Chemeketa Community College Catalog

September 1985-86

Picture your future.

Chemeketa Community College
1985-1986 Catalog

Table of Contents

CHEMEKETA COMMUNITY COLLEGE

4000 Lancaster Drive NE, P.O. Box 14007, Salem, Oregon 97309

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 (Maiden Name)

Mailing Address _____ City _____
Number Street

State _____ Zip _____ County _____ Phone (Home) _____
(Work) _____

Permanent Address _____ City _____
Number Street

State _____ Zip _____ County _____ Phone _____

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

Date of birth _____ Age _____
Month Day Year

Sex ☐ Female ☐ Male

U.S. Citizen ☐ No ☐ Yes

Schools attended	Name & Location	Grade completed	Last year attended
☐ High School ☐ GED			
Colleges			
Occupational Schools			

I am applying for: (Please check only one)

- ☐ Non-credit classes only
- ☐ Evening classes only
- ☐ Six credit hours or less
- ☐ College transfer curriculum _____ (enter code and/or title from other side)
- ☐ 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)

1. White, Non-Hispanic
2. Black, Non-Hispanic
3. Hispanic
4. American Indian or Alaska native
5. Asian or Pacific Islander
6. No response

Are you handicapped?
(circle numbers which apply)

1. Learning Disability
2. Blind/visually impaired
3. Deaf/hearing impaired
4. Physically handicapped
5. Other _____
6. No
7. No response

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.

Signature _____ Date _____

PROGRAM CHOICES

Select one of the following programs of study:

Occupational Programs

Accounting (025)
Agriculture—Agribusiness (625)
Agriculture—Crop Production (627)
* Automotive Mechanics (135-29A)
* Auto Parts Sales (668)

Banking and Finance (545)
Building Inspection (635)

Civil-Structural Engineering Technology (110)
Clerical Technology (023)
Commercial Food Production (100)
* Computer Operations (031-29R)
* Computer Programming (032-29T)
Criminal Justice (044)

* Dental Assisting (081-29C)
Drafting Technology (142)

Early Childhood Education (060)
Educational Aide—One year (062)
Educational Aide—Bilingual/Bicultural (06E)
Educational Aide—Handicapped-Deaf/Blind (06F)
Educational Aide—Handicapped-Mentally/Physically/Emotionally (06H)
Educational Aide—Junior/Senior High (06C)
Educational Aide—Kindergarten/Elementary (06A)
Educational Aide—Vocational-Technical (06G)
* Electronic Engineering (120)
* Emergency Medical Technology (607-29L)

Fire Prevention/Insurance Risk Inspection (571)
* Fire Suppression (052-29D)
Food Service Management (622)
Forest Technology (056)
* Health Care Support Services (087-29B)
* Health Records/Medical Transcriptionist (088-29P)
High School Completion (063)
Human Resource (086-29E)

* Industrial Electronics Technician (126)
Industrial Technology (160)

Management (026)
Manufacturing Engineering Technology (149)
* Manufacturing Operations (148-29F)
* Manufacturing Technology (147-29F)
Mechanical Design (143)
* Medical Office Assistant (083-29M)

* Nursing (084-29H)

Office Administration/Secretarial—Engineering (02A)
Office Administration/Secretarial—Legal (512)
Office Administration/Secretarial—Medical (029)
Office Administration/Office Administration (028)

Office Occupations (500)

Real Estate (040)

Records Management (533)

* Silicon Technology (146)

* Visual Communications (145-29J)

* Ward Clerk (614)
* Welding (137-29K)
* Welding/Nondestructive Testing (131-29K)
* Welding Fabrication (136-29N)

One star (*) indicates programs which may have special admission requirements or enrollment limits.
Please contact the Admissions Office.

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

LDC-Business (210)
Accounting
**Business Administration
**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-Health (275)
Community Health
**Health Education
**Nursing

LDC-Home Economics (240)
Child Development
**Home Economics

LDC-Hotel and Restaurant Management (350)
**Hotel and Restaurant 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

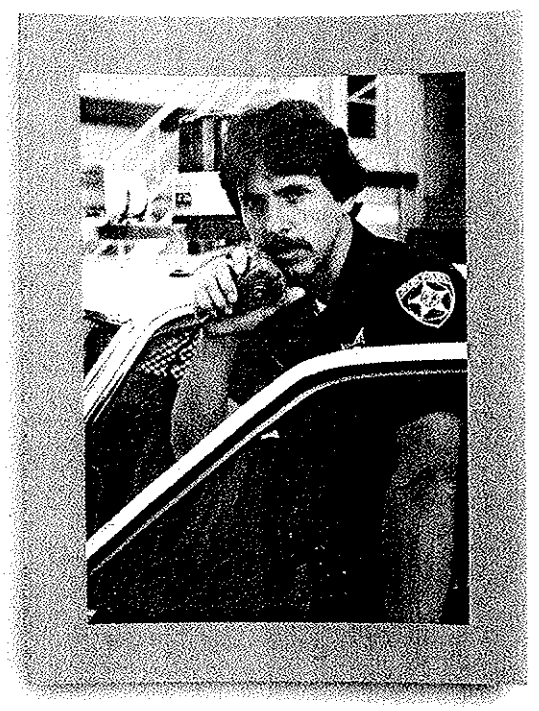
LDC-Science (300)
**Agriculture
Atmospheric Sciences
**Biology
**Botany
**Chemistry
**Chiropractic
**Geology
Horticulture
Oceanography
Physical Science
**Physics
**Pre-Professional Study
(Medicine, Dentistry, and Veterinary Medicine)
**Zoology

LDC-Social Sciences (260)
American Studies
**Anthropology
**Economics
Ethnic Studies
**Geography
**History
Law Enforcement-Corrections
**Political Science
Pre-Law
**Psychology
**Sociology

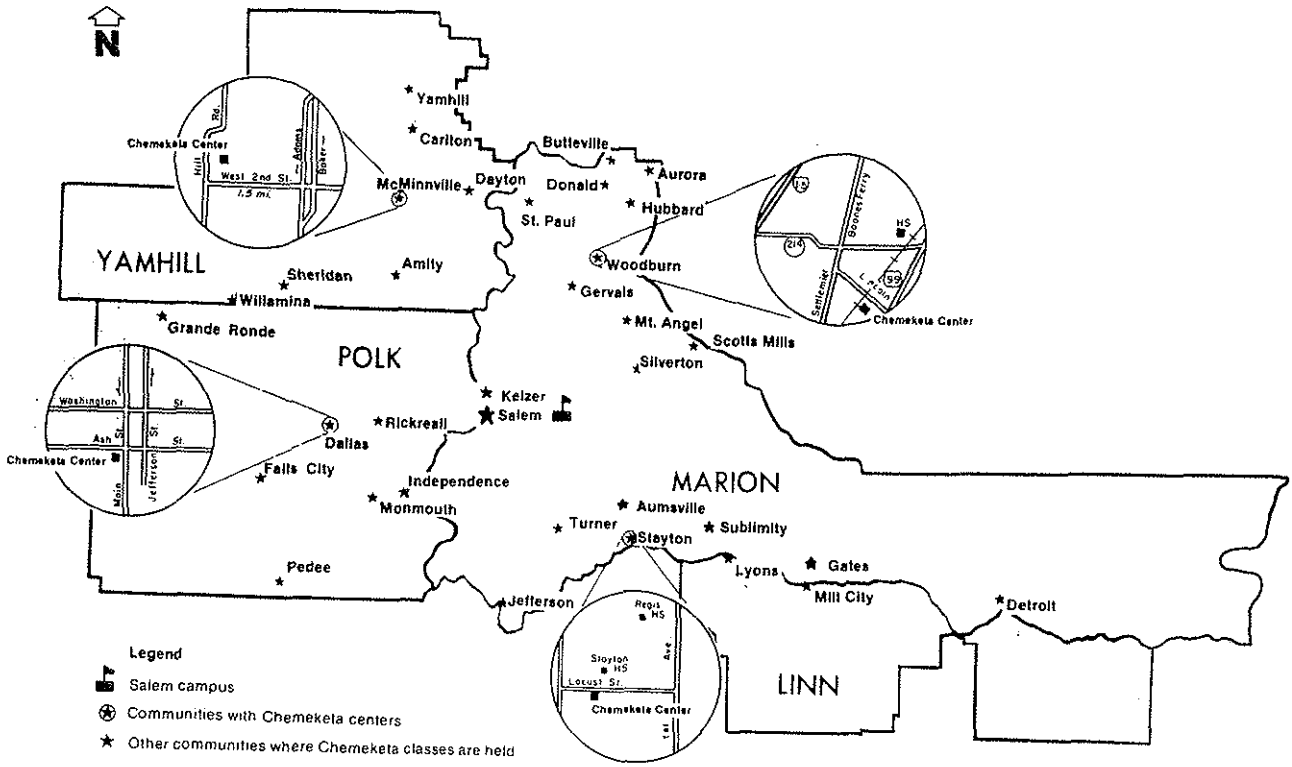
LDC-Exploratory (280)
**General Studies
Undecided Majors

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

About Chemeketa...



