GS209 Astronomy

3 class hrs and 2 lab hrs/wk, 4 cr.

Astronomical, optical, and radio telescopes; Milky Way galaxies; the universe of galaxies; the origin of the universe; and life in the universe. Lab demonstrations illustrate physical principles of the galactic system. **Prerequisite:** MTH070 recommended. Class fee, \$8. **Sp**

Health Care Support Services,
see **Allied Health, Medical Assisting**

Human Development

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, test anxiety, and memory and concentration techniques. Campus resources and learning styles are also covered. **F, W, Sp, Su**

HD199 Special Studies: Life Skills Seminar

6 class hrs/wk, 6 cr.

Development of self-knowledge, coping skills, confidence building and ability to explore specific careers. In-depth orientation to job search techniques, college support services, study skills, and classroom survival techniques. **F, W, Sp, Su**

Human Development and Family Studies

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.

HDFS199 Special Studies: Reading, Writing, and Arithmetic for the Young Child

3 class hrs/wk, 3 cr.

How to provide developmental reading, writing, and arithmetic learning experiences for young children. Explores developmental theory, current research, and developmental practice, and provides experiences that promote reading, writing, and arithmetic for young children. **Su**

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 a kind of relationship that will fulfill their personal and mutual needs. **Sp**

HDFS225 Prenatal and Infant 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, occasionally Sp**

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.**

HDFS228 The Exceptional Child

3 class hrs/wk, 3 cr.

Characteristics and world of preschool children who deviate from average or normal levels in mental characteristics, sensory

abilities, neuromuscular physical characteristics, social or emotional behavior, communication abilities, multiple handicaps, and cultural or economic differences. Includes community resources, curriculum considerations, and parent involvement. **Prerequisite:** HDFS225 and ECE062 or consent of instructor. **Sp**

HDFS230 Single Parent/Stepparent Experience

3 class hrs/wk, 3 cr.

A practical, functional approach for families with single parents and/or stepparents. **Offered as needed.**

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 communication techniques. **W**

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. Focus on understanding, facilitating, and respecting the development of these children. **Offered as needed.**

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**

HDFS270 Child Care for Elementary School Children

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, program, 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. **Offered as needed.**

HDFS290 Footsteps

3 class hrs/wk, 3 cr.

Parenting: struggles and conflicts in the parenting role; questions about how children act and why; dilemmas of raising children in a rapidly changing world; outcomes of various child-rearing practices; how to be the best possible parent. **Offered as needed.**

Health Education, see also Allied Health

HE151 Alcohol and Other Drugs

3 class hrs/wk, 1-3 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.**

HE199W Health Assessment

8 class hrs and 4 lab hrs total, 1 cr.

Examines students' fitness level and fitness capabilities, health status, and state of wellness. Individual attention given to each student to assess his or her own current "health and fitness" level, and to propose a program of improvement. Class fee, \$9. **F, W, Sp**

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, 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**

HE251 Community Health

3 class hrs/wk, 3 cr.

A study of community health problems and related agencies, community health programs, health resources, and the relationship of personal health to community health. **Prerequisite:** HE250. **W**

HE252 First Aid

2 class hrs and 2 lab hr/wk, 3 cr.

Theory and procedures for accident prevention and for providing first aid for a variety of illnesses and injuries in home, recreation, school, and civil defense settings. Class fee, \$10. **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. **Prerequisite:** HE252. **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**

ganization 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; structure and organization within individual firms. Studies front office procedures and explores career opportunities. **Sp**

Human Services

HS101 Alcohol Use, Misuse, and Addiction

3 class hrs/wk, 3 cr.

Human Services Presents basic information concerning alcohol, particularly in relation to physiological effects of alcohol on the human body. Information focuses 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**

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. **F, W, Sp**

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 to explore their use in meeting life goals. **F, W, Sp**

HS152 Stress Management

1 class hr/wk, 1 cr.

An introduction to stress management and relaxation techniques. Covers deep breathing, autogenic training, progressive muscle relaxation, meditation, imagery, and systematic desensitization. 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. **W**

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. **F, W, Sp**

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. **W, 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. Focus 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**

HS167 Gerontology

3 class hrs/wk, 3 cr.

Presents aging as an active developmental process which occurs throughout life. Examines social, physical, emotional, and cultural dynamics which influence the aging process. Examines ways of promoting positive involvement throughout life. **F, W, Sp**

HS168 Mental Health and Aging

3 class hrs/wk, 3 cr.

Assumes that emotional problems are often linked to life experiences and established patterns of coping with stress. Studies specific organic and functional mental disorders and presents various approaches to assessment, treatment, and health. **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, Sp**

HS199B Counseling Young Children of Alcoholics

2 class hrs and 2 lab hrs/wk, 3 cr.

Explores methods and a variety of experimental techniques for counseling young children and adolescents of chemically dependent and dysfunctional families. **Prerequisite:** HS101, HS201. **F**

HS199C Alcohol, Drugs and Sexuality

1 class hr/wk, 1 cr.

Examines relationships of chemical dependency, sexuality, and co-dependency. Discusses physiological, psychological, and social factors which affect the sexuality of an alcoholic. **Prerequisite:** HS101 or consent of instructor. **F**

HS199D Adult Children of Alcoholics/Addicts

1 class hr/wk, 1 cr.

Explores relationships between growing up in a chemically-dependent or dysfunctional family and problems as adults. Discusses family dynamics, denial, relationships, work, social skills, and feelings. **F**

HS199E Dreikurs' Principle

14 class hrs/wk for 2 weeks, 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 principles for improving relationships. **Sp**

High School Completion, see page 28.

Home Economics, see also Clothing/Textiles, Foods/Nutrition, Human Development, and Family Studies

HEC101 Orientation to Home Economics

2 lab hrs/wk, 1 cr.

A survey of employment opportunities, training, and preparation required to qualify for various home economic jobs. Also covers new developments in related careers. Offered as needed.

HEC280 Cooperative Work Experience

see AUM280.

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; structure and or-

HS199F Introduction to Eating Disorders

3 class hrs/wk, 3 cr.

Identifies symptoms of food addiction, socio-cultural influences, and effective treatment. Studies stereotypes and role models. **Sp**

HS199I Misuse and Abuse of Alcohol and Drugs Among the Elderly

1 class hr/wk, 1 cr.

Focuses on alcohol and prescription and over-the-counter drugs, taken either alone or in combination. **Prerequisite:** HS101 or consent of instructor. **F**

HS199L Changing Life-Styles

3 class hrs/wk, 3 cr.

Provides information to individuals affected by addiction and information on how to change one's life-style. Discusses communication, prioritizing, goal setting, strategies for change, commitment, and development of a support network. **W**

HS199M Preventing Alcohol and Other Drug Abuse

2 class hr/wk, 2 cr.

Presents major theories, models, and activities to help schools and communities prevent or intervene with drug abuse. **W**

HS199N Implementing Alcohol and Other Drug Prevention Strategies

2 class hrs/wk, 2 cr.

Reviews prevention models and helps in developing needs-assessment tools and planning appropriate prevention programs. **Prerequisite:** HS199M. **Sp**

HS199P Parenting in Recovery

2 class hrs/wk, 2 cr.

Presents a variety of parenting skills for persons recovering from addictions. Discusses dysfunctional family dynamics, normal child development, participants' childhood blocks, and a variety of parenting skills. **F, W, Sp**

HS199Q Physical and Sexual Abuse

3 class hrs/wk, 3 cr.

An overview of how physical and sexual abuse affects individuals and families. Cultural and political implications will be explored. **F**

HS199R Peer-Assistance Training

3 class hrs/wk, 3 cr.

Helps students develop skills effectively and 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. **Sp**

HS199S Child and Adolescent Sexual Abuse Victims and Offenders

3 class hrs/wk, 3 cr.

Focuses on the dynamics of sexual abuse and on treatment intervention techniques for victims and offenders. Students will be acquainted with the indicators of sexual abuse and with treatment interventions. **Prerequisite:** HS199Q or consent of instructor. **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. Assessment and treatment strategies will be discussed. **Prerequisite:** HS199Q or consent of instructor. **Sp**

HS199V Handling the Violent Client

1 class hr/wk, 1 cr.

An introduction to the recognition, prevention, and control of aggressive behavior. Training in prevention of violence through early intervention, includes information on

pre-aggression warning signs, provides practice in defusing violent behavior in physical defense. **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. **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 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. **W**

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. **Sp**

HS210 Biofeedback and Psychology of Health

2.5 class hrs and 1 lab hr/wk, 3 cr.

An introduction to psychological aspects of health. Covers principles of psychophysiology and the application of biofeedback to psychosomatic symptoms and disorders. How to use a temperature trainer, electrodermal unit, electromyograph and electroencephalograph in the laboratory. Class fee, \$5. **F**

HS211 Clinical Applications of Biofeedback

3 class hrs/wk, 3 cr.

Introduces the clinical applications of biofeedback to psychosomatic disorders and general stress management. Includes clinical applications of a temperature trainer, electromyograph, electrodermal unit, and electroencephalograph. **Prerequisite:** HS210 or HS152. Class fee, \$5. **W**

HS212 Biofeedback and Control of Hypertension

2.5 class hrs/wk, .5 lab hrs/wk, 3 cr.

An introduction to psychophysiological self-regulation for control of essential hypertension. Lectures and biofeedback training for individuals wanting to reduce high blood pressure. Class fee, \$5. **F, Sp**

HS260 Group Dynamics

3 class hrs/wk, 3 cr.

Introduction to theory of small group behavior and skills in working with groups. Includes styles of group leadership, roles played by various group members, and supervisor subordinate relationships. **Sp**

HS261 Counseling the Older Adult

3 class hrs/wk, 3 cr.

How to work with and/or provide services for older adults. Covers physical, emotional, environmental, and developmental issues unique to older persons. Includes discussion and practice of communication and counseling skills emphasizing empathy, respect, and genuineness. **Prerequisite:** HS167 or consent of instructor. **Sp**

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. **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:** 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 intervention strategies. **Prerequisite:** 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:** HS170. **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.**

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, inter-related industry composed of food, travel and tourism, lodging, and recreation resource management. Assesses the impact of North America's rapidly changing demographics and life-style 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.

Marketing concepts and techniques in the hospitality industry. **Sp**

HSM083 Hotel, Restaurant, and Travel

Law

3 class hrs/wk, 3 cr.

Legal aspects of the hospitality industry. Identifies areas of potential problems and provides a grounding in preventive tactics. **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**

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.**

HST199B War and Peace in the Nuclear Age

3 class hrs/wk, 3 cr.

Draws upon a wide range of expert opinions as the impact of nuclear weapons upon international relations is considered. **W**

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.**

HST238 Oregon History

3 class hrs/wk, 3 cr.

Explores the history of Oregon from its origins until statehood including establishment of the Hudson's Bay Company, formation of self-government, arrival of the missionaries, settlement of the overlanders, Indian-white relations, treatment of racial minorities, role of women, and everyday life under the provisional and territorial governments. Concentrates on people, events, and the major cultural, political, economic, and societal themes of the period. **F**

HST257 Introduction to Ethnic History—American Indian

3 class hrs/wk, 3 cr.

Native Americans as a minority group, its 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. Recounts 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.**

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. **F, W, Sp**

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. **W**

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. **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.

A survey of the press emphasizing newspaper operations in the United States. Includes history, reporting responsibilities, journalism ethics, and law. For consumers of

news as well as beginning journalism majors. **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**

Japanese

JPN101, 102, 103 First Year Japanese, Terms I, II, III

4 class hrs/wk, 4 cr.

Basic structure of the Japanese language. Intensive aural-oral exercise based on text written in Romanji, Katakana, Hiragana, and some Kanji introduced. Japanese grammar introduced as needed. **Prerequisite:** JPN102: JPN101 or consent of instructor. JPN103: JPN102 or equivalent. Class fee, \$2 each. **JPN101: F, 102: W; 103: Sp**

JPN201, 202, 203 Second Year Japanese, Terms I, II, III

4 class hrs/wk, 4 cr.

Improvement on the basic skills acquired in First Year Japanese. Emphasizes reading and writing, using a Japanese language. Systematically reviews fundamental grammatical structure. **Prerequisite:** JPN201: JPN103 or consent of instructor. JPN202: JPN201 or consent of instructor. JPN203: JPN202. Class fee, \$2 each. **JPN101: F; 102: W; 103: Sp**

Job Search, see Field Experience

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 by legal aids 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**

Literature, see English

Management, see Business Administration

Mechanical Design, see Drafting Technology

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 hrs and 3 lab hrs/wk, 4 cr.

Procedures and principles used in medical offices in administrative duties, marketing, establishment of patient records, employee manual, 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

2 class hrs and 4 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, drugs, and solutions. **Prerequisite:** High school graduate or equivalent and enrolled in Medical Assisting Program. Class fee, \$20. **F**

MED057 Medical Assisting, Advanced Procedures

3 class hrs and 4 lab hrs/wk, 5 cr.

Theory and practice of basic diagnostic and treatment procedures. Collection, preparation, and preservation of specimens for diagnostic studies. **Prerequisite:** MED051, MED056 or consent of instructor. Class fee, \$20. **W**

MED060 Medical Transcription

2 class hr 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 records. **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 hrs 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 hrs 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. **F, Sp**

MED065 Introduction to Medical Coding Systems

3 class hrs/wk, 3 cr.

Covers basic differences between nomenclature and classification systems. Includes basic coding systems as CPT and ICD9-CM and basic abbreviations and format of coding manual. Fundamental application of coding in basic forms, computerized billing, and state and federal agencies. **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, use of Current Procedural Terminology (CPT) and Relative Value Studies (RVS); and reimbursement protocol for unemployment compensation

disability, worker's compensation, federal Medicare, Medicaid, Blue Cross, Blue Shield, Champus, and cross reference reimbursement with Health Maintenance Organization. **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, 056, 057 or MED061, 062. 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.