Chemeketa Community College District



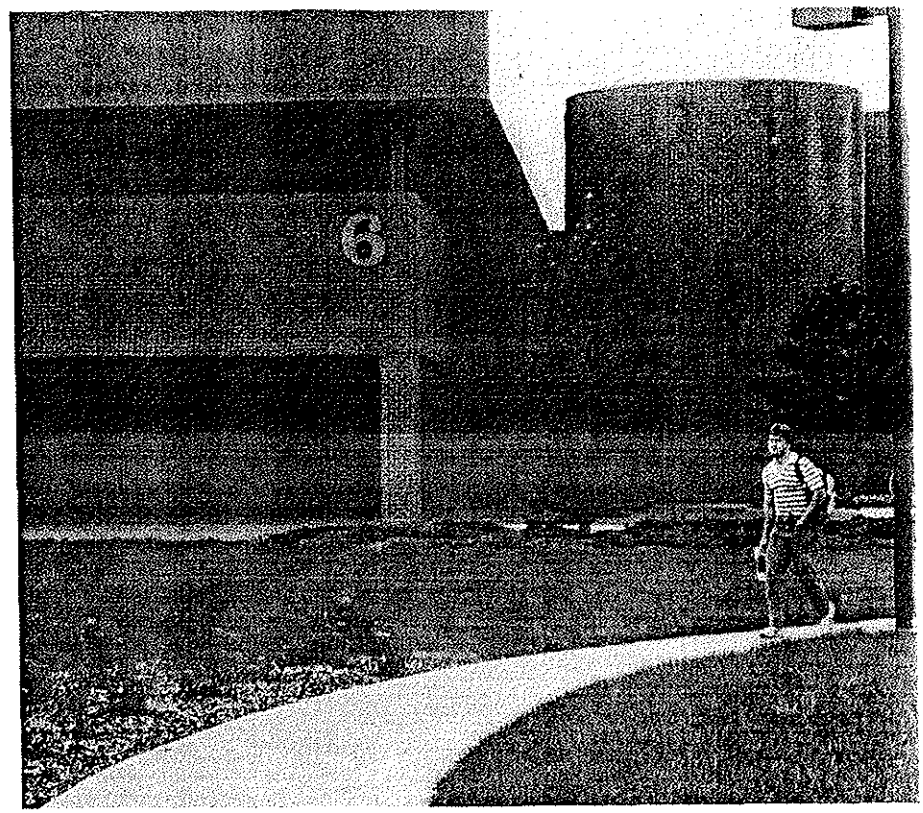
The college district is the Salem campus. In addition to the Salem campus, Chemeketa has centers in four towns and offers classes in many communities in the district.

For a map of the Salem campus, see page 120.

Introducing Chemeketa

Welcome to Chemeketa Community College

Chemeketa is a community college for people—for all kinds of people. Our goal is to help you, and all the people who live within our college district. We are ready to help you prepare yourself to earn a living, realize your life-long educational goals, and enrich your life. In response to your needs, we offer quality occupational and academic training, courses, and services. We hope these will add to the quality of your life.



What kinds of education does Chemeketa offer?

Basically, Chemeketa has four areas of learning:

1) 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 in Science degree. It usually takes two years to meet the requirements; it may take longer if you attend part-time.

In addition to vocational training classes, our occupational programs include general education courses. The aim of these courses is to increase your self-awareness; help you appreciate the values of good physical and mental health; become more competent in English and mathematics; and gain an understanding of history, governments, and economic systems.

2)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 in Arts degree. (See page 12 for requirements.)

Some of our vocational and technical programs also include courses which may be transferred for college credit. Check with the four-year institution you wish to attend. Generally, transfer courses are numbered 100 or above.

Consult a counselor or your academic advisor for more specific information.

3)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.

4)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.

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

Academic Calendar

	Fall 1985	Winter 1986	Spring 1986	Summer 1986	Fall 1986 (tentative)
Registration	Sept. 23-26	Jan. 6	March 31	June 20	Sept. 22-25
Evening classes begin	Sept. 30	Jan. 6	March 31	June 23	Sept. 29
Day classes begin	Sept. 30	Jan. 7	April 1	June 23	Sept. 29
Last day to register or add classes	Oct. 18	Jan. 27	April 21	July 11	Oct. 17
Holidays	Nov. 11 Nov. 28, 29		May 26	July 4	Nov. 10 Nov. 27, 28
Last day to withdraw from classes without responsibility for grades	Dec. 2	Feb. 28	May 23	July 25	Dec. 1
Review and final examination	Dec. 16-19	Mar. 17-20	June 9-12		Dec. 15-18
End of term	Dec. 20	Mar. 21	June 13	Aug. 15	Dec. 19
Graduation					
General Education Development and High School Completion			June 11		
One- and two-year programs			June 13		

What kind of facilities does Chemeketa have?

We have seven major buildings and a number of smaller buildings on our Salem campus. Building 2 houses the counseling center, tutoring services, and the learning resource center. The learning resource center includes the library, media services, telecommunications programs, a television studio, and the planetarium and multimedia theater.

The library has about 47,000 books, over 1,000 periodicals, and a variety of software.

Our science and health building has modern, well-equipped laboratories for science and health-related programs. In the physical education building are specially equipped 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. We have a greenhouse, and part of our campus serves as an agriculture laboratory.

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, 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 re-train 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 1984-85, some 30,000 persons enrolled in Chemeketa classes and workshops. Each term, about 3,250 students are enrolled full-time.

Chemeketa's teachers

Chemeketa has over 200 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. Many 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 Dean of Academic Services in building 5 on the Salem campus, phone 399-5144.

Student Rights and Responsibilities

Chemeketa's Board of Education has approved a document outlining the rights and responsibilities of students. See page 116.

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 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.

Affirmative Action Policy

It is Chemeketa's policy that discrimination or harassment on the grounds of race, color, sex, marital status, religion, national origin, age, or handicap will not exist in any area, activity, or operation of the college.

We define harassment as unwelcome behavior, either verbal or physical in nature, which meets any of these criteria:
1) submission to the conduct is either an implicit or explicit condition of employment or of successful course work.
2) submission or rejection of the conduct by an employee or student is used as the basis for decisions affecting that person's employment or success in course work.
3) the conduct has the purpose of substantially interfering with an individual's work performance or class performance.
If you have questions about the college's educational or employment practices relating to equal opportunity, or if you feel you have been discriminated against, contact the director of affirmative action Carol Maga, building 22, room 111, 399-5009.

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. Consult the term schedules of classes for updated information. You will find an application form for admission 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.

Placement tests

In order to be accepted for admission, Chemeketa requires new students to take a free placement test or to be granted a test waiver. The purpose of the test is to measure your reading, English, and mathematics skills so that you may choose courses that suit your abilities.

For information about tests and test waivers, contact the counseling center in building 2 on the Salem campus or Chemeketa centers in Dallas, McMinnville, Stayton, and Woodburn.

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. Also each term the schedule of classes gives the step-by-step procedure for registering for classes.

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

Class loads (399-5001)

If you enroll in 12 or more credit hours, you are considered full time for academic purposes. The average class load is 15 credit hours per term. If you wish to enroll for more than 22 credit hours, you must obtain special permission from the registrar. You will be charged additional tuition fees for each authorized credit hour over 22 hours. The rates are listed under **Tuition** on page 6.

Class changes (399-5001)

You may make changes in your class schedule before the deadline published in each term's schedule of classes. To make changes, complete an add-drop form. Forms are available in the registrar's office, staff offices, and the counseling center. These changes should be approved by your academic advisor and taken to the registrar's office.

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 or have special admission requirements:

Automotive Technology
Computer Operations
Computer Programming
Dental Assisting
Electronics Technology
Emergency Medical Technology
Fire Suppression
Health Care Support Services
Industrial Electronics
Manufacturing Engineering Technology
Nursing (Registered Nurse, Licensed Practical Nurse, Nursing Assistant, and re-entry courses)
Visual Communications
Welding Technology

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, and advanced placement (399-5006)

You may transfer credits from other colleges you have attended by requesting each of them to send a copy of your transcript to our admissions office.

If you have taken the College Level Examination Program (CLEP), request that your advanced placement test 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 information, see page 12.

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.

If you are an international student, you may contact a Chemeketa counselor or a bilingual staff member for help in how to enroll.

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 on Salem campus for MOST classes* sponsored by Chemeketa (see exceptions below).	Contact counseling center, building 2, Salem campus (optional).	Contact counseling center, building 2, Salem campus.	• File application with admissions office, building 22, Salem campus. **or** • Use mail-in form found in class schedule if enrolling for non-credit classes or six or less credit hours of classes.	**New students—** Register on Salem campus following directions sent to all applicants by admissions office. **Returning students—** Register on Salem campus following directions published in the quarterly schedule of classes.
Enrolling for classes held outside of Salem	Contact counseling center on 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.	• 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).	• Application for admission recommended, but not required. **or** • Use mail-in form found in class schedule if enrolling for non-credit classes or six or less credit hours of classes.	• Follow procedure shown above for enrolling on Salem campus. **or** • Register at first class session.
Interested in GED or English as a Second Language (non-credit)	Contact counseling center, building 2, Salem campus or call your local Chemeketa center in Dallas, McMinnville, Stayton or Woodburn (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 term schedule of classes. Open entry during term.
Interested in earning a high school diploma	Contact counseling center, building 2, Salem campus or call your local Chemeketa center in Dallas, McMinnville, Stayton or Woodburn (optional).	Contact counseling center, building 2, Salem campus.	• 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 admissions requirements or enrollment limits. Please contact the admissions office, 399-5006.

Automotive Technology
Computer Operations
Computer Programming
Dental Assisting
Electronics Technology
Emergency Medical Technology
Fire Suppression
Health Care Support Services
Industrial Electronics
Manufacturing Engineering Technology
Nursing (RN, LPN, nursing assistant, re-entry courses)
Visual Communications
Welding Technology

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, 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 admission 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
☐ special tools, equipment, uniforms, etc. required by your program? Contact the admissions office, Salem campus, building 22, 399-5006.
☐ tuition and fees? Contact the registrar's office, Salem campus, building 22, 399-5001.

3. Have you made arrangements for
☐ transportation?
☐ child care?

4. ☐ Have you inquired about financial aid? Contact the financial aid office, Salem campus, building 22, 399-5018, or the Chemeketa center in your community.

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? Look in your mail box or contact the counseling center, Salem campus, building 2, 399-5120, or the Chemeketa center in your community.

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**.)

If you are a full-time student, you are required to enroll in 12 credit hours for full academic standing. However, when paying tuition, you are classified as a full-time student if you enroll in 10 or more credit hours.

If you enroll for 23 hours or more, you will be charged a fee per credit hour for each hour over 22 hours.

Tuition rates for 1985-86 are:

Oregon students

Full-time ..... $210 per term
Part-time ..... $21 per credit hour

Out-of-state students

Full-time ..... $790 per term
Part-time ..... $79 per credit hour

Non-credit courses ... $1.25 per class hour, $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.

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 to prove whether 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.

Certain courses, particularly some training classes, may require separate registration and tuition. For some classes, there may be additional charges to cover the costs of required materials.

Auditing courses (399-5001)

If you enroll in credit courses but do not wish to receive grades or credits, you may register as an auditor. However, you must pay full tuition fees. Pick up and turn in an audit request form at the registrar's office before the end of the fourth week of a term.

Deferred tuition payments

If you are enrolling in 10 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. The college charges $3 if this amount is less than $100 and $6 if it is $100 or more. Make arrangements with the business office before you register.

Tuition refund policy

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

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 11.

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.

Student health and accident insurance (399-5011)

As a 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.

You may not purchase insurance for summer term only. However, if you enroll in Chemeketa fall term, you may purchase coverage for the whole year, including summer term. Also, insurance coverage you buy spring term may include summer term.

Chemeketa encourages you to buy insurance coverage if you are enrolled in classes involving risk and/or much physical activity.

Student identification cards (399-5116)

A student identification card is required for all students. There is a nominal fee. This will include your photograph which can be taken when you register or at the student activities office, building 3, room 101. Your student 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. The student ID card is sponsored by the Associated Students of Chemeketa Community College (ASCC).

Other fees (399-5001)

Locker fee (optional), $2.50. Physical education locker and towel fee (optional), $5 if you are enrolled in a physical education class; $11 if you are not enrolled in a PE class.

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

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.

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 and 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. This is separate from your application for admission to the college.

If you have attended other colleges, arrange to have transcripts of your credits sent to the admissions office for 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:
1) Receive no more than 44 deficiency course units over a two year period.
2) 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.
3) 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.

If 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 for, 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:
1) be at least 18 years of age or have graduated from high school.
2) be a United States citizen or able to provide I-94 documents or other documents showing you are eligible for noncitizenship status.
3) show a need for financial help.
4) enroll in a certificate or degree program at Chemeketa.
5) enroll in six or more credit hours at Chemeketa with these restrictions:

a) 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.

b) If you register for six to 11 credit hours (not including any courses by television), you may apply only for a Pell grant, Guaranteed Student Loan, or a job at Chemeketa.

c) If you have a bachelors degree you may apply for college work study, a National Direct Student Loan, a Guaranteed Student Loan, and an Oregon "Plus" loan.

d) You may not include audited and non-credit courses in these totals.

e) 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.

Financial aid continued on page 10.

Kinds of financial aid available at Chemeketa

Program and source of funding	Eligibility requirements	Available amounts	Special information
Grants and scholarships			
Pell grant (funded by federal government)	• enroll in at least six undergraduate credit hours per term • be a U.S. citizen or permanent resident • do not have a bachelor's degree	• varies, based on federal funding • estimated highest award at Chemeketa for 1985-86 will be $1,590	• apply by Financial Aid Form **or** • if you are a part-time student or a full-time student applying only for a Pell grant, apply by Application for Federal Student Aid form • Pell grant sends you a Student Aid Report (SAR) indicating your eligibility. Take three copies of SAR to financial aid office • funds may be transferred to any U.S. community college or university participating in federal programs
Supplemental Educational Opportunity Grant (SEOG) (funded by federal government)	• enroll full-time (12 credit hours or more) • be a U.S. citizen or permanent resident • indicate an exceptional financial need • do not have a bachelor's degree	• $200 to $2,000 a year • estimated highest award at Chemeketa for 1985-86 will be $1,500	• apply by Financial Aid Form (FAF) • financial aid office determines and notifies you of eligibility
Oregon state need grant (funded by state of Oregon)	• enroll full-time (12 credit hours or more) • be an Oregon resident • must not be enrolled in a program leading to a degree in theology, divinity, or religious education • must apply for Pell grant • must not be in default or owe a refund to a Title IV financial aid program • do not have a bachelor's degree	• varies, based on state allocations • estimated highest award at Chemeketa for 1985-86 will be $654	• apply by Financial Aid Form (FAF) • indicate and pay for a copy of FAF to be sent to Oregon State Scholarship Commission • use only for expenses related to the eligible institution you are attending • may be transferred to other Oregon colleges and universities • may be awarded for up to 12 quarters (terms) or eight semesters
Oregon state cash award (funded by state of Oregon)	• be an undergraduate (initial awards made only to graduating high school seniors) • have a cumulative high school GPA of 3.50 or higher • score 500 or higher on SAT mathematics and verbal tests • meet all requirements listed under Oregon state need grant (above)	• varies, based on state allocations • estimated highest award at Chemeketa for 1985-86 will be $672	• apply by Financial Aid Form (FAF) • all conditions listed under Oregon state need grant (above) apply
Talent grants (funded by Chemeketa Community College)	• show outstanding ability and achievement in selected fields • enroll full-time (12 credit hours or more)	• tuition waivers for in-district students	• contact instructor or coach directly associated with your skills

Loans

National Direct Student Loan (NDSL) (funded by federal government)	• enroll full-time (12 credit hours or more) • be a U.S. citizen or a permanent resident	• up to $3,000 for the first two years • up to $6,000 until you earn a bachelor's degree • highest award at Chemeketa for 1985-86 will be $1,500	• apply by Financial Aid Form (FAF) and National Direct Student Loan application form • pay no interest or principal while in school • begin payment six months after you leave school or you drop your enrollment to less than six credit hours • currently, interest rate is five percent • repay Chemeketa Community College • hold an exit interview with Chemeketa business office when you complete studies at Chemeketa
Nursing Student Loan (NSL) (funded by federal government)	• meet requirements listed under NDSL (above) • be accepted into associate degree nursing program	• up to $2,500, based on federal funding available • loans average $1,500 a year	• apply by Financial Aid Form (FAF) and Nursing Student Loan application form • begin payment nine months after you graduate • currently, interest rate is six per cent
Guaranteed Student Loan (GSL) (funded by private lenders with state guarantee and insured by federal government)	• enroll in at least 6 credit hours • be a U.S. citizen or permanent resident • be an Oregon resident • maintain satisfactory academic progress • most lenders will not loan money to students not enrolled full-time • financial aid office analyzes need if adjusted gross income is $30,000 or more	• up to $2,500 for a three-term period • up to $12,000 until you earn a bachelor's degree	• at financial aid office, pick up application forms to be completed by borrower, college, and lender • contact lending agency such as bank, savings and loan association • pay required fees • begin payment six months after leaving Chemeketa • repayment may be deferred if you continue half-time or full-time study or serve in armed forces, VISTA, or Peace Corps • currently, simple interest rate is eight percent • interest is deferred while you are enrolled in an approved program
Oregon "Plus" program (funded by private lenders with state guarantee)	• enroll in at least six credit hours • be a U.S. citizen or permanent resident • be an Oregon resident • have no defaults on other loans • owe no refunds to other aid programs • use funds only for educational costs • maintain satisfactory academic progress	• independent students may borrow up to $2,500 a year • parents may borrow up to $3,000 a year for dependent students	• at financial aid office, pick up application forms to be completed by borrower, college, and lender • pay required fees • currently, interest rate is 12 to 14 per cent for long-term loans • lenders loan own funds • Oregon State Scholarship Commission insures against loss (contact financial aid office for more information) • begin payment 60 days after date lender disburses funds to you • parents borrowing for dependents may only be mother, father, adoptive parent or legal guardian

Work

College Work Study Program (CWS) (funded by federal government)	• enroll in 12 credit hours	• varies according to your financial need, available time, and skills • usually no more than $600 a term or $1,800 a year • pays minimum wage or higher	• apply by Financial Aid Form (FAF) • jobs not guaranteed but are available on- and off-campus • hold interviews with Chemeketa work study program coordinator and job supervisor after receiving award but before beginning work
Part-time jobs (funded by private businesses)	• willingness to work • meet qualifications of employer	• varies according to job • average wage for 1984-85 was $3.60 per hour	• be referred by Chemeketa job placement specialist
Chemeketa employment (funded by Chemeketa Community College)	• enroll in six credit hours or more	• varies according to job • pays minimum wage or higher	• apply at Chemeketa job placement office

Financial aid, continued

f) You may count no more than 24 credit hours of developmental courses which were recommended by your advisor.
g) You may not count credits you earned by passing challenge examinations.

6) score at the 4.6 grade reading level or above on the college's placement test. (If you score between the 4.6 and 6.9 grade levels:
a) The college places you in a guided studies program for two terms. (You may enroll also in classes included in your chosen program of study.)
b) The college assigns you an advisor.
c) You take classes to learn the basic skills you need for your program.

How much help will you need?

To apply for financial aid, you must file a Financial Aid Form (FAF) with the College Scholarship Service (CSS). From information you give on this form about you and your family's finances, the CSS calculates how much money it expects you and your family to contribute during the school year.

What kinds of financial aid are available?

There are three kinds of financial aid available for students enrolled at Chemeketa:
1) Grants and scholarships which you do not repay.
2) Loans which you must repay.
3) Part-time jobs.

For detailed information, read the chart on pages 8 and 9.

How to apply

Follow these steps to apply for financial aid:
1) 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.
2) Fill out and mail your Financial Aid Form to the College Scholarship Services (CSS), following directions on the form. Ask the CSS to send a copy to Chemeketa. Be sure to include a check or money order to cover the fee indicated on the form.
3) Arrange to take Chemeketa's placement test by contacting the counseling center on the Salem campus or a Chemeketa center in Dallas, McMinnville, Stayton, or Woodburn.
4) Apply for admission to Chemeketa.
5) Request other colleges you have attended to mail financial aid transcripts to Chemeketa.

Chemeketa's financial aid office will mail you the necessary forms to complete your file.

When to apply

You may file your application any time during the year. However, the financial aid office first considers the applications for fall term that it receives by April 1, then takes others in the order received. We recommend that you apply at least three months before a term starts. The financial aid office publishes suggested filing deadlines which appear in the term schedules of classes. Remember, money is limited and some funds may run out before the needs are met for every student who applies.