The relationship of medical staff services with intra-disciplinary systems, nursing services, fiscal management, research and development, and external systems; joint commission on accreditation of hospitals; federal health planning; Medicare, Medicaid, and alternative programs that are major elements of the health care delivery system. **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

10 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, pathol-

ogy, 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.

Manufacturing Technology

MFG050 Introduction to Manufacturing
3 class hrs 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 hrs 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 and the methods. Covers machine tools, tooling, measuring, inspection, welding fabrication, and casting techniques and procedures. Class fee, \$16. **F**

MFG056 Machining Fundamentals I
2 class hrs and 3 lab hrs/wk, 3 cr.

Basic machine shop operations including principles and operations of basic machine tools, measuring tools, bench tools, layout tools, drilling machines, pedestal grinder, and band saws. Class fee, \$20. **F, W, Sp**

MFG057 Machining Fundamentals II
2 class hrs and 3 lab hrs/wk, 3 cr.

Continuation of MFG056. Includes machine operations and setups. **Prerequisite:** MFG056 or consent of program coordinator. Class fee, \$20. **F, W, Sp**

MFG060 Introduction to Manufacturing—Special Needs
3 class hrs and 9 lab hrs/1 wk, 1 cr.

A survey of mechanical trades and employment prospects for counselors, handicapped persons and rehabilitation advisors. Class fee, \$10. **Su**

MFG063 Manufacturing Print Reading and Sketching
3 class hrs 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 I
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, engine lathes, and milling machines. **Prerequisite:** Consent of program coordinator. Class fee, \$30. **F**

MFG065 Manufacturing Fundamentals II
3 class and 6 lab hrs/wk, 5 cr.

Fundamental principles, setup, and operation of the engine lathe. Includes continued knowledge and skill development in the area of benchwork processes, basic milling operations, measuring inspection, and quality control. **Prerequisite:** Consent of program coordinator. Class fee, \$30. **W**

MFG066 Manufacturing Fundamentals III
3 class and 6 lab hrs/wk, 5 cr.

Emphasizes the principles, setup, and operation of the milling machines. Includes continued knowledge and skill development in the areas of benchwork, measuring, inspection, quality control, and fundamental lathe processes. Class fee, \$30. **Sp**

MFG068 Manufacturing Measuring, Inspection and Quality Control
2 class hrs 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, \$5. **W**

MFG070 Introduction to Manufacturing—Nontraditional
3 class hrs and 9 lab hrs/1 wk, 1 cr.

A survey of manufacturing trades and employment prospects for persons interested in nontraditional work roles. Class fee, \$10. **Su**

MFG072 Manufacturing Materials and Processes
2 class and 4 lab hrs/wk, 3 cr.

Introduction to materials used by modern industry to manufacture industrial products. Covers ferrous and non-ferrous alloys, space age and precious metals, and non-metallic materials. Production procedures of parts from manufacturing through heat treatment, grinding, finishing, and assembly. Includes demonstrations of finishing processes such as hard surfacing, chrome plating, and metal spraying. Class fee, \$30. **W**

MFG073 Applied Manufacturing Mathematics
3 class hrs/wk, 3 cr.

Applies mathematics in solving typical machine shop problems. Includes powers and roots of numbers, segments of circles, transposition and various formulas, practical trigonometry, geometrical figures, tapers, tolerances and allowances, gearing problems, and bearing fits. **Prerequisite:** MTH053 or consent of program coordinator. Class fee, \$5. **Sp**

MFG076 Manufacturing Cutting Tools
3 class and 6 lab hrs/wk, 5 cr.

Provides knowledge and skill development in the selection and application of cutting tools. Includes grinding and nontraditional methods used in removing material to produce machined parts. **Prerequisite:** MFG066, MFG072 or consent of program coordinator. Class fee, \$30. **Sp**

MFG077 Mechanical Systems
3 class hrs and 4 lab hrs/wk, 4 cr.

An introduction to transfer of power methods used by industry, and to industrial products relating to basic laws of physics. Emphasizes general types of mechanical equipment used, purpose of components, equipment maintenance requirements, and terminology of electrical components. **Prerequisite:** Math skills as approved by program coordinator. Class fee, \$10. **Offered as needed.**

MFG078 Hydraulic and Pneumatic Systems
2 class hrs 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 ultimate use of these

circuits. Covers selection, installation, and maintenance of hydraulic and pneumatic systems. **Prerequisite:** MTH051 or approval of program coordinator. 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 air, and electrical equipment used; the purpose of the components; the maintenance requirements of the equipment; and terminology. **Prerequisite:** Consent of program coordinator. Class fee, \$20. **W**

MFG081 Advanced Manufacturing I
3 class and 6 lab hrs/wk, 5 cr.

Advanced instruction in the use of drills, saws, and lathes. Automated processes included in tracer and CNC operations. **Prerequisite:** Consent of program coordinator. Class fee, \$40. **F**

MFG082 Advanced Manufacturing II
3 class and 6 lab hrs/wk, 5 cr.

Emphasizes advanced theory and skill in horizontal and vertical milling. Includes setup, operation, tool selection and application, proper feed, calculation of speeds, and cutting depth. **Prerequisite:** Consent of program coordinator. Class fee, \$40. **W**

MFG083 Advanced Manufacturing III
3 class and 6 lab hrs/wk, 5 cr.

Advanced job shop repair work. Emphasizes 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 or experience are applied to the design, and production of a completed product of parts. **Prerequisite:** Consent of program coordinator. Class fee, \$40. **Sp**

MFG088 Fluid Power Systems
3 class hrs and 4 lab hrs/wk, 4 cr.

Principles of hydraulic and pneumatic systems. Includes the selection, installation, and maintenance of hydraulic and pneumatic circuit systems, including circuits with electrical controls. **Prerequisite:** Math skills as approved by program coordinator. Class fee, \$10. **Offered as needed.**

MFG092 Jig and Fixture Design and Applications
2 class hrs and 7 lab hrs/wk, 4 cr.

Introduction to the design, fabrication and application of jigs and fixtures used in industry. **Prerequisite:** Consent of program coordinator. Class fee, \$20. **Sp**

MFG093 CNC Fundamentals
3 class and 6 lab hrs/wk, 5 cr.

Introduces students to computer numerical control (CNC) terminology, applications, and operations in manufacturing industries. **Prerequisite:** Consent of program coordinator. Class fee, \$10. **Sp, Offered as needed.**

MFG094 CNC Programming
2 class and 6 lab hrs/wk, 4 cr.

Introduces CNC programming techniques as they apply to the manufacturing industry. **Prerequisite:** Consent of program coordinator. Class fee, \$10. **F**

MFG095 CAM Applications
2 class and 6 lab hrs/wk, 4 cr.

Introduces Computer Aided Manufacturing (CAM). **Prerequisite:** Consent of program coordinator. Class fee, \$20. **W**

MFG096 CAD-CAM Integrations

2 class and 6 lab hrs/wk, 4 cr.
Introduces transfer of CAD-generated two- and three-dimensional drawings to a CAM system. Class fee, \$20. **Offered as needed.**

MFG097 Manufacturing Working Relations

3 class hrs/wk, 3 cr.
Relationships and responsibilities of labor and management. Includes study of these 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; company image and reputation. **Sp**

MFG280 Cooperative Work Experience

see AUM280.

Multidisciplinary Studies**MS251 The Art of Discovery**

3 class hrs/wk, 3 cr.
Introduces selected significant discoveries in the ancient Greek world. 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.
A study of the Renaissance, concentrating on relationships among scientific discoveries, philosophical world views, artistic accomplishments, and social movements. **W**

MS253 The Art of Discovery

3 class hrs/wk, 3 cr.
A study of the late 19th and 20th centuries, concentrating on relationships among scientific discoveries, philosophical world views, artistic developments, and social movements. **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. **Offered as needed.**

Mathematics**MTH007 Whole Numbers**

5 lab hrs/wk, 1 cr.
Fundamental mathematics—addition, subtraction, multiplication, and division of whole numbers. Includes two-step application problems of whole numbers. **F, W, Sp, Su**

MTH008 Fractions

5 lab hrs/wk, 1 cr.
Fundamental mathematics—addition, subtraction, multiplication, and division of fractions. Includes two-step application problems of fractions. **F, W, Sp, Su**

MTH009 Decimals, Proportions and Percents

5 lab hrs/wk, 1 cr.
Fundamental mathematics—addition, subtraction, multiplication, and division of decimals. Includes two-step application problems of decimals. **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. **F, W, Sp, Su**

MTH052 Introduction to Algebra and Geometry

3 class hrs/wk, 3 cr.
Covers basic concepts in algebra and geometry to introduce students to algebraic and geometric techniques and applications. Includes signed numbers; elements of algebra; equations and formulas; ratio and proportion; common geometric figures; basic geometric measures of perimeter, area and volume; and their practical applications. **Prerequisite:** MTH051 or equivalent. **F, W, Sp, Su**

MTH053 Introduction to Trigonometry with Geometry

3 class hrs/wk, 3 cr.
Introduces further geometric techniques and basic trigonometry. Covers basic angle concepts, the Pythagorean theorem, similar triangles, right triangle trigonometry, some oblique triangle trigonometry, and their occupational applications. **Prerequisite:** MTH052. **F, W, Sp, Su**

MTH061 Business Mathematics

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:** MTH051 or equivalent. **F, W, Sp, Su**

MTH062 Applied Business Math

3 class hrs/wk, 3 cr.
Continuation of MTH061. Includes bank notes and discounts, compound interest, present value, annuities, sinking funds, installment loans, depreciation, financial statements, and business profits and losses. **Prerequisite:** MTH061 or equivalent. **W, Sp**

MTH065 Introductory Algebra

4 class hrs/wk, 4 cr.
For students who have not had any previous algebra courses. Meets entry-level requirements of MTH081. Also meets course requirements for some voc-tech students and other students who are required to complete one algebra course. Helps students overcome lack of study skills or fear of mathematics and gain a strong, fundamental background in elementary algebra. Prepares students for the MTH070, MTH100 and MTH101 sequence. Covers algebraic and arithmetic operations with real numbers, solving linear equations with applications, ratio and proportions, and scientific notation. Introduces rational expressions and equations. **Prerequisite:** MTH051 or equivalent. **F, W, Sp, Su**

MTH070 Beginning 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:** MTH065 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:** 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:** 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:** MTH070 or equivalent. **F, W, Sp, Su**

MTH078 Applied Trigonometry

3 class hrs/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:** 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:** 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:** 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:** 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**

MTH100 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:** MTH070 or equivalent. **F, W, Sp, Su**

MTH101 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) determinants; sequences and series; conic sections with transformations; and algebra of matrices. **Prerequisite:** MTH100 or equivalent. **F, W, Sp, Su**

MTH102 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 conic, and trigonometric form of complex numbers. **Prerequisite:** MTH101 and MTH075 or equivalent. **F, W, Sp, Su**

MTH103 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:** MTH101 or equivalent. **F, W, Sp, Su**

MTH106 Elementary Calculus

4 class hrs/wk, 4 cr.

An intuitive approach to differential and integral calculus. Emphasizes techniques of calculus in applied problem solving. Designed primarily for business, social science, life science or liberal arts students. **Prerequisite:** MTH101 or equivalent. **F, W, Sp**

MTH191 Mathematics for Elementary Teachers

3 class hrs/wk, 3 cr.

First of a three-term sequence in mathematics for prospective elementary teachers. Partially fulfills mathematical requirements for elementary education students. Emphasizes concepts, terminology, and skills encountered in kindergarten through ninth grade mathematics curriculum. Primarily studies subject matter, but several concepts are presented through concrete examples utilizing manipulative materials, such as attribute games, multibase arithmetic blocks. **Prerequisite:** MTH070 or equivalent. **F**

MTH192 Mathematics for Elementary Teachers

3 class hrs/wk, 3 cr.

Continuation of MTH191. Further concepts, terminology, and skills encountered in the kindergarten through ninth grade mathematics curriculum, including rational and real numbers, ratio and proportion, consumer math, probability and statistics, and a brief introduction to the IBM BASIC programming language. **Prerequisite:** MTH070 or equivalent. **W**

MTH193 Mathematics for Elementary Teachers

3 class hrs/wk, 3 cr.

Continuation of MTH191 and MTH192. Concepts, terminology and skills encountered in the kindergarten through ninth grade geometry curriculum, with some concepts presented through an introduction to the LOGO programming language. Also considers additional elements of elementary mathematics education and teaching

strategies. **Prerequisite:** MTH070 or equivalent. **Sp**

MTH199 Introduction to Contemporary Mathematics

3 class hrs/wk, 3 cr.

Entry-level mathematics course for the liberal arts student. Demonstrates contemporary applications of mathematics in management science, statistics, social choice and applied geometry. **Prerequisite:** MTH070 or two years of high school mathematics at Algebra I level or above. **W**

MTH200 Calculus

5 class hrs/wk, 5 cr.

First term of the four-term sequence in college calculus. Covers limits, continuity, differentiation, extrema, curve sketching, derivative applications, integration, integral functions, approximate integration, theory of calculus including derivation of theorems and formulas, as well as applications from many fields, particularly science and engineering. **Prerequisite:** MTH102. **F, Sp**

MTH201 Calculus

5 class hrs/wk, 5 cr.

Continuation of MTH200. 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, as well as applications from many fields, particularly science and engineering. **Prerequisite:** MTH200 or equivalent. **F, W**

MTH202 Calculus

4 class hrs/wk, 4 cr.