After you have filed your completed forms, the financial aid office will send you a financial aid offer indicating the kinds of aid you are eligible to receive. Sign this offer and return it to the financial aid office.

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.

At least once a year, the financial aid office checks to make sure you complete the minimum number of credit hours. If you do not, you may be placed on probation and 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 no more than nine terms or 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. Contact Chemeketa's financial aid office for information on your eligibility.

Financial aid probation

If you do not meet the minimum credit-hour and 2.0 GPA requirements, the financial aid office reviews your progress and may either cut off your aid or place you on probation and allow you one more term to meet the requirements. If you withdraw from Chemeketa, your aid stops.

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:
1) continue at Chemeketa for one term, paying your own tuition.
2) complete a required number of credit hours with a 2.0 GPA.

Refunds

Chemeketa has a tuition refund policy for students receiving financial aid funds. We ask you to read and sign a copy of this policy at the time you sign your financial aid offer.

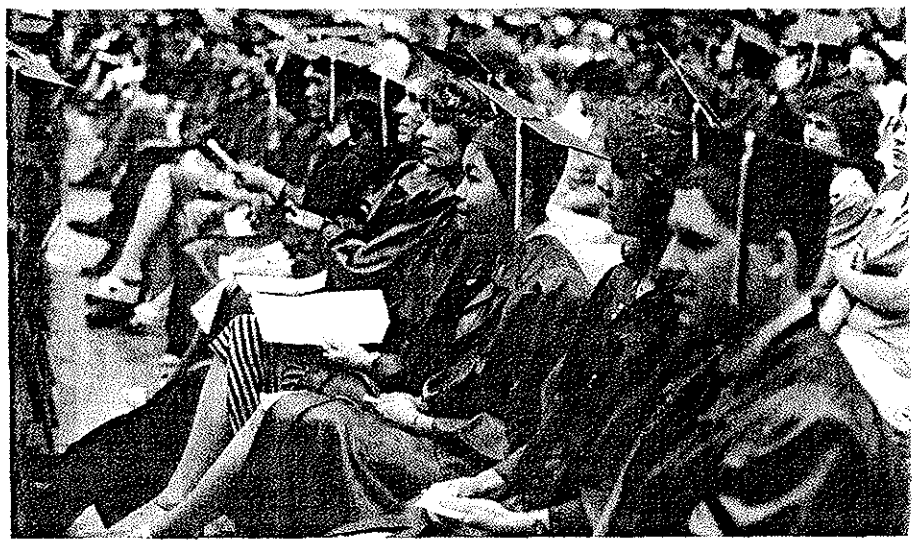
Appeals

You may appeal any action 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 in determining and re-establishing your eligibility. The office also helps students with concerns about funds and budgeting.

Academic Information



Students 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 your transcript until the business office clears your obligation. Upon graduation, you are entitled to five free copies of your transcript.

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 the student records policy adopted by Chemeketa's Board of Education in August, 1973, and the Federal Education Rights and Privacy Act, Public Law 93-380.

Grading system

Final grades are issued at the end of each quarter. 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 you have, in his or her judgment, not finished a minor portion of required class work although you attended the class regularly. To remove an "Incomplete," you must make up the required class work within one year following the term in which you received it. Your grade is then recorded by the registrar.

Repeating a course (399-5001)

We suggest you confer with your academic advisor before repeating a course. If you do repeat a course, and want the old grade removed from your record, you must request through the registrar's office that your original grade be changed to an R (Repeated). The R is not computed in your GPA. You may request this change through the registrar's office at any time after you have completed the course the second time.

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 6.

Withdrawal from college (399-5001)

If you decide to withdraw from Chemeketa, obtain a withdrawal (add-drop) form from the registrar or the counseling center. File the completed form with the registrar's office as soon as possible. The last day to withdraw from classes without responsibility for grades is three weeks prior to the end of the term. If you leave Chemeketa with out 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 full refund of the tuition and fees you paid, provided you do not owe money to the business office, library, or any other college department. Any debts will be deducted from your refund. 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 and 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 final examination, you may receive credit

Questions?

Call Chemeketa's 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 answer questions about room locations, campus activities, workshops, meetings, academic advisor assignments, and instructional staff office hours. The information center also distributes class schedules each term.

from Chemeketa for the course. Inquire at the admissions office about what courses and scores Chemeketa accepts.

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 for each exam.

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, perhaps in 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)

Chemeketa's independent study plan encourages and assists students who are interested in and appear ready to learn on their own. In this plan, under the direction of a faculty advisor, you may select a topic related to your career or program goal. Then you enter into a learning contract with a Chemeketa instructor.

This contract may include:
1) the study of a topic not covered in an existing course.
2) an in-depth study of a topic introduced in a course.
3) field studies.
4) study combined with tutoring sessions, regular meetings with your instructors, or seminars.
5) service activities.

For more information, contact your academic advisor or the counseling center.

Telecourses

You may earn credit hours at Chemeketa by enrolling in courses offered by television, telephone conference (PhoneNet), and mail.

Courses by television allow you to earn college credits at home or at a Chemeketa center in Dallas, McMinnville, Stayton or Woodburn.

If you enroll in a TV course, you
1) attend an orientation meeting on Chemeketa's Salem campus, led by your instructor.
2) watch two 30-minute television programs a week.
3) follow a study guide and read a text.
4) complete assignments and take tests.

During the term, you may telephone your instructor at scheduled times to ask questions and discuss ideas.

PhoneNet classes link Salem campus classes with Chemeketa centers in Dallas, McMinnville, Stayton, and Woodburn. Through two-way telephone conferences, you listen to a class in session and may join in class discussions. To earn credits, you must fulfill all the requirements of the class, including completing your assignments and taking tests.

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

Degrees, Certificates, and Graduation Requirements

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

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

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 24.

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 in Arts degree

To qualify for an Associate in Arts degree, you must meet these requirements:
1) Complete a minimum of 93 credit hours. These must include the following:
   a) Six credit hours of English composition.

b) One term of personal health.
c) Three terms of physical education. This may be totally or partially waived under certain circumstances.
d) One sequence in humanities (English composition sequence does not meet this requirement).
e)One sequence in mathematics or science.
f) One sequence in social science.
g) One additional sequence in humanities, mathematics, science or social science.
h) Three credit hours of computer studies.

2) Earn a cumulative grade point average of 2.0 or above in all work to be applied to the degree.
3) Complete a minimum of 30 credit hours at Chemeketa.

Specific course sequences satisfying the above requirements are listed on page 22.

Up to 12 credit hours earned in occupational programs may apply toward the Associate in Arts degree. However, not all four-year colleges and universities will accept these hours. Check with the institution to which you wish to transfer credits.

Associate in Science degree

You may earn an Associate in Science degree in a two-year occupational program by meeting these requirements:
1) Satisfactorily complete the required courses and credit hours listed for each program (a minimum of 90 credit hours). These include program-related instruction on computers or three credit hours of computer studies
2) Complete a minimum of 30 credit hours at Chemeketa.
3) Earn a cumulative grade point average of 2.0 or above for all course credits which apply toward the degree.

Associate in Science degrees are granted in the following areas:
Accounting
Agribusiness
Automotive Mechanics
Banking and Finance
Building Inspection
Civil-Structural Engineering Technology
Computer Programming
Criminal Justice
Drafting
Early Childhood Education
Educational Aide
Electronics Technology
Emergency Medical Technology
Fire Protection Technology
Food Service Management
Forest Technology
Health Care Support Services
Human Resources
Industrial Technology
Manufacturing Engineering Technology
Management
Mechanical Design
Nondestructive Testing
Nursing (Registered Nurse)
Office Administration-Secretarial
Real Estate
Visual Communications
Welding Fabrication

Certificate of Completion

You may earn a Certificate of Completion in one-year programs by meeting these requirements:
1) Satisfactorily complete the required courses or credit hours listed for each program.
2) Earn a cumulative average of 2.0 or above for all course work which applies to the certificate.
3) Complete a minimum of 15 credit hours at Chemeketa.

Certificates of Completion are granted in the following areas:
Auto Parts Sales
Building Inspection
Clerical Technology
Commercial Food Production
Computer Operations
Crop Production
Dental Assisting
Early Childhood Education
Educational Aide
Health Records Technician-Medical Transcriptionist
Manufacturing Operations
Medical Office Assistant
Nursing (Licensed Practical Nurse)
Office Occupations
Ward 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 in the term schedule of classes.

You may be allowed to make substitutions in the curriculum and still meet graduation requirements by following these steps:
1) Discuss the substitution with your program director or academic advisor.
2) Gain approval of the program director to make the substitution.
3) File a curriculum deviation form, signed by your program director, with 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.

Degrees and certificates become official when graduation information is recorded on your transcript. Chemeketa confers degrees once a year, at the close of spring term.

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.

Call a Chemeketa center for information

If you live outside the Salem area, call your local Chemeketa center for information.

Chemeketa Dallas Center
623-5567
1251 Main Street

Chemeketa McMinnville Center, 472-9482
500 N. Hill Road

Chemeketa Stayton Center
769-7738
756 W. Locust Street

Chemeketa Woodburn Center, 981-8820
120 E. Lincoln Street

Student Development Services

Student-instructor conferences

You may confer with your instructors regarding class assignments and methods of study. Their office hours are posted in each faculty office area or on their office doors.

Tutoring services (399-5093)

Drop in at the tutoring center in building 2 on the Salem campus, for free tutoring. If you have special needs or problems, contact the tutor program coordinator.