A continuation of MTH203. Covers infinite sequences and series and topics in calculus of vector fields. **Prerequisite:** MTH203 or equivalent. **Sp**

MTH203 Calculus

4 class hrs/wk, 4 cr.

Continuation of MTH201. Covers multivariate calculus including vector-valued functions, partial derivatives, multiple integration, and applications. **Prerequisite:** MTH201 or equivalent. **Sp**

MTH221 Applied Differential Equations

4 class hrs/wk, 4 cr.

Solution techniques for special first-order nonlinear differential equations including linear differential equations and Laplace transforms. Applications in physical and life sciences. **Prerequisite:** MTH203 or equivalent. **F**

MTH231 Discrete Mathematics

4 class hrs/wk, 4 cr.

Presents a mathematical system with four major application areas: logic, sets, Boolean algebra and switching circuits. Presents theory in each area as a system of axioms, elements, and operations. Each area has specific applications to other fields of study. **Prerequisite:** MTH101 or equivalent. **W**

MTH241 Linear Algebra

4 class hrs/wk, 4 cr.

For students in engineering, computer science, business, life sciences, and physical sciences. Includes matrices, determinants, real vector spaces, inner product spaces, linear transformations, eigenvalues and eigenvector, and systems of linear differential equations. Theory as well as application are emphasized. **Prerequisite:** MTH200 or equivalent. **Sp**

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. May be repeated for a maximum of 6 credits. **F, W, Sp**

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 6 credits. **F, W, Sp**

MUS101 Music Fundamentals, Term 1

3 class hrs/wk, 3 cr.

An introduction to the principles and foundations of music. First of a three-term sequence. **F**

MUS102 Music Fundamentals, Term 2

3 class hrs/wk, 3 cr.

Second of a three-term sequence. **Prerequisite:** MUS101. **W**

MUS103 Music Fundamentals, Term 3

3 class hrs/wk, 3 cr.

Third of a three-term sequence. **Prerequisite:** MUS102. **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. **Sp**

MUS197 Chorus

4 lab hrs/wk, 2 cr.

Rehearsal and performance of many types of styles of choral literature. **Prerequisite:** Consent of instructor, 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**

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 1980s. **Sp**

Nondestructive Testing

NDT051 Nondestructive Testing I

1 class hr and 2 lab hrs/wk, 2 cr.
Basic theory, technique, and equipment used for magnetic particle and liquid penetrant test methods. Applies to inspection and non-destructive testing used in the metal fabricating industry for quality control. Class fee, \$15. **F**

NDT061 Nondestructive Testing II (Ultrasonics)

2 class hrs and 3 lab hrs/wk, 3 cr.
Introduces theory, equipment, and techniques used in nondestructive testing. Includes applying ultrasonic test methods as means of quality control in industry. Class fee, \$5. **W**

NDT071 Nondestructive Testing III

2 class hrs and 2 lab hrs/wk, 3 cr.
Introduces theory, techniques, and equipment used in running radiographic inspection and nondestructive tests as a means of quality control in industry. Class fee, \$20. **Sp**

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. **NOR101:F; 102:W; 103:Sp**

Nursing

NUR050 Obstetrical Nursing

2 class hrs 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 currently enrolled nursing student. **Offered as needed.**

NUR060 Survival Skills for Nursing

3 class hrs/wk, 3 cr.
Introduces basic nursing skills. Includes a survey of the nursing profession, development of study skills, learning styles, coping strategies, attitude, motivation, and interpersonal relationships. Class fee, \$5. **F, W, Sp, Su**

NUR106 Nursing

5 class hrs and 15 lab hrs/wk, 10 cr.
Basic concepts and beginning skills for providing safe nursing care. Emphasis upon meeting basic human needs in physical and psycho-social areas. Theory and clinical experiences are integrated throughout the term. **Prerequisite:** Enrollment in the nursing program. Class fee, \$30. **F**

NUR108 Nursing

5 class hrs and 15 lab hrs/wk, 10 cr.
Presents concepts and skills which 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 altera-

tions related to simple conditions. **Prerequisite:** NUR106. Class fee, \$30. **W**

NUR109 Nursing

5 class hrs 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. Class fee, \$30. **Sp**

NUR111 LPN Re-entry

7 class hrs and 15 lab hrs/wk, 12 cr.
A review and updating for the inactive Licensed Practical Nurses who wish to return to practice. **Prerequisite:** Eligibility for practical nurse licensure and have applied for, or have obtained, a limited license from the Oregon State Board of Nursing. Class fee, \$20. **F**

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.**

NUR204A Trends and Issues in Nursing

1 class hr/wk, 1 cr.
An introduction to the professional, legal, and ethical responsibilities of nurses. Addresses issues of ethics and values, nursing role transition, professionalism, charting practices, malpractice and liability insurance, trends in nursing, substance abuse in health professions, and health care delivery systems. **Prerequisite:** Enrollment in second year of nursing program. **F**

NUR204B Trends and Issues in Nursing

1 class hr/wk, 1 cr.
For students preparing to enter the nursing profession. Includes information on professional organizations and publications, advanced educational opportunities, licensure and board exams, resume writing and job search, and collective bargaining. **Prerequisite:** NUR204A. **W**

NUR206 Nursing

6 class hrs and 16 lab hrs/wk, 11 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 hrs and 16 lab hrs/wk, 11 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 hrs 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**

NUR211 RN Re-entry

7 class hrs and 15 lab hrs/wk, 12 cr.
A review and update for the inactive Registered Nurses planning to return to practice. **Prerequisite:** Eligibility for registered nurse licensure and have applied for, or have obtained, a limited license from the Oregon State Board of Nursing. Class fee, \$20. **F**

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.**

NUR221 Nursing Administration in Long Term Care Facilities

3 class hrs/wk, 3 cr.
Designed for RN's employed 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 roles of circulating and scrubbing nurses, sterilization, patient support, surgical techniques and instrumentation. Practical experience included. **Prerequisite:** NUR250. 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

3 class hrs/wk, 3 cr.
Focuses on effective, cognitive, and physical changes which 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 III

3 class hrs 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. 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. **W**

NUR298E Introduction to Physical Assessment for Nurses

3 class hrs and 1 lab hr/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.

Office Administration and Technology

OA051 Civil Service Exam Preparation

1 class hr 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. **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. **F, W, Sp, Su**

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. **F, W, Sp, Su**

OA061 Electronic Calculators

2 class hrs/wk, 2 cr.

An introduction to electronic printing calculators to solve simple business and mathematical problems. **Prerequisite:** MTH061 or equivalent. 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. Class fee, \$4. **F, W, Sp, Su**

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**

OA065P WordPerfect for Personal Use

1 class hr 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/Microcomputers (WordPerfect). **Prerequisite:** Touch typing ability; minimum 30 words per minute. Class fee, \$12. **F, W, Sp, Su**

OA067 Word Processor Operation

1 class hr 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, \$12. **F, W, Sp, Su**

OA070 Office Microcomputer Applications

3 class and 2 lab hrs/wk, 4 cr.

Integrated software training using MicroSoft Works. Includes training in word processing, database, spread sheet, graphics, and communications on the microcomputer. **Prerequisite:** Touch typing ability of 30 wpm; OA200. Class fee, \$12. **W, Sp**

OA072 Briefhand II

3 class hrs and 2 lab hrs/wk, 4 cr.

Continuation of OA114. Students work on speed development and transcribe from briefhand notes using electric or electronic typewriters. Emphasizes writing and reading technique, vocabulary, spelling and punctuation. **Prerequisite:** OA123 or concurrent enrollment and OA114. Class fee, \$12. **W**

OA073 Briefhand III

3 class hrs and 2 lab hrs/wk, 4 cr.

Further review of the theory and writing techniques. Advanced speed-building and production of quality business correspondence. Emphasizes transcription skills. **Prerequisite:** OA072. 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 clients; keeping financial records; filing legal documents, when and how to use court and non-court documents and procedures; setting priorities, making decisions and integrating office skills. **Prerequisite:** OA116, OA122. Class fee, \$6. **W**

OA076 Legal Office Procedures II

2 class hrs 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. **Sp**

OA077 Legal Machine Transcription I

2 class and 2 lab hrs/wk, 3 cr.

Practice in typing from machine dictation. Forms, documents, and correspondence re-

lated to the legal field. **Prerequisite:** OA075, OA076, and OA225 or consent of instructor. Class fee, \$12. **F**

OA078 Legal Machine Transcription II

3 class hrs/wk, 3 cr.

A continuation of OA077 with emphasis on increased skill in typing and handling of materials in producing legal documents. **Prerequisite:** OA077. Class fee, \$12. Offered as needed.

OA080 Medical Machine Transcription

1 class hr 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:** MED051 and typing speed of 40 words per minute. Class fee, \$12. **F, Sp**

OA084 Business English I

3 class hrs/wk, 3 cr.

Basic English skills including spelling, grammar, business vocabulary, and dictionary use. Study of and practice in writing clear, concise, effective sentences. **F, W, Sp, Su**

OA085 Business English II

3 class hrs/wk, 3 cr.

A continuation of OA084. Practice in writing clear and concise paragraphs in a variety of short papers, memos, request and thank you letters, and a short formal report. Emphasizes improving punctuation, grammar, and spelling skills. **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 and exposes them to new areas they can nurture. Concentrates on helping students develop salable personal skills. Emphasizes traits businesses accept and appreciate in their employees. **Sp**

OA089 Filing

2 class hrs/wk, 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 non-correspondence papers. **W, Sp**

OA089A Alphabetic Filing

2 lab hrs/wk, 1 cr.

How to master and apply 14 comprehensive alphabetic indexing rules. Students use a text-workbook and a computer to gain proficiency in indexing names of individuals, businesses, institutions, organizations, and government agencies. **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 deter-

mine types of payroll records required. Provides practice computing and recording wages and salaries both manually and on computer. Preparation of quarterly reports for income taxes, Federal Insurance Contributions Act (FICA), Federal Unemployment Tax Act (FUTA), and State Unemployment Tax Act (SUTA). **Prerequisite:** OA090 or BA051 or BA211. Class fee, \$12. **W, Sp**

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.**

OA098B CPS Business Behavior Review
3 class hrs for 4 weeks, 1 cr.

An overview of effective behavior in the business world. Covers organization types, group activities, motivation, leadership, and the change process. Specifically oriented as a review for the Certified Professional Secretary (CPS) exam. **Offered as needed.**

OA098C CPS Accounting Review
3 class hrs for 7 weeks, 2 cr.

An overview of accounting for persons who have some knowledge of accounting principles. Specifically oriented as a review for the Certified Professional Secretary (CPS) exam. **Offered as needed.**

OA098D CPS Business Law Review
3 class hrs for 7 weeks, 2 cr.

An overview of business law for persons who have completed courses in office administration or persons who have never enrolled in an office administration course at community college or university levels. Oriented as a review for the Certified Professional Secretary (CPS) exam. **Offered as needed.**

OA098E CPS Economics and Management Review

2 class hrs for 5 weeks, 1 cr.
A survey for persons who have completed office administration courses and an introduction for persons who have never enrolled in office administration courses at community college or university levels. Specifically oriented as a review for the Certified Professional Secretary (CPS) exam. **Offered as needed.**

OA098F CPS Office Administration and Communication Review

2 class hrs for 5 weeks, 1 cr.
For those who have completed office administration courses and an introduction for persons who have never enrolled in office administration courses at community college or university levels. 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 and capitalization rules. Includes use of

office reference manuals. **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**

OA111 Shorthand I

3 class hrs and 2 lab hrs/wk, 4 cr.
Beginning course in Gregg Shorthand Centennial Edition. A study of principles to enable students to take simple dictation and transcribe in longhand early in the course. Includes proper recording habits, spelling, vocabulary, and punctuation. **Prerequisite:** OA122 and OA084 or concurrent enrollment. Class fee, \$12. **F**

OA112 Shorthand II

3 class hrs and 2 lab hrs/wk, 4 cr.
Continuation and review of shorthand theory plus transcription, including special forms, abbreviated forms, punctuation, and expanded vocabulary. Emphasizes shorthand writing from dictation to increase speed and skill, and transcribing from shorthand notes on a typewriter. **Prerequisite:** OA111 and OA123 or concurrent enrollment. Class fee, \$12. **W**

OA113 Shorthand III

3 class hrs and 2 lab hrs/wk, 4 cr.
Expanding recall of shorthand theory, developing dictation and transcription skills, and producing quality business correspondence. Advanced vocabulary, phrase-building, and word building based on basic Gregg shorthand principles. **Prerequisite:** OA112. Class fee, \$12. **Sp**

OA114 Briefhand 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 transcribing in longhand early in the course. Emphasizes good recording habits, vocabulary, spelling, and punctuation. Useful as a vocational or personal skill. **Prerequisite:** OA122 and OA084 or concurrent enrollment. Class fee, \$12. **F**

OA116 Office Procedures
3 class hrs/wk, 3 cr.

An introduction to administrative support activities. Includes telephone usage, development of effective listening skills, mailing and shipping services, preparation of financial records, plans for meetings and conferen-

ces, travel arrangements and scheduling appointments, and meeting with the public. Presents new technology in today's businesses. **F, W, Sp**

OA117 Executive Office Simulation
2 class hrs and 2 lab hrs/wk, 3 cr.

A work-flow simulation to give students experience in working as team members with office co-workers. Applies principles and skills acquired in OA116. **Prerequisite:** OA116, OA122 or OA123, OA084, or equivalent. 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 inputting or retrieving information, 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 keyboarding 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 and type 40 words per minute. Class fee, \$12. **W, Sp**

OA123A Formatting A

2 lab hrs/wk, 1 cr.
First one-third of a three-part series. 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. Class fee, \$4. **F, W, Sp, Su**

OA123B Formatting B

2 lab hrs/wk, 1 cr..