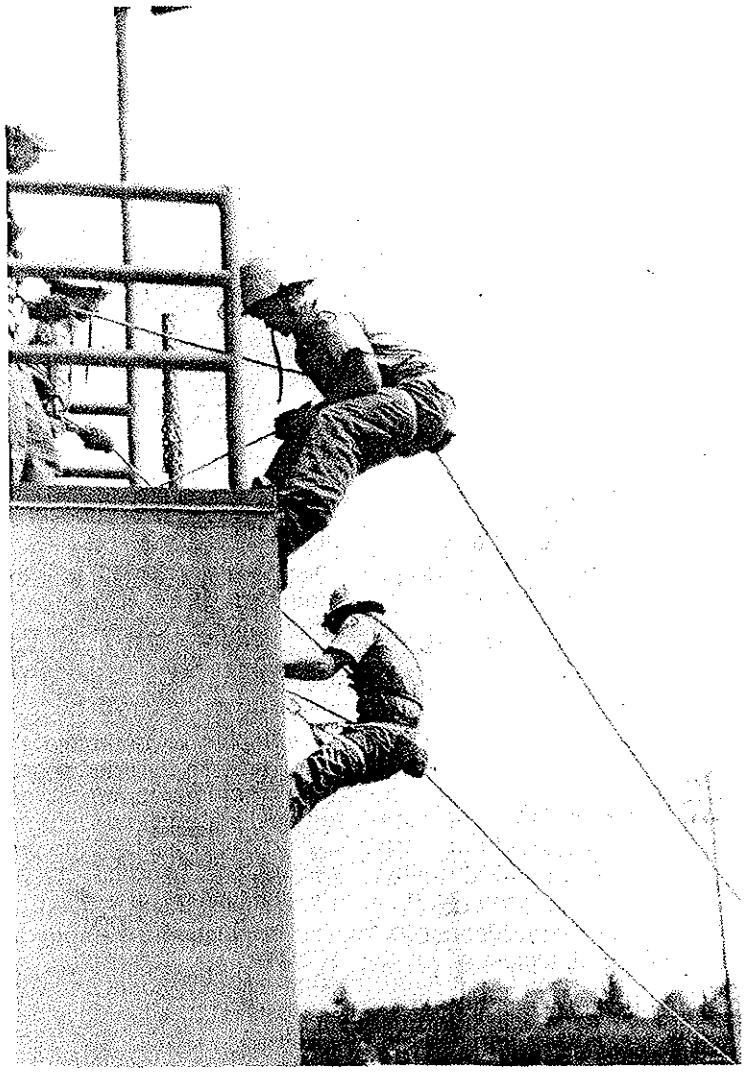
Volunteers offer additional tutoring on a one-to-one basis. Contact the volunteer tutor coordinator.

Skill-building classes (399-5093)

If you feel a need to increase your basic skills in order to do better in college-level classes, contact the center for developmental education in building 2 on the Salem campus. The center offers classes in reading, writing, mathematics, spelling, vocabulary development, study techniques, goal setting, problem solving, and thinking skills.

English as a second language and bilingual assistance

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, 399-5093.

Refugee training program—building 40, 399-5141.

Volunteer tutoring program—building 2, 399-5093.

For off-campus help, you may make an appointment to see a counselor at a Chemeketa center in Dallas, McMinnville, Stayton, and Woodburn.

Services for handicapped 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 or your hearing and/or sight are limited. This includes counseling, interpreting, note-taking, tutoring, reading, and using special equipment.

If you are deaf or your hearing is impaired, you may enroll in special classes in language development and basic reading.

Chemeketa also offers four levels of sign language classes. For information on services for deaf and hearing and visually impaired persons, call 399-5049.

Chemeketa provides individual educational plans for developmentally disabled and limited learning handicapped students who can benefit from our instruction. If you need special assistance, please contact the Chemeketa diagnostician at 399-5120.

Student Services

Bookstore

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 Chemeketa 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 $125 to $200 a term.

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

Book buy back—The Salem campus bookstore will purchase used books at specified times. Watch for posted notices.

Student health services (399-5023)

Chemeketa's first aid office is in building 22, room 113. Because the college has no physician, you must rely upon your personal physician, dentist, or clinic to meet your 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 security office in building 22. Visitors may park without permits.

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 (399-5091)

If you are hungry when you are on the Salem campus, you have several choices for buying food.

Chemeketa's food service department manages these eating places:
The Connection, building 2, serves breakfast, fast food items, a salad bar, and a wide variety of beverages.
The Skillet, building 34, has fast foods, hot meals, a salad bar, and fresh desserts.
The Chef's Corner, building 34, is open during spring term. Advanced food service students prepare and serve specialty menus, salads, and sandwiches. Reservations are 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, roommates wanted, and a list of apartments located close to the campus. You may post a notice and check for housing. You may also consult 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 full-time cost is $200 a month. 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 17 children ages one to six years old for up to 4 hours per day or 20 hours per week. Parents register their children each term. Members pay $1 per hour; others pay $1.75 per hour.

The financial aid office, building 22, room 118, has a list of day care centers in the Salem area.

Career and Employment Advising and Services

Counseling center (399-5120)

If you are interested in educational, vocational, or personal counseling, contact Chemeketa's 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 is 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:
1) gain a better understanding of your interests, values, and skills.
2) relate those characteristics to a wide variety of careers.
3) find accurate information about occupations and the labor market.
4) 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.

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.

Career Information System

A computer-based Career Information System (CIS) is available for enrolled and prospective students to use in career decision-making. In using the 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 fit you.

In addition, you may:
1) obtain descriptions of occupations.
2) learn how to prepare and train for specific careers, and find out which schools offer such training.
3) gather information about the availability of jobs.
4) obtain salary information for occupations in Oregon.

Appointments are necessary. For more information or to arrange an appointment, contact the counseling center.

Career conversation videotapes

A library of videotapes covers 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, qualifications for specific occupations, availability and outlook for jobs, and working conditions. The tapes feature interviews with individuals, usually Chemeketa graduates, who are actively engaged in a particular career.

You may view these tapes anytime the center is open.

Entry and re-entry workshops

If you are entering Chemeketa for the first time or returning to school, you are invited to these workshops, held just before the beginning of each term. They are planned to help you become aware of Chemeketa's services, to answer questions about your concerns, to reduce your anxieties about problems which may occur when you return to school after an absence, especially if you are an older student, and possibly to establish an ongoing support group.

The schedule of workshops is published in each term's schedule of classes.

Orientation

A series of sessions is held before the beginning of each term. The series 1) describes the various services available to you, 2) discusses how you select your courses, 3) explains registration procedures, and 4) helps you fill out a tentative schedule of classes.

All new students are invited. You are not required to attend, but we recommend that you do.

Academic advising

Chemeketa offers academic advising for all students. If you are a student enrolling in a program of study, we assign you 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 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 and computerized job matching

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.

When you register, the placement service enters your name and qualifications into a computer which matches an employer's needs with your qualifications and availability. When a match comes up, the placement service notifies you of the job opportunity and issues you a referral.

Placement files

Students and graduates may set up placement files which can be helpful in landing certain jobs. These files can 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, 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.

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. See the schedule of classes for exact times and locations.

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 class promotes awareness of important job search strategies. It is listed under Job Search in each term's schedule of classes.

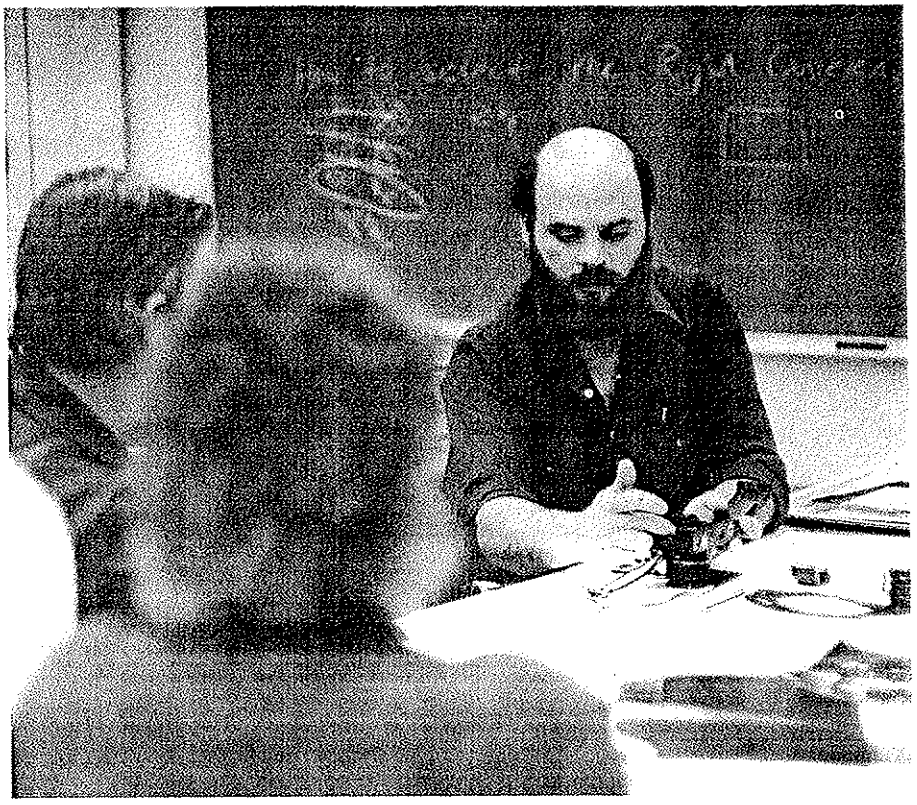
Cooperative Work Experience (399-5026)

As a 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. You may find a job on your own, or your coordinator will help you find a position. The college must approve your training site. This may be a paid or an unpaid job. You and your job supervisor work together on a training plan which relates to your classroom studies.

This 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. The number of hours you work on the job per week determines the number of credits you earn.

Many of Chemeketa's occupational programs include CWE either as an elective or as a graduation requirement.



Services to the Community

College for older adults (399-5135)

Chemeketa plans daytime classes, workshops, and other activities which may especially interest older adults. We hold these classes at a number of Salem locations, including the Salem Area Senior Center, and in various communities throughout the college district. Topics range from arts and crafts, foreign languages, and history to nature studies, physical fitness, and writing.

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 $5 plus lab fees if you have a Golden Age card.