Second one-third of a three-part series. 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..

Final one-third of a three-part series. Covers format styles for business letters and envelopes, memorandums, business forms, financial statements, and reports. **Prerequisite:** OA123B. Class fee, \$4. **F, W, Sp, Su**

OA124 Word Processing—Advanced Formatting Applications**OA124P Advanced Formatting: WordPerfect****OA124S Advanced Formatting: WordStar****OA124W Advanced Formatting: Wang System**

2 class and 3 lab hrs/wk, 3 cr.

How to apply word processing principles. Stresses correct techniques and independent judgment. Provides extensive practice in formatting, revising, and proofreading from dictated, typed, and hand-written material. **OA124:** **Prerequisite:** OA123 and 45 words per minute touch keying ability. **OA124P:** **Prerequisite:** OA201P and 45 words per minute touch keying ability. **OA124S:** **Prerequisite:** OA0201S and 45 words per minute touch keying ability. **OA124W:** **Prerequisite:** OA201W and 45 words per minute touch keying ability. Class fee, \$12 each. **Offered as needed.**

OA199D Introduction to PageMaker

1 class hr/wk, 1 cr.

Hands-on instruction with Aldus PageMaker 3.0 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 and the dedicated word processor. **Prerequisite:** Touch typing ability. Class fee, \$12. **F, W, Sp, Su**

OA201P Word Processing Procedures I—WordPerfect**OA201S Word Processing Procedures I—WordStar****OA201W Word Processing Procedures I—Wang**

2 class and 2 lab hrs/wk, 3 cr. each

Provides basic training in operation of dedicated word processors. **Prerequisite:** Touch typing ability of 45 wpm. Class fee, \$12 each. **F, W, Sp, Su**

OA202 Word Processing Procedures II

2 class hrs and 2 lab hrs/wk, 3 cr.

Provides training in operation of special features of a dedicated word processor, including basic glossary, sort, math, and advanced functions. **Prerequisite:** OA201W. Class fee, \$12. **Offered as needed.**

OA204P Advanced WordPerfect

2 class and 2 lab hrs/wk, 3 cr.

Training on IBM-compatible computers for persons with basic skills and knowledge of WordPerfect. **Prerequisite:** OA201P or proficiency in basic WordPerfect. Class fee, \$12. **F, W, Sp, Su**

OA205 Desktop Publishing—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, 30 words per minute minimum. Class fee, \$6. **W**

OA211 Shorthand/Briefhand Skillbuilding

2 class hrs and 2 lab hrs/wk, 3 cr.

A continuation of shorthand/briefhand development. Emphasizes office-related transcription skills and improvement of shorthand or briefhand vocabulary and dictation speeds. **Prerequisite:** OA113 or OA073. Class fee, \$12. **F**

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. **Sp**

OA226B Machine Transcription II-B

2 lab hrs/wk, 1 cr.

A continuation of OA226A. **Prerequisite:** OA226A or equivalent. Class fee, \$4. **Sp**

OA226C Machine Transcription II-C

2 lab hrs/wk, 1 cr.

A continuation of OA226B. **Prerequisite:** OA226B or equivalent. Class fee, \$4. **Sp**

OA280 Cooperative Work Experience

see AUM280.

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, Criminal Justice, Visual Communications**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.

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; advanced methods of team play; game strategy; training and conditioning; officiating experience.

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, \$5.

PE185AJ,AK,AL Archery—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each

Fundamentals of archery including safety, history, care and use of equipment, basic rules, skills techniques, and target shooting. Emphasizes self-testing and improvement. Class competition in regulation and novelty shoots. Intermediate and advanced courses include more emphasis on shooting perfection, self-improvement, analysis of errors. Class fee, \$5 each.

PE185BA,BB,BC**Badminton—Beginning, Intermediate, Advanced**

3 lab hrs/wk, 1 cr. each

Fundamental skills of serving, clears, drop smash, backhand, singles and doubles play, terminology, and rules. Intermediate includes practice in the overhead clear. Advanced covers perfection of techniques, skills, and strategies through sophisticated drills and routines. Competitive play patterns emphasized. Class fee, \$5 each.

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, \$5 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, \$5 each.

PE185BO Basketball Officiating

2 class hrs and 1 lab hr/wk, 1 cr.

Officiating techniques for beginning and novice referees. Includes rules, mechanics, conditioning, and job opportunities. Class fee, \$5.

PE185BP,BQ,BR Billiards—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each

Fundamental skills, strategy, application of rules, etiquette, and competitive play.

PE185BS,BT,BU Body Building—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each

Exercises to increase muscularity, muscular definition, and muscular power to develop physique. Class fee, \$5 each.

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. Concern given to cardiovascular improvement, flexibility, and strength improvement through use of aerobic exercise and strength apparatus. Class fee, \$5 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, \$5 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.

PE185CW,CX,CY Cycling—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each

Cycling techniques including proper bicycle fitting, correct pedaling, safety, maintenance, and touring. Special emphasis on physical fitness.

PE185DA,DB,DC Aerobics, Low Impact—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr.

Beneficial cardiovascular and health exercises with one foot on the floor. Prevent jar-

ring to weight-bearing parts of the body. Class fee, \$5 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, \$5 each.

PE185DJ,DK,DL Dance Modern—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr.

Presents a variety of modern dance styles. Introduces concepts of space, time, and force into movement and dance techniques. Class fee, \$5 each.

PE185DM,DN,DO Dance Aerobic—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr.

Dance routines which provide cardiovascular exercise. Class fee, \$5 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, \$5 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: PE185DW and DW. Class fee, \$5 each.

PE185DY Dance/Tap, Beginning

3 lab hrs/wk, 1 cr.

Introduces basic tap steps of varying degrees of difficulty. Class fee, \$5.

PE185FA,FB,FC Fencing—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each

Safe and competent handling of weapons with emphasis on foil. Initial position, en garde, salute, lunge and recovery, basic parries, basic attack and defense movements, fencing bouts, and scoring. Class fee, \$5 each.

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, \$5 each.

PE185FM,FN,FP Fitness Appreciation—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each

Circuit training, jogging, running, and exercise programs designed for lifetime fitness. Instruction in diet and nutrition as aids to physical and mental fitness. Class fee, \$5 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, \$5 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.

PE185JQ,JR,JS Judo—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr. each

Instruction in fundamental personal defense skills, precautionary safety measures, countering attacks, etc.

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.

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, \$5 each.

PE185LD Logging Sports—Beginning

3 lab hrs/wk, 1 cr.

Fundamentals of competition logging sports. Safety practices for each event are stressed.

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 a lifeguards. Prerequisite: Minimum age 13 years. 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.

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.

PE185PR,PS,PT

Backpacking—Beginning, Intermediate, Advanced

3 lab hrs/wk, 1 cr.

An introduction to backpacking.

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, \$5 each.

PE185RD Rifle**Marksmanship—Beginning**

3 lab hrs/wk, 1 cr.

Fundamentals of smallbore rifle target shooting, including gun safety, basic parts of the rifle and equipment, range commands and procedures, targets and scoring, positions, and firing of .22 caliber ammunition.

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.

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.

PE185SA,SB,SC Scuba**Diving—Beginning, Intermediate,****Advanced**

3 lab hrs/wk, 1 cr. each

Skills and techniques necessary for proper and safe performance of underwater swimming and diving. Covers proper use and care of diving equipment, potential dangers of underwater swimming and diving, and procedures to avoid those dangers.

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. **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.

PE185SH,SJ,SK Skiing—Beginning,**Intermediate, Advanced**

3 lab hrs/wk, 1 cr. each

Fundamental skills and techniques including snowplow turns, traverse-stem turns, sidelip, uphill christie, beginning parallel, and parallel turn. Advanced includes free skiing, powder, phase II, etc.

PE185SL,SM,SN Total**Fitness—Beginning, Intermediate,****Advanced**

3 lab hrs/wk, 1 cr. each

Calisthenics and jogging to achieve toning and total fitness. These exercises, when combined with a reduction in intake, may result in loss of inches and pounds. Includes nutritional information. Class fee, \$5 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, \$5 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.

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.

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.

PE185TA,TB,TC Table Tennis—**Beginning, Intermediate, Advanced**

3 lab hrs/wk, 1 cr. each

Class fee, \$5 each.

PE185TF,TG,TH Tennis—Beginning,**Intermediate, Advanced**

3 lab hrs/wk, 1 cr. each

Beginning: fundamental skills including forehand, backhand, serve strategy, application of rules, and etiquette. Intermediate: perfection of skills and strategy in singles and doubles play. Advanced: continued practice in skills and strategy with emphasis on competitive play. Class fee, \$5 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, \$5 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, \$5 each.

PE185WD,WE,WF Weight Training—**Beginning, Intermediate, Advanced**

3 lab hrs/wk, 1 cr. each

Fundamental safety procedures, pre-conditioning for weight training, and progressive resistance for lifetime physical fitness. For students of all ages. Class fee, \$5 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.

PE185WR Racewalking

3 lab hrs/wk, 1 cr.

Fundamentals of racewalking.

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, \$5 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**PE194BY Basic Rhythms**

3 lab hrs/wk, 2 cr.

Basic forms of locomotion, creative movement, folk and square dances used in elementary school activities. Class fee, \$5.

PE194FW Fundamentals of Movement

3 lab hrs/wk, 2 cr.

Human movement principles; communication and expression through movement.

PE194GR Games and Relays

3 lab hrs/wk, 2 cr.

Emphasis on skills developed through games and relays.

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, \$5.

PE194TF Tennis—Professional

1 class and 2 lab hrs/wk, 2 cr.

For physical education majors. Class fee, \$5. **Sp**

PE194TR Track and Field

3 lab hrs/wk, 2 cr.

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. **Offered as needed.**

PE231 Human Performance—Fitness**for Contemporary Living**

3 class hrs/wk, 3 cr.

Exercise and how it affects the human body. Through lecture and laboratory experiences, students may increase their understanding of their own levels of health and fitness. An assessment of a personal profile may guide students to develop and maintain individualized, lifetime "wellness" programs. **F, W, Sp**

PE232WW,WX,WY Backpacking and**Orienteering, Beginning, Intermediate****and Advanced**

1 class and 2 lab hrs/wk, 2 cr. each

Builds an appreciation for the outdoors. Provides training and promotes respect for nature for developing such lifetime activities as hiking and backpacking. Class fee, \$20. **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. **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, \$5. **W**

PE294BD Badminton—Professional

1 class and 2 lab hrs/wk, 2 cr.

For physical education majors. Class fee, \$5.

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, \$5. **F**

PE294FD Soccer—Professional Activities

1 class and 2 lab hrs/wk, 2 cr.

Prepares students to teach or coach soccer. Includes both discussion and practical application of basic soccer skills, rules and regulations, strategy, and coaching techniques, as well as some practice teaching and coaching situations. **Prerequisite:** Beginning soccer or consent of instructor. Class fee, \$5.

PE294FH Field Sports—Professional

1 class and 2 lab hrs/wk, 2 cr.

Presents teaching, techniques and basic skills for soccer, speedball, touch football, and field handball. Class fee, \$5.

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, \$5.

PE294TR Track and Field—Professional

1 class and 2 lab hrs/wk, 2 cr.

For physical education majors. Class fee, \$5.

PE294VP Professional**Activities—Volleyball**

1 class and 2 lab hrs/wk, 2 cr.

Includes skill progressions, knowledge, strategy, practice, conditioning, rules interpretation, and teaching and coaching techniques. Class fee, \$5. **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, \$5. **W**

Physics**PH051 Practical Physics**

3 class hrs 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 hrs 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:** PH051, MTH052 or equivalent, or consent of instructor. Class fee, \$8. **Sp**

PH081 Applied Physics

3 class hrs 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 hrs 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, and light. 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**

PH201 General Physics

3 class hrs and 3 lab hrs/wk, 4 cr.

First term of sequence. Covers classical mechanics including motion, force, momentum, energy, and power. Applications range from motions of planets to collisions between atomic particles. **Prerequisite:** MTH101. Class fee, \$12. **F**

PH202 General Physics

3 class hrs and 3 lab hrs/wk, 4 cr.

Introduces wave motion, sound, electromagnetic interactions, and radiation. **Prerequisite:** MTH101 and PH201. Class fee, \$12. **W**

PH203 General Physics

3 class hrs and 3 lab hrs/wk, 4 cr.

Introduces light, optics, heat, thermodynamics, quantum mechanics, and nuclear physics. **Prerequisite:** MTH101 and PH201. Class fee, \$12. **Sp**

PH211 General Physics for Engineers and Scientists

4 class hrs and 3 lab hrs/wk, 5 cr.

First term of calculus physics. Includes motion, force, work, fields, gravitation, planetary motion, and conservation rules. **Prerequisite:** MTH200. Class fee, \$12. **F**

PH212 General Physics for Engineers and Scientists

4 class hrs and 3 lab hrs/wk, 5 cr.

Second term of calculus physics. Includes fluid mechanics, wave-motion, sound, thermodynamics, and electrostatics. **Prerequisite:** PH211. Class fee, \$12. **W**

PH213 General Physics for Engineers and Scientists

4 class hrs and 3 lab hrs/wk, 5 cr.

Third term of calculus physics. Includes magnetic fields, electromagnetic interactions, AC circuit analysis, propagation of electromagnetic waves, geometric optics, and physical optics. **Prerequisite:** PH211 and MTH201. Class fee, \$12. **Sp**

Philosophy**PHL201 Problems of Philosophy**

3 class hrs/wk, 3 cr.

A study of major philosophic traditions by means of a history of western philosophic concerns such as metaphysics, ethics, politics, and epistemology. Current applications of these questions with a wide variety of perspectives are examined in lecture, readings, and student papers. **F**

PHL202 Problems of Philosophy

3 class hrs/wk, 3 cr.

An expanded investigation of one or more selected problems of philosophy not covered in ethics or logic courses. One current problem or one classical problem may be selected. The study may present many philosopher's viewpoints and methods. **W**

PHL203 Elementary Ethics

3 class hrs/wk, 3 cr.

Studies the concept of what is "good" in personal and in group contexts. Studies and compares all major alternatives in western philosophy. **Sp**

PHL204 Introduction to Logic

3 class hrs/wk, 3 cr.

Studies propositional logic including translation of sentences into symbols, symbols into sentences, and valid arguments into deduc-

tive reasoning using symbolized propositions. Identifies everyday fallacies, but these are not the major emphasis. **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.**

Physical Science, see General Sciences**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. **Prerequisite:** PS201 recommended, but not required. **W, Sp**

PS203 State and Local Governments

3 class hrs/wk, 3 cr.

Examines the roles of regional, state, and local governments, particularly the nature of federalism. Either PS203 or PS205 will complete the American Government sequence following PS201 and PS202. **F, Sp**

PS205 International Relations

3 class hrs/wk, 3 cr.

An introduction to international politics. Deals with the nature of superpower conflict, nationalism, non-aligned nations, foreign policy; the role of multinational corporations in international decision-making, development and underdevelopment; and mechanisms of conflict resolution as related to contemporary international issues. **Sp**

PS212 Political Election Campaigning

3 class hrs/wk, 3 cr.

Introduction to election campaign techniques, processes, and strategy. **Offered as needed.**

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. For people in general, but particularly valuable to persons 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-planning 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.**

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 introductory course 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. **Prerequisite:** PSY201 or consent of instructor. **Offered as needed.**

PSY211 Brain, Mind, and Behavior

3 class hrs/wk, 3 cr.

An overview 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:**

site: 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 anxiety and related neuroses, depressions, schizophrenia, psychophysiological and personality disorders, and sexual variations and dysfunctions. **Prerequisite:** PSY100 or PSY201 recommended. **F**

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. **Prerequisite:** PSY201 or consent of instructor. **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.**

Religion**R201 Primitive and Far Eastern Religions**

3 class hrs/wk, 3 cr.

A study of religion, religious practices in prehistory, and major oriental religions. Discussion and film media relate the intellectual and the aesthetic, the ancient and modern. Students are encouraged to do individual research. **F**

R202 Near Eastern Religions

3 class hrs/wk, 3 cr.

Second course in a sequence. Surveys thought, scriptures, and practices of Judaism, Christianity, and Islam. Discussions, papers, and films to stimulate critical appreciation of these religions. **Prerequisite:** R201 and/or consent of instructor. **W**

R203 American Religions

3 class hrs/wk, 3 cr.

Major religious traditions, beliefs, and institutions necessary in understanding Western culture. A survey of the richness and diversity of American religious thought and practice, emphasizing useful information for believers and/or questioners. Includes discussion and individualized research projects to aid students in interpreting religious practices. **Sp**

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 Basic Reading Tactics I

3 class hrs/wk, 3 cr.

For students who need to improve basic reading skills. Emphasizes understanding words, sentences, and paragraphs. Stu-

dents must enroll in RD009LL at the same time. **Prerequisite:** Concurrent registration in RD009LL; reading level between 4.0 - 5.9. **F, W, Sp, Su**

RD009L Basic Reading Tactics—Individualized

6 lab hrs/wk, 3 cr.

Individualized to help community college students improve their reading abilities. Emphasizes comprehension of words, sentences, and paragraphs. **Prerequisite:** Concurrent registration in RD009LL; reading level between 4.0 - 5.9 as determined by an appropriate standardized test. If credit has been earned for RD009, student may not enroll in RD009L.

RD009LL Basic Reading Tactics I—Lab

2 lab hrs/wk, 1 cr.

Helps students raise his or her reading grade level to 5.9 or above. Pays special attention to comprehension and vocabulary skills. **Prerequisite:** Concurrent registration in RD009 or RD009L and ability to read at a grade level from 4.0 to 5.9. **F, W, Sp, Su**

RD010 Basic Reading Tactics II

3 class hrs/wk, 3 cr.

Instruction to help students improve their reading skills. Emphasizes understanding paragraphs, vocabulary, and notetaking, and reading vocational textbooks. **Prerequisite:** Reading score as recommended by the college placement reading test or satisfactory completion of RD009LL. **F, W, Sp, Su**

RD010L Basic Reading Tactics II—Individualized

6 class hrs/wk, 3 cr.

Helps individual students improve their reading skills. Emphasizes vocabulary development, study reading, and comprehension. **Prerequisite:** Reading grade level from 6.0 to 8.9. Students who have earned credit for RD010 may not enroll.

RD115 Accelerated Reading Tactics I

3 class hrs/wk, 3 cr.

How to comprehend and remember nonfiction material. Instruction and practice aids students to vary and increase reading speed according to reading purpose and difficulty of material. **Prerequisite:** Reading score as recommended by the college placement reading test or consent of instructor. **F, W, Sp, Su**

RD115L Accelerated Reading Tactics I—Individualized

6 lab hrs/wk, 3 cr.

Helps students improve their reading abilities. Studies strategies for comprehending nonfiction materials, especially textbooks. Provides instruction and practice increasing reading speeds. **Prerequisite:** Reading grade level of 9.0 or above as determined, completion of RD010 or RD010L, or instructor approval. Students who have earned credit for RD115 may not enroll.

RD116 Accelerated Reading Tactics II

3 class hrs/wk, 3 cr.

For above average readers. Presents an analytical method of reading non-fiction material which can improve both speed and comprehension. **Prerequisite:** RD115, recommendation based on college placement tests, or instructor's approval. **F, W, Sp**

Real Estate

RE051 Legal Descriptions, Platting and Map Reading

1 class hr 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.

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 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.

Income property appraisal techniques using indicators of value including gross rent multiplier (GRM), capitalization, and yields' rates. **Prerequisite:** RE061. **W**

RE063 Real Estate Appraisal III

3 class hrs/wk, 3 cr.

Continuation of RE062, or qualified appraisal experience. Students prepare a demonstration income property report. **Prerequisite:** RE062. **F**

RE064 Real Estate Appraisal IV

3 class hrs/wk, 3 cr.

Continuation of RE063. **Prerequisite:** RE063 or qualified professional appraisal experience. **Offered as needed.**

RE065 Appraisal Report Writing

3 class hrs/wk, 3 cr.

How to write appraisal reports 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, internal rate of return, etc. **Prerequisite:** RE055. **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 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.

Russian

RUS101, 102, 103 First Year Russian,

Terms I, II, III

4 class hrs/wk, 4 cr.

Speaking, reading, writing, and aural comprehension. **Prerequisite:** RUS102; RUS101 or consent of instructor. RUS103:RUS101, 102 or consent of instructor.

tor. Class fee, \$2 each. **RUS101:F; RUS102:W, RUS103:Sp**

Secretarial, see Office Administration and Technology

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

4 class hrs and 4 lab hrs/wk, 6 cr.

Provides intensive work in reading, spelling, and writing with an emphasis on vocational goals. Students may proceed to WR040 and/or COM051, and RD009. **Prerequisite:** Recommendation of college placement writing test or consent of instructor. **F, W, Sp**

SKD010 Discovering Success

3 class hrs/wk, 3 cr.

How students may succeed in college through self-understanding, awareness of resources, and group support. Emphasizes clarifying values and making decisions related to lifework planning. **F, Sp**

SKD013ABC Phonics Review

3 class hrs/wk, 1-3 cr.

Instruction in phonics, basic word attack skills, and syllabication. Students may register for one, two, or three credits. **SKD013A:** consonant sounds (weeks one through four); **SKD013B:** vowel sounds (weeks five through seven); **SKD013C:** syllabication and pronunciation (weeks eight through ten). **F, W, Sp, Su**

SKD014A,B,C Intermediate Spelling Skills

3 class hrs/wk, 1-3 cr.

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**

SKD014L,M,N Intermediate Spelling Skills

2 lab hrs/wk, 1 cr. each

An individualized course. Includes spelling rules, compiling a personal spelling list, and methods of study. **Prerequisite:** Score 28 or above on a 36-word screening test or instructor approval. Students who have earned credit for SKD014A,B,C may not enroll. **F, W, Sp, Su**

SKD015A,B,C Vocabulary Building

3 class hrs/wk, 1-3 cr.

Includes methods of learning general and vocational vocabularies, pronunciation, and of developing a personal vocabulary list. Students may register for one, two, or three credits. **SKD015A:** dictionary, thesaurus and context (weeks one through four); **SKD015B:** prefixes, suffixes and roots (weeks five through seven); **SKD015C:** word histories and word memory techniques (weeks eight through ten). **F, W, Sp, Su**

SKD015L,M,N Vocabulary Building

2 lab hrs/wk, 1 cr. each

Introduces students to methods of learning vocabulary. **Prerequisite:** Diagnosed minimum 4th grade vocabulary level. If SKD015A,B,C has been taken, students should not take L,M,N. **F, W, Sp, Su**

SKD030A,B,C Advanced Vocabulary Building

3 class hrs/wk, 1-3 cr.

Individualized instruction providing an in-depth study of vocabulary using both general and vocational language. **Prerequisite:** SKD015ABC or consent of instructor. **F, W, Sp, Su**

SKD030L,M,N Advanced Vocabulary Building

2 lab hrs/wk, 1 cr. each

Individualized instruction providing an in-depth study of vocabulary using both general and vocational language. **Prerequisite:** SKD015A,B,C; SKD015L,M,N; or instructor approval or a minimum of eighth grade reading level. **F, W, Sp, Su**

SKD031L,M,N Introduction to Studying for College

2 lab hrs/wk, 1 cr. each

Individualized to assess student study habits. After completing the first module, students select study behavior modules based on individual needs. **F, W, Sp, Su**

SKD045A Problem Solving and Thinking Skills

1 class hr/wk, 1 cr.

Assists students in analyzing and improving thinking skills and problem-solving techniques. 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 (weeks one through four). **F, W, Sp**

SKD045B Problem Solving and Thinking Skills

1 class hr/wk, 1 cr.

Continuation of SKD045A. Focuses on helping students apply problem-solving steps to both verbal and mathematical word problems and to assess personal analytical skills (weeks five through seven). **F, W, Sp**

SKD045C Problem Solving and Thinking Skills

1 class hr/wk, 1 cr.

Continuation of SKD045B. Helps students deal with complex problems and abstractions. How to plot and graph complicated problems using deductive reasoning, see trends and patterns, move from two- to three-dimensional design concepts and assess personal logical thinking (weeks eight through ten). **F, W, Sp**

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

3 class hrs/wk, 3 cr.

Sociological approach to 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**

SOC208 Social Changes and Earth's Resources

3 class hrs/wk, 3 cr.

Introduction to the direction and form social change may take because of rapidly increasing consumption of limited natural resources serving a growing mass population. Studies various adaptive possibilities which seem open to society. Uses case materials from the Pacific Northwest. **Offered as needed.**

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 of 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.**

SOC295 Seminar: Grant Writing

3 class hrs/wk, 3 cr.

Explores availability of private and public grants. How to expand basic skills in grant writing. **Offered as needed.**

Speech**SP105 Effective Listening**

3 class hrs/wk, 3 cr.

How students may improve their listening abilities. Analyzes listening behavior and developing 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 communications. **F, W, Sp**

SP112 Fundamentals of Persuasion

3 class hrs/wk, 3 cr.

Ways to become an effective speaker to meet job demands and to build self-confidence. Covers verbal and nonverbal levels of persuasion, concentrating on effective delivery, motivation, and language. **W, Sp**

SP113 Fundamentals of Small Group Communication

3 class hrs/wk, 3 cr.

How to participate effectively in a committee-oriented society. Includes discussion and activities for developing leadership abilities and improving communication techniques in small task groups. **Sp**

SP114 Interpersonal Communication

3 class hrs/wk, 3 cr.

For students who have no need for a formal speaking course, but would like to be able to communicate more effectively with friends and business associates. Covers concepts of self-awareness, nonverbal communication, emotional listening, and assertiveness. **F, W, Sp**

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. **Prerequisite:** Previous enrollment in SP114 enhances appreciation of this course. **W, Sp**

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. Practical application in actual situations. **Offered as needed.**

SP199 Special Studies—Communication in the Health Professions

3 class hrs/wk, 3 cr.

Examines communication among health professionals: physicians, dentists, nurses,

physical and occupational therapists, pharmacists, counselors and clinical psychologists and their clients. Applies principles of interpersonal, small group, and organizational communication. **Prerequisite:** Interest or involvement in health professions. **Offered as needed.**

Spanish

SPAN066, 067, 068 Conversational Spanish, Terms I, II, III
3 class hrs/wk, 3 cr.

Emphasizes Spanish-American pronunciation, grammar, and practical curriculum-based vocabulary, with some reading and writing. **Offered as needed.**

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, 102, 103 First Year Spanish, Terms I, II, III
4 class hrs/wk, 4 cr.