You may apply for a card at the first meeting of a class. 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 currently in building 17 on the Salem campus.

The center helps in the development of businesses by arranging for individual counseling by members of the Service Corps of Retired Executives (SCORE) and other volunteer business women and men. The center also holds business-related seminars, and distributes a variety of free publications.

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 on special business topics.

Businesses and organizations may arrange through the center for on-site, specialized training for their employees.

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 presents two original sky shows each fall, winter, and spring term. Several afternoon and evening showings are scheduled each weekend during a term. There is an admission fee with a special rate for families.

Art gallery (399-5184)

Chemeketa's art gallery is in building 3, room 107 on the Salem campus. It presents exhibits of artists from around the country. Each spring, the gallery exhibits student art. Several shows a year exhibiting 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), which includes 17 public libraries, the college and the Oregon State Library.

This cooperative, tax-supported effort provides library service to district residents who have no access to a local library. A benefit of CCRLS is a "universal" library card which may be used at any participating library. Other services are a book service between libraries, a bookmobile, and reference assistance.

Student Life at Chemeketa

Student activities (399-5116)

At Chemeketa, we realize that activities other than classes and studying are important to students. Our student activities program tries to respond to your recreational and social interests and needs.

Students assume most of the responsibilities for Salem campus activities, with guidance from the student activities office and assistance of faculty members. Students establish and administer most co-curricular activities, set up campus social programs, and help maintain the discipline necessary in a college community.

Activities vary throughout the year, depending upon student interests. You are encouraged to join in these activities. For more information, contact officers of student organizations and/or the student activities office in building 3 on the Salem campus.

Student government (399-5117)

All Chemeketa students are members of the Associated Students of Chemeketa Community College (ASCCC). ASCCC encourages all members to participate in its programs as much as possible.

The six executive officers and senators receive tuition grants.

The special responsibilities of each ASCCC officer are as follows:
The **president** represents the Chemeketa students at Board of Education meetings and at other official functions.

The **vice-president** presides over the student senate.

The **programming director** helps plan ASCCC-sponsored events and works with the student senate in promoting and publicizing ASCCC-sponsored and campus club activities.

The **administrative assistant** prepares agendas and keeps minutes of all ASCCC meetings.

The **budget director** is responsible for ASCCC financial records and expenditures and prepares the budget.

The **clubs director**, a new executive position, coordinates the functions of all campus clubs and meets regularly with club representatives and members.

The **student senate**, composed of 11 students representing various programs, meets weekly. All students are encouraged to attend meetings of the senate.

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

The following clubs have been chartered by ASCCC and are active on the Chemeketa campus:
Agriculture Club—For students interested in agriculture.

American Welding Society, student chapter—Aims to increase student awareness of the welding industry and add to students' knowledge through studies of results of welding and the development of welding processes.

Art Club—For students interested in promoting the fine arts on campus.

Auto Club—Promotes auto safety and maintenance.

Bowling Club—For students, staff members, and spouses.

Christian Fellowship Association—A non-denominational Christian fellowship featuring guest speakers and music.

Data Processing Management Association—Tries to strengthen confidence, improve scholarship, and develop the data processing skills of its members.

Deaf Awareness Club—For students who want to learn more about programs for the deaf both on campus and throughout the state.

Disabled Students Club—Promotes awareness of better ways to serve disabled students.

Drama Club—For students and staff members who want to participate in dramatic activities, mostly short plays.

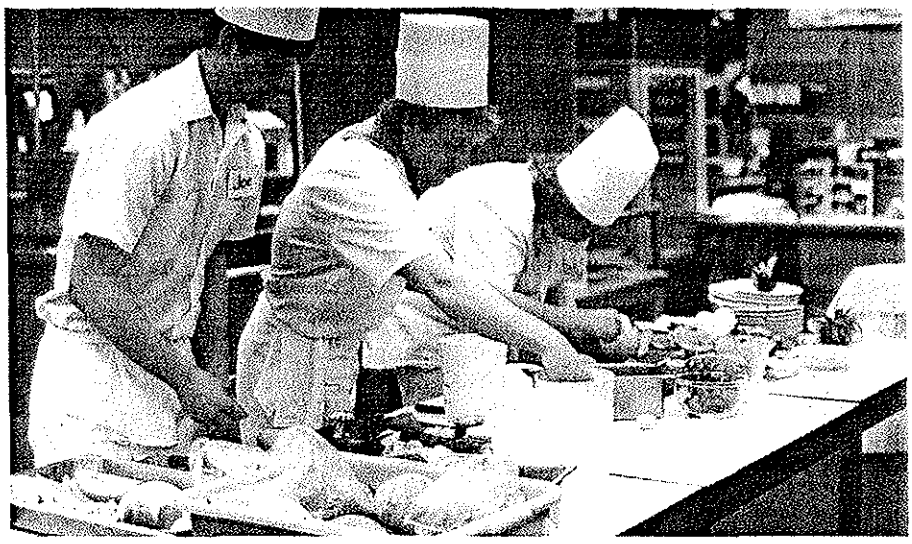
Emergency Medical Technicians Club—Promotes Chemeketa's emergency medical technology program, public service, individual and group improvement, and employment.

Fencing Club—Promotes the art of fencing, helps advance the skills of present and future fencers, and represents Chemeketa in fencing tournaments.

Fire Protection Club—Publicizes Chemeketa's fire protection program through public service and plans social activities for members.

Forestry Club—Promotes, publicizes, and tries to make the public aware of the forest technology program and the forest industry. The club represents and promotes the needs of Chemeketa's forest technology students.

Gourmet Club—Promotes gourmet cooking, provides public service, encourages individual and group skill improvement, and brings together food service students and alumni.



Human Resource Program Club (HRP)—Open to all students interested in a humanistic approach to dealing with and caring for people.

International Student Club—Promotes understanding of various world cultures through activities and meetings. Open to everyone.

Juntos Club—For Hispanic students and other students interested in learning about Mexican culture, food, and language.

Karate Club—Helps members develop correct techniques in the martial arts.

Latter Day Saints Organization—Organized for the fellowship of members of the Church of Jesus Christ of Latter Day Saints but open to everyone.

Parents Club—Promotes services for parents who need help and support in various aspects of child care.

Pep Band Club—Provides music during basketball games and special sporting events.

Phi Theta Kappa—A national honor society for community college students who earn a grade point average of 3.5 and above.

Political Awareness Club (PAC)—Encourages students to become aware of political issues and concerns.

Ski Club—Promotes snow skiing and organizes weekend ski trips.

Society for the Advancement of Management (SAM)—A program-related club which promotes administration and management skills. Open to everyone.

Society of Manufacturing Engineers (SME)—Promotes interest in the advancement of manufacturing sciences.

Student Nurses of Oregon (SNO)—The Salem chapter of Student Nurses of Oregon. Open to students in the associate degree nursing program. Assists in preparing student nurses to assume professional responsibilities.

Table Tennis Club—Encourages participation in table tennis and promotes tournaments in the community and with other community colleges.

Vietnamese Club—Promotes understanding and study of Vietnamese culture, food, and dance.

Writers Club—Publishes the journal, *Before the Sun*. Allows members to share their work at frequently scheduled readings. Open to students and staff.

New ideas welcome

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 welcome. 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 and printed by students in the Visual Communications program, the newspaper has earned consistently 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.

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.

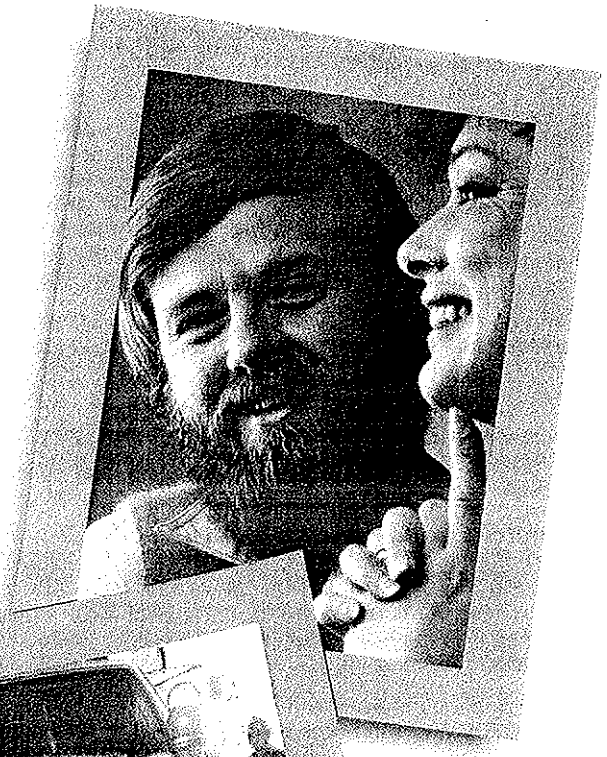
Intercollegiate athletics (399-5081)

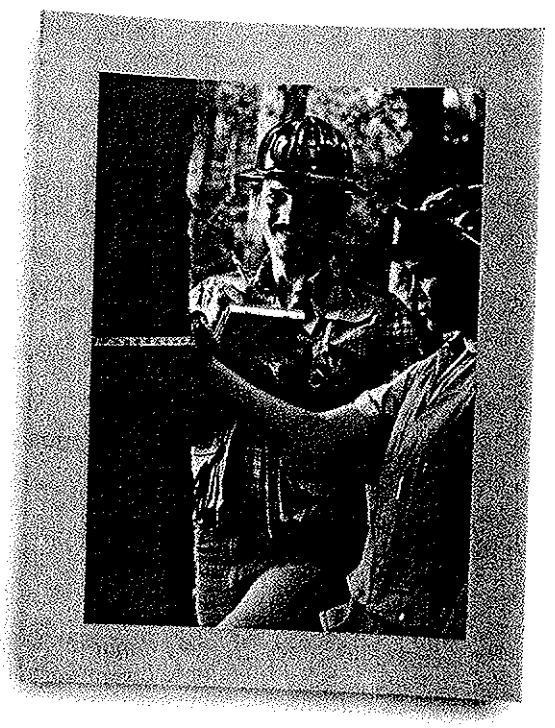
Participation in intercollegiate sports is based on the requirements of the Northwest Athletic Association of Community Colleges (NWAACC). Chemeketa is a member of that association and of the Oregon Community College Athletic Association, whose members abide by the rules of NWAACC as a minimum standard.