Speaking, reading, writing, and oral comprehension. **Prerequisite:** SPAN102: SPAN101 or one year of high school-level Spanish or consent of instructor. SPAN103: SPAN101, 102, or one year of high school-level Spanish or consent of instructor. Class fee, \$2 each. **SPAN101:F; 102:W; 103:Sp**

SPAN199 Special Studies: Spanish Conversation Workshop
9 class hrs and 3 lab 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, 202, 203 Second Year Spanish, 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 Spanish literature and culture. **Prerequisite:** SPAN201: one year of college Spanish or two years of high school Spanish or consent of instructor. SPAN202: One year of college level Spanish or two years of high school level Spanish or SPAN201 or consent of instructor. SPAN203: SPAN202 or two years of high school-level Spanish or consent of instructor. Class fee, \$2 each. **SPAN201:F; 202:W; 203:Sp**

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.**

Theater Arts

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**

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. **W**

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. **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. **F, W, Sp**

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, and 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**

Visual Communications

VC040 Introduction to Graphics

3 class hrs 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 hrs and 12 lab hrs/wk, 6 cr.
Pasteup, character generation, art techniques, design principles, layout, proof reading, copy classification, photo composition, and typography. **Prerequisite:** Current enrollment in the Visual Communications program. **F, W, Sp**

VC052 Process Photography, Stripping and Platemaking

3 class hrs and 12 lab hrs/wk, 6 cr.
Development of technical competency in production methods and knowledge of process photography, line copy, halftones, development methods, stripping (including multiple exposures), scribing, register systems, exposure computers, platemaking, and elementary densitometry. Includes practical applications of the theoretical basis of process photography. **Prerequisite:** Current enrollment in the Visual Communications program. **F, W, Sp**

VC053 Press Work and Reproduction Systems

3 class hrs and 12 lab hrs/wk, 6 cr.
Image transfer systems, press designs, feeders, printing units, dampening units, inking systems, delivery systems, office duplication, pH control, and career opportunities. **Prerequisite:** Current enrollment in the Visual Communications program. **F, W, Sp**

VC061 Advanced Graphic Design

3 class hrs and 12 lab hrs/wk, 6 cr.
Practice and experience in visual communication and graphic technology relating to information design, multiple pasteup, register controls and systems, typographic design display, tabular composition, proofing, procedures, career opportunities, symbolism and audience analysis. **Prerequisite:** VC051. **F, W, Sp**

VC062 Image Conversion and Image Carriers for Offset Lithography

3 class hrs and 12 lab hrs/wk, 6 cr.
Image conversion, posterization, knockouts, chokes, spreads, duotones, densitometry, multiple color stripping, specialized films, photographic materials, plates and other image carriers, quality controls including graphic design, design element conversion into reproducible elements, assembly of the reproducible elements into an image carrier, and transfer of the image carrier to a transport. **Prerequisite:** VC052. **F, W, Sp**

VC063 Advanced Presswork

3 class hrs and 12 lab hrs/wk, 6 cr.
Practical experience relating to papers and inks, rollers and cylinder adjustments, multiple color runs, registration controls, pH control, and outside plant observations. **Prerequisite:** VC053. **F, W, Sp, Su**

VC067 Basic Technical Photography

3 class hrs 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 hrs 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, 081, 082 Special Problems in Graphic Communication

variable hrs and cr.
Final course for graphic arts and photography students. After identifying a graphic reproduction problem, a student and instructor write a contract which includes a proposal to solve the problem. It identifies objectives, procedures, equipment needed, and key check points for student-instructor conferences. Areas of consideration may include color separation, plant management, and quality control. Consideration and encouragement given for interdisciplinary teams of students working on common problems. Variable amounts of credit given, ranging from three term units to seven term units. **Prerequisite:** VC051, VC052, VC053 or consent of instructor. **F, W, Sp, Su**

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.

Welding Fabrication

WFB081 Elements of Metallurgy

3 class hrs/wk, 3 cr.
Basic metallurgical theories as they apply to the welding industry. **Sp**

WFB082 Heat Treatment of Steel

2 class hrs and 3 lab hrs/wk, 3 cr.
Methods and procedures for improving characteristics of steel by hardening and tempering. Heat treating processes, including furnace and flame hardening, case hardening, tempering, annealing and normalizing, and hardness and tensile testing. Laboratory time provides hardening, tempering and testing demonstrations and experiments. Class fee, \$10. **Prerequisite:** Completion of WFB081 or consent of program coordinator. **F**

WFB087 Fabrication Practices III

1 class hr and 6 lab hrs/wk, 3 cr.
Emphasizes fabrication of structural and ornamental iron and machinery frames and bases. **Prerequisite:** Basic welding skills. Class fee, \$15. **W**

WFB088 Fabrication Practices IV

1 class hr 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 coordinator. Class fee, \$15. **Sp**

WFB091 Fabrication Procedures

6 lab hrs/wk, 2 cr.
Methods and application in layout and template design for structural shapes and pipe. Study and practice with equipment used to prepare metal for fabrication. **Prerequisite:** WLD051 or consent of program coordinator. Class fee, \$15. **W**

WFB092 Fabrication Shop Problems I

8 lab hrs/wk, 3 cr.
Review and application of theories and procedures learned in previous classes in layout, mathematics, welding, and print reading. How to apply procedures to problems of welded design and fabrication, to produce a usable product in a job shop atmosphere. **Prerequisite:** Sufficient welding and fabrication skills to complete assignment projects under actual job shop conditions. Class fee, \$20. **F**

WFB093 Fabrication Shop Problems II

8 lab hrs/wk, 3 cr.
Continuation of WFB092 with emphasis on quality control. **Prerequisite:** WFB092 or consent of program coordinator. Class fee, \$20. **W**

WFB096 Shop Projects

1 class hr 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 registration as a full-time student in the welding program or consent of the program coordinator. Class fee, \$40. **F, W, 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 coordinator. **Sp**

WFB280 Cooperative Work Experience

see AUM280.

Welding

WLD051 Basic Arc Welding

2 class and 9 lab hrs/wk, 5 cr.
Basic skills in Shielded-Metal Arc Welding (SMAW). Principles of making welds on mild steel using standard procedures and using standard industrial welding equipment and welding electrodes. Includes basic technical and related information. Class fee, \$20. **F, W, Sp**

WLD052 Intermediate Arc Welding

2 class hrs 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 coordinator. Class fee, \$25. **F, W, Sp**

WLD053 Advanced Arc Welding

1 class hr 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 coordinator. Class fee, \$20. **F, W, 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, W, Sp**

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. **F, W, Sp**

WLD058 Weld Shop Problems

2 class hrs 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. **F, W, Sp**

WLD061 Basic Gas Metal Arc Welding (MIG)

1 class hr 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, \$15. **Prerequisite:** WLD051, WLD071 or consent of program coordinator. **F, W, Sp**

WLD062 Intermediate Gas Metal Arc Welding (MIG)

1 class hr 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 flux-cored) with mixed shielding gases in flat or horizontal positions. **Prerequisite:** WLD061 or consent of program coordinator. Class fee, \$30. **F, W, Sp**

WLD063 Advanced Gas Metal Arc Welding (MIG)

1 class hr 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 coordinator. Class fee, \$30. **F, W, 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 hr and 3 lab hrs/wk, 2 cr.
Fundamentals of oxyacetylene welding including brazing and cutting processes. Class fee, \$12. **F, W, Sp**

WLD072 Oxyacetylene Cutting

5 lab hrs/wk, 2 cr.
Use and care of oxyacetylene cutting processes. Class fee, \$15. **F, W, Sp**

WLD073 Basic Gas Tungsten Arc Welding (TIG)

1 class hr 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 coordinator. Class fee, \$30. **F, W, Sp**

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 hrs 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, \$20. **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. **F, W, Sp**

WLD082 Welding Metallurgy II

2 class hrs/wk, 2 cr.
Continuation of WLD081 covering common non-ferrous metals and chromium alloys. **F, W, Sp**

WLD097 Welding

1 class hr 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, \$15. **F**

WLD098 Metallurgy

2 class hrs 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 coordinator. Class fee, \$10. **W**

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**

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**

WR121 English Composition—Exposition

3 class hrs/wk, 3 cr.
First term college level course. Emphasizes clear, detailed expository prose, clear thinking, and intelligent 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, 4) using standard written English to write complete correct sentences, punctuate correctly, follow generally accepted conventions of usage, 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. 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.**

WR270A-F Literary Publications

variable lab hrs/wk, variable 1-3 cr.
How to solicit, select, edit, proofread, and publish writings for Chemeketa's student literary journal, Before the Sun. No prerequisite required but previous writing courses are helpful, particularly WR122, WR241, WR242 or WR243. **F, W, Sp**

Women's Studies

WS100 Women in Transition

3 class hrs/wk, 3 cr.
Deals with adjustments women make upon returning to school. Topics include family vs. students' needs, confidence building, study skills, financial assistance, time management, the search for a basic survival job, and specific needs of the students. **Offered as needed.**

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. **F**

WS102 Introduction to Women's Studies

3 class hrs/wk, 3 cr.
The historical development of women from the 1920s through the 1960s with major emphasis on women cross-culturally in developing third world countries and modern industrial societies. **W**

WS103 Introduction to Women's Studies

3 class hrs/wk, 3 cr.
Women as social beings moving toward the year 2000 A.D. 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. **Sp**

Zoology

ZOO201 General Zoology

3 class hrs and 3 lab hrs/wk, 4 cr.
Introduction to animal life dealing with the principles, theories, and applications of animal biology. Includes comparative study of the morphology, anatomy, life history, physiology, development, and ecology of both vertebrates and invertebrates. Class fee, \$12. **F**

ZOO202 General Zoology

3 class hrs and 3 lab hrs/wk, 4 cr.
Continuation of ZOO201. **Prerequisite:** ZOO201 or consent of instructor. Class fee, \$12. **W**

ZOO203 General Zoology

3 class hrs and 3 lab hrs/wk, 4 cr.
Continuation of ZOO201 with emphasis on human biology. **Prerequisite:** ZOO201, 202, 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—George Martin

Zone two—Marilyn Crouser

Zone three—Signe Pribnow

Zone four—Wayne E. Feller

Zone five—Philip Frey

Zone six—Mary Bartle Pearmine

Zone seven—Gwen VanDenBosch

Staff

As of May, 1989

Adcock, James—Instructor, Computer Science

Aebischer, Joanne—Automation Project Librarian

Agee, Steve—Instructor, Automotive Technology

Anderson, D. Craig—Coordinator, Community Agriculture Program

Anderson, Frank—Coordinator, Campus and Apprenticeship Programs

Anderson, Holly—Instructor, Human Services

Anderson, Robert—Manager, Computer Services

Asher, Greg—Instructor, Psychology

Atwell, Kenneth—Instructor, Small Business Management

Barber, Wayne—Instructor, Mathematics

Bargabos, David—Instructor, Fire Protection

Barnes, Nancy—Diagnostician, Counseling

Barth, H. Philip—Director, Business Services

Bartlett, Karen—Instructor, German

Bates, Michael—Instructor, Computer Science

Bay, Brian—Director, Emergency Services

Beebe, Janell—Instructor, Office Administration and Technology

Beigh, Marybelle—Instructor, Electronics

Bennett, Suzanne—Coordinator, Cooperative Work Experience

Benoiken, Robert—Instructor, Physical Science and College Transfer Engineering

Berger, Gerard—Vice President, Academic Services

Berman, Arthur—Program Coordinator, Accounting and Management

Bibler, Rob—Instructor, Art

Blank, Franklin—Director, Registration, Records, and Admissions

Blodget, James—Specialist, Media Production

Bode, Elizabeth—Instructor, Health Care Support Services

Bodtker, Diana—Instructor, Life Science

Bodtker, Egon—Director, Social Science, Early Childhood Education, and Criminal Justice

Bolen, Gene—Director, Counseling

Booth, Karleen—Instructor, Office Administration and Technology

Bothwell, Bruce—Instructor, Electronics

Bowman, Roberta—Instructor, Alternative High School

Boyington, Gary—Program Coordinator, Electronics

Brock, Clifford—Instructor, Journalism; Advisor, Student Newspaper

Brooks, W. David—Instructor, Accounting

Brownlow, Carol—Director, Allied Health, Physical Education, and Athletics

Bunch, Ray—Instructor, Computer Science

Buttles, George—Instructor, Human Services

Byers, E. Maxine—Specialist, Developmental Education

Calhoon, Claudia—Instructor, Nursing

Campbell, Lorraine—Coordinator, Family Programs

Carnegie, Kay—Instructor, Nursing

Caster, John—Instructor, Farm Business Management, McMinnville Center

Chancey, Fred—Instructor, Communication Skills

Chavez, Robert—Athletic Director and Instructor, Physical Education

Chesley, Robert—Instructor, Inmate Education

Christian, Michiko—Instructor, Japanese

Christner, Ray—Instructor, Computer Science

Clark, Lori—Instructor, Physical Education

Clyde, Bobbie—Coordinator, Small Business Assistance

Clyde, John—Counselor

Cochrane, Edward—Instructor, History

Cochrane, Linda—Director, Library and Regional Library Services

Cockrell, Barbara—Instructor, Office Administration and Technology

Cockrell, James—Program Coordinator, Real Estate

Concepcion, Paul—Instructor, Psychology

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—Instructor, Developmental Education

Culver, Curtis—Assistant to the President, Foundation Development

Daugherty, Ron—Dean, Business, Health, and Industry

Davis, Anne—Counselor

DePue, Thomas—Director, Business and Management

Dixon, Robert—Program Coordinator, Manufacturing Engineering Technology

Dobay, Deborah—Instructor, Psychology

Doeneka, Molly—Instructor, Anthropology and Political Science

Dunn, Marvin—Specialist, Academic Computing

Eichstadt, Wendy—Instructor, Emergency Medical Technology

Eppler, Carol—Instructor, Office Administration and Technology

Erovick, Joyce—Instructor, Nursing

Eustrom, James—Coordinator, Student Activities

Faust, Dorothy—Instructor, Mathematics

Felton, Maureen—Program Coordinator, Educational Aide

Fenske, Helen—Instructor, Human Services

Ferry, Marjorie—Instructor, English

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 Coordinator, 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—Program Coordinator, Mathematics

Gohaidan, Carol Ann—Program Coordinator, English as a Second Language

Gohring, Judy—Director, Personnel and Affirmative Action

Goward, Richard—Director, Auxiliary Services

Green, Constance—Assistant to the President, Special Projects

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

Hedeem, Keith—Manager, Business Office

Held, Leonard—Instructor, Composition, Literature, and Film Studies

Henderson, Madeleine—Program Coordinator, Center for Individual Learning, Woodburn Center

Henry, Max—Instructor, Mathematics

Hilgemann, Vickie—Instructor, Speech

Hodges, Gary—Instructor, Automotive Technology

Holmes, Darrel—Instructor, Building Inspection

Hoobler, Tony—Instructor, Physical Science

Horn, Terry—Program Coordinator, Banking and Finance

Hulett, Ronald—Director, Training & Economic Development Center

Irving, Jan—Instructor, Nursing

Jacobson, Lee—Program Coordinator, Art

Jakubowski, Thomas—Instructor, Alternative High School

Jantzi, Ron—Director, Trades and Technologies

Johnen, Elizabeth—Director, Developmental Education

Johnson, Donald—Instructor, Drafting Technology

Jolly, Dale—Instructor, Geography

Jones, Ben—Counselor

Jones, Lee—Instructor, Mathematics

Judd, Connie—Instructor, Adult Basic Education and GED

Judd, Roger—Instructor, Mathematics

Kalb, David—Instructor, Automotive Technology

Kenworthy, James—Program Coordinator, Building Inspection

Killpatrick, Paul—Instructor, High School Completion and Developmental Education

Kimmel, Fred—Instructor, Drafting Technology

King, James—Program Coordinator, 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 Activities

Koontz, Everett—Specialist, Media Production

Kurz, Sandra—Program Coordinator, Physical Education

Lacy-Tang, Jean—Career Counselor

Larkin, Hugh—Instructor, Hospitality Systems

Larson-Kent, Lil—Instructor, Early Childhood Education

Lauck, Lori—Assistant to Vice President, Academic Services

Leavitt, Judith—Manager, Bookstore

Lewis-Vessello, Vicki—Purchasing Agent

Lindsey, Sharon—Instructor, Health Care Support Services

Longshore, Glen—Specialist, Media Production

Lund, Eugenia—Program Coordinator, Outreach Developmental Education

Lynch, James—Instructor, Industrial Skills Training

MacDonald, Lucy—Program Coordinator, Developmental Education

MacInnes, Patricia—Instructor, Inmate Education

Maguren, Janet—Director, Nursing

Malone, Patricia—Instructor, Office Administration and Technology

Marckx, Elaine—Instructor, Nursing

Marges, Dawn—Coordinator, Women's Programs

Marshall, Jean—Accountant

Martin, Joel—Counselor

McConville, Virginia—Instructor, Adult Basic Education and GED

McCready, Marveen—Instructor, Mathematics

McDermott, Laura—Reference Librarian

McDonough, Thomas—Program Coordinator, Physical Science

McGill, Meg—Coordinator, Salem Area Programs

McGowan, Esther—Instructor, Inmate Education

McLain, Roger—Instructor, Criminal Justice

McLaughlin, Suzanne—Program Coordinator, Foreign Languages

McMurry, Melody—Counselor/Instructor, Prevention

McNicholas, Michael—Instructor, Physical Science

Melius, Faye—Instructor, Nursing

Merola, Joseph—Program Coordinator, Visual Communications

Meyers, Dianne—Instructor, Nursing

Micheis, John—Instructor, Mathematics

Mills, Keith—Instructor, Management

Minato, Alfeo—Instructor, Forestry

Mock, John—Instructor, Composition and Literature

Mock, Lorene—Program Coordinator, Dental Assisting

Mohn, Elaine—Team Coordinator, Nursing

Moothart, Janine—Director, Vocational Education, Tri-Counties

Morin, Christiane—Instructor, French

Mount, Joan—Instructor, Center for Independent Learning, McMinnville Center

Mouritsen, Bent—Instructor, Engineering and Mathematics

Murray, Susan—Program Coordinator, High School Completion

Myers, James—Instructor, Psychology

Nagle, Priscilla—Instructor, Adult Basic Education
Neuendorf, Mary—Coordinator, Public Relations
Newton, Kristi—Instructor, Business
Nguyen, Hung—Instructor, Facilitator, Refugee Employment Training
Nichols, Sandra Loy—Instructor, Composition and Literature
Nichols, Van—Program Coordinator, Civil-Structural Engineering, College Transfer Engineering, and Drafting Technology
Nubile, Barbara—Team Coordinator, Nursing

Ochsner, Ken—Instructor, Emergency Medical Technology
O'Harra, Kris—Instructor, Communication Skills
Olheiser, Dean—Program Coordinator, Automotive Technology
O'Reilly, Edward—Instructor, Automotive Technology
Ottaway, Carol—Instructor, Business Education
Owens, Chris—Instructor, Health Education

Panasuk, Eugene—Program Coordinator, 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
Pillsbury, Chris—Instructor, Human Services
Pintler, Michael—Program Coordinator, Welding Technology
Pitt, Donald—Instructor, Civil-Structural Engineering Technology
Powell, Sheryl—Instructor, Emergency Medical Technology
Pratt, Betty—Program Coordinator, Outreach Office Occupations
Prothero, Marilyn—Instructor, English as a Second Language

Rasmussen, Douglas—Instructor, Mathematics
Reid, Donna—Program Coordinator, English
Rengert, Lee—Instructor, Human Services
Rhodes, Sandra—Instructor, Adult Basic Education and GED
Rice, Leonard—Instructor, Drafting Technology
Ringwald, Beverley—Instructor, Office Administration and Technology
Robinson, Marilyn—Instructor, Mathematics
Roelofs, Gary—Instructor, English as a Second Language
Rollings, Ronald—Instructor, Automotive Technology
Rosen, Lois—Instructor, Adult Basic Education, GED, and English as a Second Language
Rude, John—Coordinator, Grants

Sansone, Steve—Instructor, Health and Physical Education
Sauter, Betty—Instructor, Office Occupations, McMinnville Center
Sawser, Judith—Instructor, Banking and Finance and Office Administration and Technology
Schaefer, William—Instructor, Physical Science
Scheer, Sara—Instructor, Nursing
Scherf, Joan—Director, Dallas Center
Schuetz, Gretchen—Dean, Humanities, Sciences, Developmental Education, and Learning Resource Center
Schwab, Patrick—Director, Information Services

Scoggin, Paul—Director, Hospitality Systems
Seals, Georgina—Instructor, Office Administration and Technology
Segura, William—President
Sharp, Grady—Program Coordinator, Criminal Justice
Shaw, John—Program Coordinator, Computer Science
Shaw, Robert—Instructor, Visual Communications
Shotts, Phyllis—Program Coordinator, Office Administration and Technology
Showers, Keith—Instructor, Physical Science
Skirvin, Charles—Counselor
Slosser, Joseph—Instructor, Psychology
Smith, Craig—Dean, College Support Services
Smith, Warren—Instructor, Speech
Stafford, Sandra—Instructor, Early Childhood Education
Stam, Bruce—Program Coordinator, Early Childhood Education
Steiner, Ann—Program Coordinator, Adult Basic Education
Steiner, Jerry—Director, Employee Relations; Executive Assistant to the President
Streight, Gene—Coordinator, Cooperative Work Experience
Stubbs, Dina—Instructor, Nursing
Suter, Marcia—Program Coordinator, Humanities
Suter, Paul—Instructor, Communication Skills

Tabor, Patrick—Program Coordinator, Social Science
Terhes, John—Instructor, Communication Skills
Terpin, Mark—Program Coordinator, Refugee Employment Training
Toman, William—Program Coordinator, Emergency Medical Technology
Triplett, Geary—Counselor
Trumbo, Mark—Director, McMinnville Center

Varnum, Sara—Director, Outreach and Community Education
Vaughan, Joyce—Instructor, 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—Program Coordinator, Deaf and Hearing and Visually Impaired
Wasson, Barbara—Instructor, Developmental Education
West, Susan—Instructor, Physical Education
Westford, Gary—Instructor, Inmate Education
White, Roger—Instructor, Electronics
White, Vernon—Program Coordinator, Forest Technology
Whitton, Louanne—Instructor, Adult Basic Education and GED
Wigginton, Barbara—Instructor, Composition and Literature
Willis, Vicki—Human Resource Development Specialist
Wintermeyer, Larry—Instructor, Computer Science
Woods, Rae—Counselor
Wright, Larry—Instructor, Accounting and Business Management

Zacharias, Patricia—Program Coordinator, Health Care Support Services
Zolkoske, Gary—Instructor, Manufacturing Engineering Technology

Student Rights and Responsibilities

1.0 Preamble

Chemeketa Community College is dedicated to the philosophy that the greatest well-being accrues to the individual, the community, and the society only when each individual is accorded the opportunity to define and pursue legitimate interests and discover and develop abilities to the maximum of individual potential.

Freedom to teach and freedom to learn are inseparable facets of academic freedom. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on the campus, and in the larger community. College policy protects students from discrimination or harassment on the grounds of race, color, sex, marital status, religion, national origin, age or handicap in any area, activity, or operation of the college. Students should exercise their rights and freedom with responsibility.

The College and students are members of a democratic society and are responsible to the laws, rights, and responsibilities of the society. The college sets direction and solves problems on campus according to the laws, rights, and responsibilities of the society. When those documents are not specific, they will be supplemented by the decisions or policies adopted by the College Board.

2.0 Definitions

- 2.1 *College* shall mean Chemeketa Community College.
- 2.2 *College Board* shall mean the Board of Education.
- 2.3 *Staff* shall mean any employee of the college, both full- and part-time, management, professional staff, and classified.
- 2.4 *Student* shall mean any person enrolled in a class at Chemeketa Community College.
- 2.5 *Associated Students of Chemeketa Community College (ASCCC)* shall mean the official organization of the student body, made up of currently enrolled students at Chemeketa Community College.
- 2.6 *ASCCC Student Senate* shall consist of student representatives of the student body elected by the students according to the ASCCC Constitution and Bylaws.
- 2.7 *Official club and organization* shall mean a group of students and staff who have complied with the formal requirements of the College and ASCCC to gain recognition to operate on the campus as an official organization.
- 2.8 *The College Affairs Committee* shall be composed of students and staff and will conduct hearings on violations of rights and responsibilities.

3.0 Rights

3.1 Access to education

- 3.1.1 Within the limits of its resources and facilities Chemeketa Community College shall be open to applicants who are qualified according to current admission requirements.
- 3.1.2 Each student has the right to be informed about class requirements and College policy and procedures.
- 3.1.3 No student's access to education shall be inhibited by prejudiced or capricious academic evaluation. Students shall not be evaluated on the basis of opinions or conduct in matters unrelated to educational standards.
- 3.1.4 Each student shall have the right of participation in evaluation of course content and educational standards.
- 3.1.5 If a student is charged with a violation of law not related to his activities as a student, the matter

shall be of no disciplinary concern to the College, unless the student is incarcerated and cannot comply with educational requirements.

3.2 Access to facilities

- 3.2.1 Students and official clubs and organizations may utilize available College facilities according to College policy and procedures.

3.3 Provisions of confidentiality

- 3.3.1 Student records and information are protected and governed by federal and state laws and Chemeketa Community College Student Records Policy.
- 3.3.2 Information about student views, beliefs, private activities and political associations which is acquired or learned in the course of their work is to be treated with professional judgment and confidentiality.
- 3.3.3 Professional evaluations and judgments of ability and character may be provided under appropriate circumstances, with the prior knowledge and consent of the student.

3.4 Provisions of association

- 3.4.1 Policy governing clubs and organizations shall be established by the College Board, Procedures for establishment, maintenance, and financial management of clubs and organizations shall be established by the College and the ASCCC Student Senate.
- 3.4.2 Official club and organization membership shall be open to students without regard to race, national origin, sex, age, marital status, religion, or handicap.
- 3.4.3 Students, clubs, or organizations shall not speak or represent a point of view on behalf of the College without express authorization from the College President, or designee, or may not represent the views of ASCCC without express authorization from the ASCCC Student Senate.

3.5 Provisions of expression

- 3.5.1 Students may express their views on College policy or matters of general interest, and may support causes by any orderly means which does not disrupt the operation of the College.
- 3.5.2 In the classroom, a student may take exception to the information or views offered in the course of study and reserve judgment about matters of opinion, but is responsible for learning the content of the course.
- 3.5.3 Chemeketa Community College, as publisher, bears in conjunction with the staff of student publications, the responsibility for the content of the publication. The publication shall adhere to all applicable Oregon statutes, such as those regarding mass communications.
- 3.5.4 The student newspaper shall be governed by the "Student Newspaper Policies and Procedures" and shall follow the Canons of Journalism (American Society of Newspaper Editors).
- 3.5.5 Student publications shall state that the opinions expressed are not necessarily those of the College or student body.

4.0 Responsibilities

- 4.1 Each student has the responsibility to obey and follow College policy and procedures and the ASCCC Constitution and Bylaws. The ASCCC Constitution, Bylaws, College policy, and procedures shall provide means for student involvement and

participation in the formulation and alteration of College policies and procedures regarding academic and student affairs.