If you participate in interscholastic sports, the college requires, and pays for, special insurance coverage for you and for your physical examination. Contact the physical education department office in building 7 for more information.

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

Programs of Study





College Transfer Courses

Most Oregon four-year colleges and universities accept Chemeketa credit 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 a transfer guide, a publication approved by the Oregon State Department of Higher Education.

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. However we recommend that you inquire at the college you plan to attend to be sure that this information is up-to-date.

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 and Restaurant Management
Journalism
Mathematics
Manufacturing Engineering Technology
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:

1) Contact the senior college you plan to attend to check entrance requirements and the suggested freshman and sophomore classes required in your chosed field.

2) Confer with counselors and advisors at Chemeketa before you register.

3) Check with the senior college a term or two before completing your work at Chemeketa to make sure you are meeting all requirements.

4) 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. We try to keep our courses current with those at Oregon's four-year institutions.

Associate in Arts Degree

If you take college transfer classes, you may also earn an Associate in Arts degree at Chemeketa. The requirements for this degree are listed on page 12.

Classes which meet AA degree course requirements include:

Six hours of English composition. Wr121, and 122, 123 or 227.

One term of personal health. HE250

Three terms of physical education. Select 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. Select from:
Art115, 116, 117
Art204, 205, 206
Art231, 232, 233
Art154, 155, 156
Art231, plus any six hours of these courses: Art232, 233, 244, 260, 261, 271, 272, 273, 281, 284, 285, 286

Eng101, 102, 103
Eng104, 105, 106
Eng107, 108, 109
Eng201, 202, 203
Eng253, 254, 255
Eng105, 106, 261

FA255, 256, 257
GER101, 102, 103
NOR101, 102, 103
J224, 225, 226
MS251, 252, 253
Mus111, 112, 113
Mus201, 202, 203

Phl201, 202, 203
R201, 202, 203
FR101, 102, 103
SPAN101, 102, 103
FR201, 202, 203
SPAN201, 202, 203

Sp111, 112, 113
Sp112, 113, 114
TA121, 122, 123
Wr241, 242, 243

One sequence in mathematics or science. Select from: Mth100 or higher (any three courses)

CS133B, 233B, 261, 262, 263 (any three courses)
Bi101. 102, 103
Bi121, 122, 124
Bot201, 202, 203

Ch101, 102, 103
Ch104, 105, 106
Ch114, 115, 116
Ch204, 205, 206
Ch226, 227, 228, 229, 230

G101, 102, 103
G201, 202, 203
ENGR211, 212, 213
GS104, 105, 106
GS207, 208, 209

Ph201, 202, 203
Ph211, 212, 213
Zoo201, 202, 203

One sequence in social science. Select from:
Anth101, 102, 103
Anth207, 208, 209
BSt202, 203, 204
Ec201, 202, 203
Geog105, 106, 107

Hst107, 108, 109
Hst157, 158, 159
Hst201, 202, 203
Hst257, 258, 259

PS201, 202, 203 or 205
Psy201, 202, 203
Soc204, 205, 206
WS101, 102, 103

One additional sequence in humanities, mathematics, science, or social science.

Three credit hours of computer studies.
Select from:
CS113, 103, 121, 131, 133B, 233B, 261, 262, 263

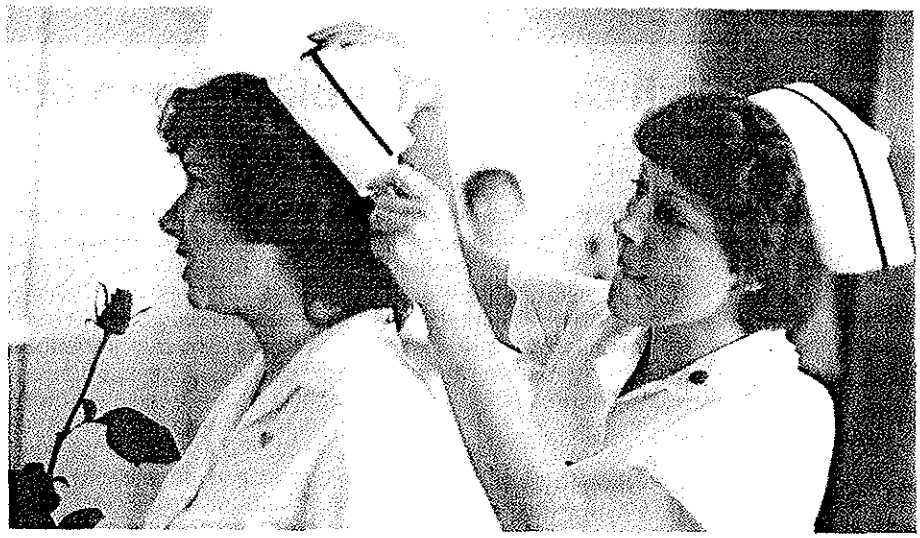
Occupational Programs

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

In most of these programs, you may earn an Associate in Science degree. It usually takes two years to meet the Associate in 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 are given on the following pages along with college transfer curricula. Certificate options are indicated in this list of Chemeketa's occupational programs:

Accounting
Agriculture Technology
  Agribusiness
  Crop Production (certificate)
Automotive Technology
  Automotive Mechanics
  Automotive Parts Sales (certificate)
Banking and Finance
Building Inspection Technology (certificate and degree options)



Civil-Structural Engineering Technology
Clerical Technology (certificate)
Computer Operations (certificate)
Computer Programming
Criminal Justice

Dental Assisting (certificate)
Drafting Technology
  Drafting
  Mechanical Design
Early Childhood Education (certificate and degree options)
Educational Aide (certificate and degree options)
  One year (certificate)
  Classroom Aide
    Kindergarten-Lower Elementary
    Junior-Senior High
  Bilingual-Bicultural Aide
  Handicapped Learner Aide
    Deaf-Blind
    Mentally Retarded, Physically Disabled, Emotionally Disturbed
  Vocational-Technical Aide

Electronics Technology
  Electronic Engineering Technician
  Industrial Electronics Technician
Emergency Medical Technology
Farm Business Management

Fire Protection Technology
  Fire Prevention/Insurance Risk Inspection
  Fire Suppression

Food Service Management and Commercial Food Production
  Commercial Food Production (certificate)
  Food Service Management
Forest Technology
Health Care Support Services (certificate and degree options)
  Medical Office Assistant (certificate)
  Health Records Technician—Medical Transcriptionist (certificate)
  Ward Clerk (certificate)
Human Resource
Industrial Technology Management
Manufacturing Engineering Technology
  Manufacturing Operations (certificate)
  Manufacturing Technology
Nursing
  Licensed Practical Nurse (certificate)
  Registered Nurse
Office Administration—Secretarial
  Engineering Secretary
  Legal Secretary
  Medical Secretary
  Office Administration, option A
  Office Administration option B
Office Occupations (certificate)
Real Estate

Silicon Technology (certificate)
Small Business Management
Visual Communications
Welding Technology
  Nondestructive Testing
  Welding (certificate)
  Welding Fabrication

High School Completion and GED

Chemeketa has several programs to help you earn 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)

Chemeketa's adult high school diploma program may help you gain the credits and competencies you need to earn a high school diploma.

There are three ways you may earn credits:

1) 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's staff will evaluate your transcripts.

2) Enroll in high school completion classes offered on the Salem campus or 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 have more lab hours than in college level classes. It is possible to earn high school credit for most Chemeketa courses.

3) Receive credit for some of your life experiences. These may be the skills and knowledge you learned on a job, doing volunteer work, managing a home, and serving in a branch of military service. Chemeketa staff will evaluate these experiences to award you credits.

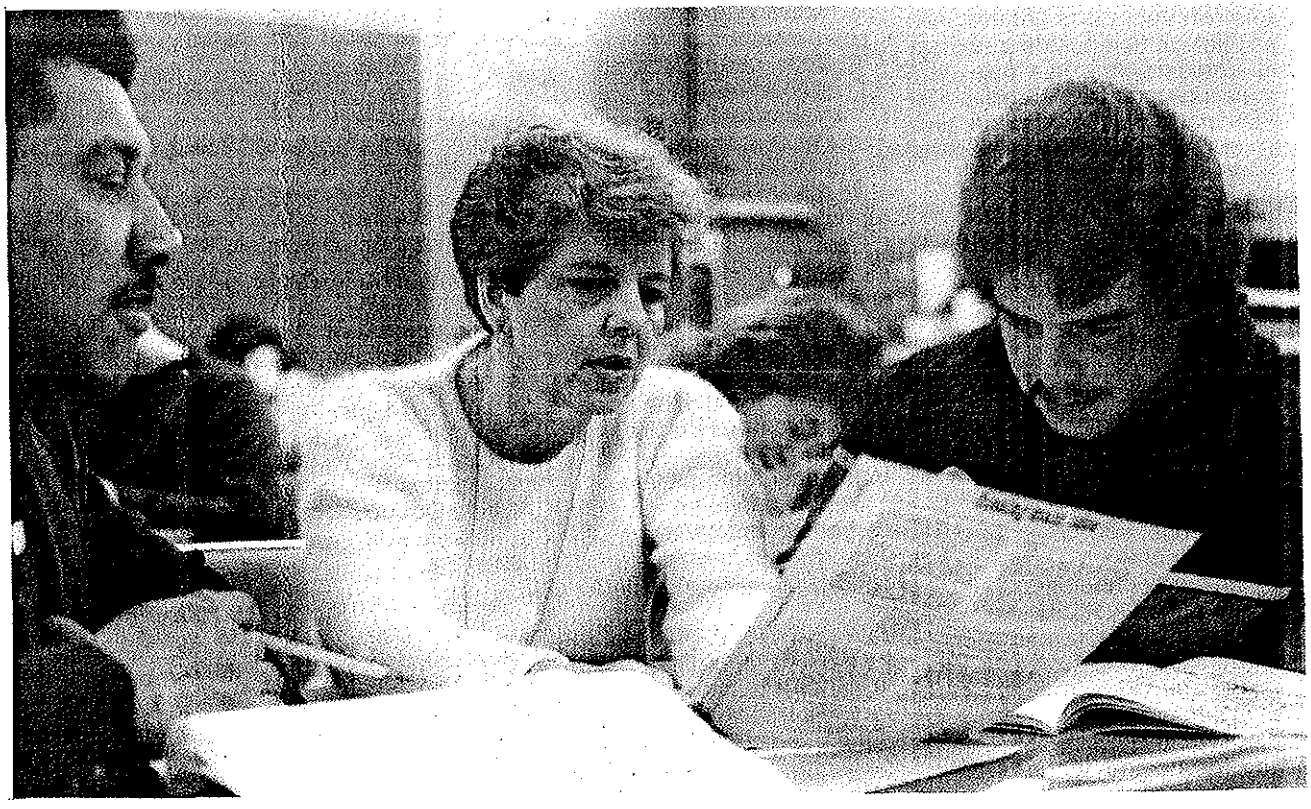
Twenty-two credits and thirteen competencies are required to complete the high school diploma program. To be in the program, you must be 18 years or older or have a release from your high school.