- 4.2 Students are responsible for respecting the rights of others and not interfering with the exercise of those rights.
- 4.3 Each student is responsible for the effects of his/her decisions and behavior. Examples of decision and behavior which become destructive to the education goals and processes of Chemeketa Community College include, but are not limited to the following:
 - 4.3.1 Failure to maintain complete academic honesty, e.g. cheating, plagiarism, or knowingly furnishing false information.
 - 4.3.2 Falsification, forgery, alteration, or misuse of college documents, records, keys, ASCCC card, or other student identification.
 - 4.3.3 Unauthorized entry or use of College-owned or controlled property, equipment, facilities, and blocking access to or from such areas.
 - 4.3.4 Hazing, physical or verbal, that injures, degrades, harasses, or disgraces another person.
 - 4.3.5 Failure to comply with directions of College staff acting in the performance of their duties.
- 4.4 The student is responsible to maintain standards of academic performance and contribute to the learning environment of the College.

5.0 Procedural Due Process for Violations of Rights and Responsibilities

5.1 Student violations

- 5.1.1 The persons involved shall attempt to resolve the issue by personal contact, if possible.
- 5.1.2 If resolution is not achieved, the persons involved should contact the next level of supervision.
- 5.1.3 If no agreement is reached at this level, the persons involved shall then consult with the Dean of Community Education and Student Services who will then attempt to resolve the issue.
- 5.1.4 If unresolved, the charges concerning the alleged violations shall be referred to the College Affairs Committee for a hearing. The Committee shall proceed as follows:
 - 5.1.4.1 The Committee chairperson must notify the charged person in writing within one week before the hearing of the time, place, and date and must include the specific alleged violations.
 - 5.1.4.2 The person charged with violation then has forty-eight hours in which to reschedule the meeting time.
 - 5.1.4.3 The person may be represented by counsel and may present evidence and witnesses of his own choosing.
 - 5.1.4.4 If the person charged fails to appear for the hearing or agrees not to contest the case, in writing, the Committee shall review the evidence and prescribe the appropriate action.
- 5.4.1.5 The Committee shall recommend appropriate action to the College President, such as:
 - A. Statement of fact: a written report of the facts indicating there has been no violation.
 - B. Admonition: an oral statement to a person who is violating, or has violated, College policy or procedures.
 - C. Warning: notice that continuation or repetition of conduct found wrongful

may be cause for more severe sanctions.

- D. Censure: a written reprimand for violations with or without stipulations regarding forfeiture of privileges.
- E. Restitution: appropriate restoration of amends.
- F. Suspension: dismissal from the College for a specified period of time.
- G. Expulsion: permanent or conditional separation from the College. The conditions of readmission, if any, shall be stated in the order of expulsion.

- 5.1.4.6 An appeal must be requested within one week of the College President's action. Minutes of the College Affairs Committee hearing shall be forwarded to the College Board Chairperson. The College Board may schedule a hearing to determine final action.

5.2 College Violation

- 5.2.1 Students who feel that have been aggrieved by a policy, procedure, staff member, or College action have the following procedural due process available to them:

- 5.2.1.1 If a student believes to have been unfairly treated and has a grievance against a policy, procedure, staff member, or College action, the student should first discuss the matter with the person or persons involved.
- 5.2.1.2 If the student cannot achieve resolution with the person or persons involved, the student should contact the next level of supervision.
- 5.2.1.3. If the student feels that a satisfactory solution cannot be reached at this level, assistance should be requested of the Dean of Community Education and Student Services.
- 5.2.1.4 If the student is not satisfied with the attempted resolution, the person may request a hearing of the College Affairs Committee.
- 5.2.1.5 The Committee shall proceed as follows:
 - A. The Committee Chairperson shall notify, in writing, the members of the College community involved within one week before the hearing of the time, place, and date, and must include the specific alleged violation.
 - B. The hearing must be rescheduled within forty-eight hours.
 - C. Evidence and witnesses may be presented and heard.
 - D. The Committee shall recommend appropriate action to the College President.
- 5.2.1.6 An appeal must be requested within one week of the College President's action. Minutes of the College Affairs Committee hearings shall be forwarded to the College Board Chairperson. The College Board may schedule a hearing to determine final action.

6.0 Amending Procedures

- 6.1 This Policy shall be amended through the following procedure:
 - 6.1.1 Proposed amendments will be submitted to the Dean of Community Education and Student Services. The amendments shall be reviewed by on-campus groups and responses forwarded to the College President.
 - 6.1.2 The College Board shall review and take action on the amendments.

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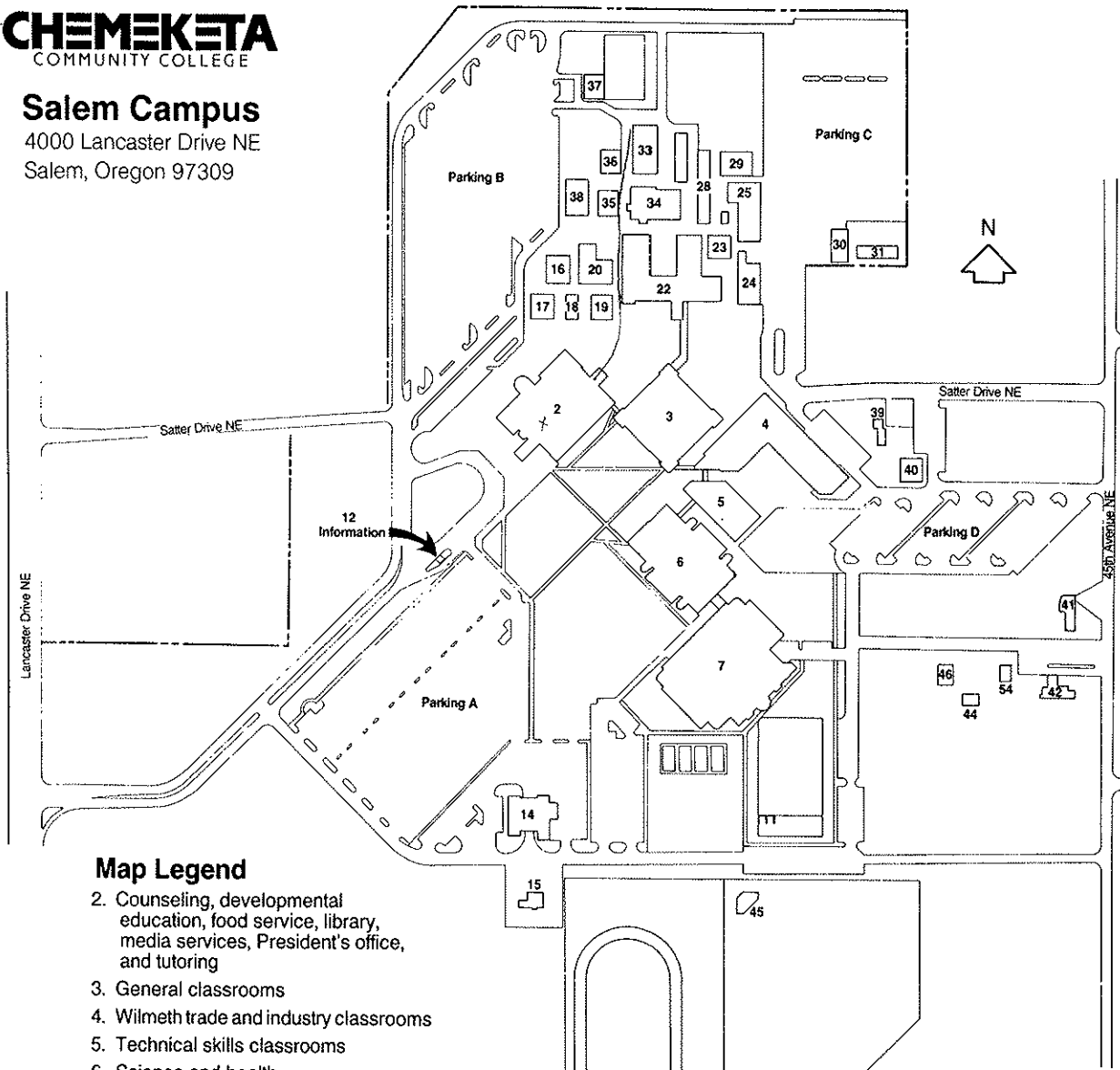
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Salem Campus

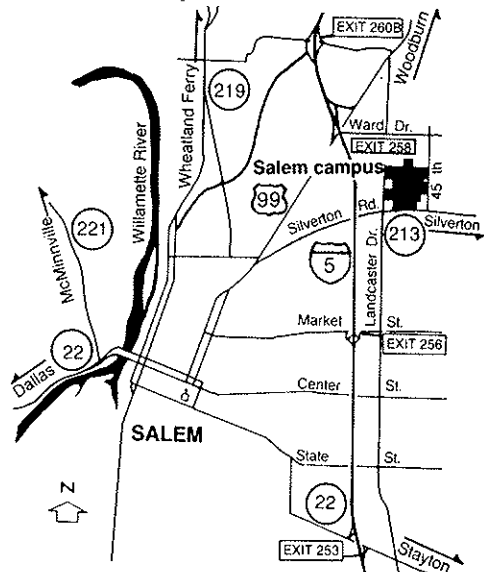
4000 Lancaster Drive NE
Salem, Oregon 97309

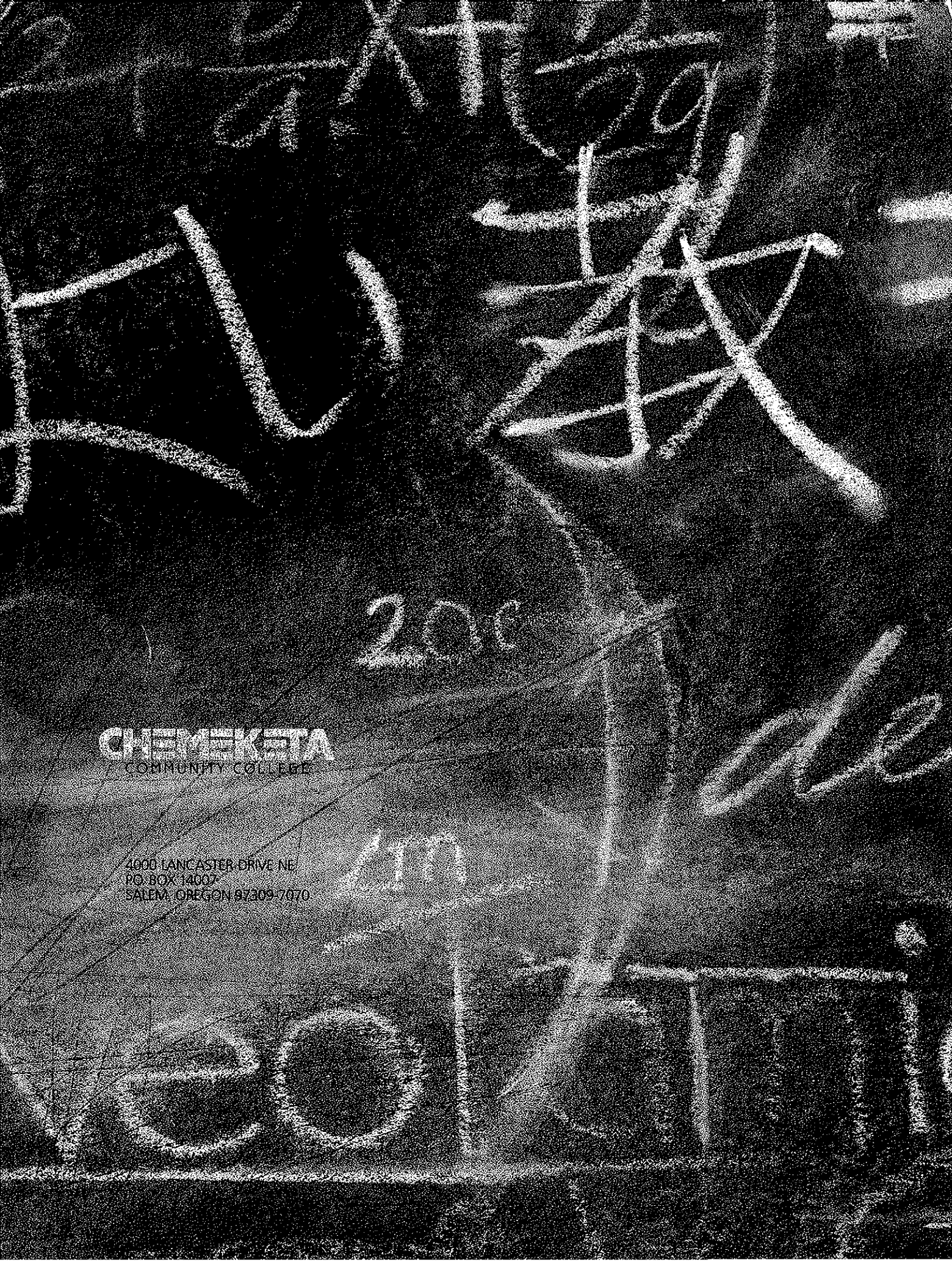


Map Legend

- 2. Counseling, developmental education, food service, library, media services, President's office, and tutoring
- 3. General classrooms
- 4. Wilmeth trade and industry classrooms
- 5. Technical skills classrooms
- 6. Science and health
- 7. Physical education
- 12. Information and security
- 14. Fire station
- 15. Emergency operations and research facility
- 16. Staff offices
- 17. Community education and refugee training center
- 18. Staff offices
- 19. Student union
- 20. College bookstore
- 22. Admissions, business office, computer services, cooperative work experience, financial aid, personnel, placement, and registrar
- 23. Staff offices
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- 41. Cooperative child care center
- 42. Ceramics and sculpture
- 44. Storage
- 45. Activity field
- 46. Greenhouse
- 54. Storage

How to get there . . .





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CHIMUKITA
COMMUNITY COLLEGE

4000 LANCASTER DRIVE NE
PO BOX 14007
SALEM, OREGON 97309-7070