General Educational Development (GED) (399-5093)

You may earn a high school equivalency certificate by passing General Educational Development (GED) tests. These are five tests covering language skills, social studies, natural science, reading skills, and mathematics.

Chemeketa offers classes throughout the college district to help students prepare for these tests. You may enroll any week during a term and progress at your own pace. Free classes are scheduled in Chemeketa centers in Dallas, McMinnville, Stayton, and Woodburn, as well as on the Salem campus.

GED tests are given in Salem, McMinnville, and Woodburn. The testing fee is $17. 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.



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 in 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, encourage you to become active in Salem area chapters.

You may take an annual standardized examination prepared by the American Institute of Certified Public Accountants. This test, which measures your skills and knowledge, is taken by accounting students throughout the United States.

In addition to tuition, estimated costs for students who complete the entire program are books, $510; lab fees, $10; 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 in Science degree by successfully completing these required 99 credit hours:

Course	Title	Credit Hours
Term 1		
BA101	Business Environment	4
BA211	Financial Accounting I*	4
Mth061	Business Mathematics	
	or	
Mth070	Beginning Algebra	3
OA085	Business English II	3
	Psychology or sociology elective	3
Term 2		
BA212	Financial Accounting II	4
BA214	Business Communications	3
Mth062	Applied Business Mathematics	
	or	
Mth100	Intermediate Algebra	3
OA121ABC	Typing	3
	Psychology or sociology elective	3
Term 3		
BA206	Business Management Principles	3
BA213	Managerial Accounting	4
BA256	Income Tax Accounting I	3
CS131	Introduction to Data Processing	3
	Psychology or sociology elective	3
Term 4		
BA056	Intermediate Financial Accounting I	4
BA226	Business Law I	3
BA054	Governmental Accounting**	
	or	
BA059	Auditing	
	or	
BA257	Income Tax Accounting II	3
Ec115	Outline of Economics	
	or	
Ec201	Principles of Economics	3
FE205	Job Search Techniques	1
	Business elective	3
Term 5		
BA057	Intermediate Financial Accounting II	4
BA215	Cost Accounting	3
BA222	Financial Management	3
CS103	Introduction to Microcomputer Operations	4
	Business 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
Wr227	Technical Writing	3
	Business elective	3

* You must have completed the requirements for, or be concurrently enrolled in, Mth061.

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

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, and wildlife science, you should transfer at the end of your first year at Chemeketa.

OSU will accept 45 credit hours of vocational agriculture courses from Chemeketa's two-year Agriculture Technology program in its general agriculture and agriculture education programs. These may be accepted as general technical electives.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, $960; lab fees, $80. 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.

Agriculture Technology

In Chemeketa's Agriculture Technology program, you may select individual courses to meet your needs, or you may work toward a Certificate of Completion in crop production or an Associate in Science degree in agribusiness. Students in both options take the same courses the first three terms. Agribusiness students continue for three more terms.

Two credits in the Cooperative Work Experience program are required during the first year and an additional three in the second year of the Agribusiness option.

The Cooperative Work Experience program allows you to earn college credit for work you do relating to your program. For more information, look under Cooperative Work Experience in the catalog index.

Crop Production Option

Crop Production is an intensified one-year certificate program designed for you if you wish to begin or return to farming or ranching or a wide variety of other agricultural occupations. These include nursery and greenhouse production, landscape construction and maintenance, pest management agriculture chemical sales, farm equipment sales, marketing services, food processing, irrigation equipment sales, installation or service.

In addition to tuition, estimated costs for students who complete the one year program are books, $280; lab fees, $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 47 required credit hours:

Course	Title	Credit Hours
Term 1		
Agr050	Introduction to Agriculture	1
Agr051	Introduction to Oregon Soils	4
Agr061	Plant Science	4
Agr070	Pesticide Safety and Regulations	2
AH071	Multimedia First Aid	1
FE205	Career Awareness	1
Mth051	Basic Mathematics	3
Term 2		
Agr055	Irrigation and Drainage	3
Agr057	Farm Equipment Management and Maintenance	4
Agr072	Pest Management Diseases	3
Agr089	Farm Records	3
Com051	Communication Skills I	3
Term 3		
Agr052	Soil Management and Fertilizers	4
Agr071	Weed Identification and Control	3
Agr073	Pest Management—Insects	3
Agr062	Plant Identification	3
Agr280	Cooperative Work Experience	2

Second-Year Agribusiness Option

The agribusiness option deals with business management in agriculture. It is recommended if you plan to begin or return to farming or are interested in working for a business which supports agricultural production. These jobs include selling; pest management; agricultural marketing; field department work; working for fertilizer or chemical companies, garden centers, farm supply dealerships, and farm records management. You may also transfer to a four-year institution to earn a bachelor's degree in agriculture.

In addition to tuition, estimated costs for students who complete the entire program are books, $390; lab fees, $2. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in Science degree by successfully completing the required 48 credit hours listed below in addition to the 47 credit hours listed under the Crop Production option, a total of 95 credit hours:

Course	Title	Credit Hours
Term 4		
Agr086	Agriculture Economics and Farm Management Seminar	1
BA101	Business Environment	4
CS100	Beginning Microcomputer Use	1
Ec201	Principles of Economics	3
Mth061	Business Mathematics	3
Psy101	Psychology of Human Relations	
	or	
BA205	Human Relations in Business	3
Term 5		
Agr087	Agriculture Marketing Seminar	1
BA223	Principles of Marketing	3
BA238	Salesmanship	3
Com052	Communication Skills II	
	or	
Sp111	Fundamentals of Speech	3
CS103	Introduction to Microcomputer Operations	4
	Approved elective*	3
Term 6		
Agr088	Managing Agriculture Finances	3
Agr280	Cooperative Work Experience	3
BA051	Accounting Procedures I	4
OA085	Business English II	3
	Approved Electives*	3

***Approved electives**

Agr059	Construction of Farm Building and Codes	3
Agr056	Soil Preparation Equipment, Operation, and Maintenance	3
Agr058	Spray Equipment Operation and Maintenance	3
Agr064	Nursery and Greenhouse Operations	4
Agr080	Grape Production and Management	4
Agr078	Small Fruit Production	4
Agr079	Christmas Tree Production	3
Agr063	Plant Propagation	4
Agr065	Nursery and Greenhouse Practices and Procedures	3
Aum091	Power Systems	4
Wld077	Welding	4

You may select other electives with the approval of the program coordinator or any other course with an Agr prefix.

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, $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. 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 (UO, 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; lab fees, $140. 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
Art115, 116, 117 Basic Design (OSU, WOSC—4 hours; UO, PSU, SOSC, EOSC—6 hours)	3	3	3
Art231, 232, 233 Drawing (UO, SOSC, PSU—6 hours; OSU-4 hours; WOSC—3 hours)	3	3	3
Additional art courses: Art119, 221, 225, 244, 254, 155, 156, 157, 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, 221, 225, 244, 254, 155, 156, 157, 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, $365; lab fees, $120; equipment and supplies, $450. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
Aum051	Basic Auto Engines	6
Aum056	Automotive Shop Safety	1
Aum057	Automotive Brake Systems	3
Com051	Communication Skills I	
	or	
Wr121	English Composition—Exposition	3
Wld097	Welding	2
Term 2		
Aum058	Automotive Steering and Suspension	3
Aum061	Standard Transmission, Clutches and Differentials	5
Aum068	Automotive Accessory Systems	3
Mth051	Basic Mathematics	3
Com052	Communication Skills II	
	or	
Wr122	English Composition—Logic and Style	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
Aum078	Automotive Service Operations	2
Aum086	Automotive Heating and Air Conditioning	4
	General education elective	3

Term 6

Aum081	Tune Up and Diagnosis	6
Aum082	New Automotive Developments	3
Aum092	Automotive Diesel Engines	4
CS121	Computer Environment	3
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, $150. 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	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 in Science degree. The banking classes are offered only at night; other required classes are offered both days and evenings.

Chemeketa and two financial organizations (Willamette Chapter of the American Institute of Banking and Capital Chapter of the Institute of Financial Education) 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, $530; equipment and supplies, $125. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in Science degree by successfully completing these required 92 credit hours:

Course	Title	Credit Hours
Term 1		
BA101	Business Environment	4
BA211	Financial Accounting I	4
OA084	Business English	3
Mth061	Business Mathematics	3
OA060	Keyboarding	1
Term 2		
OA085	Business Writing	3
Mth062	Applied Business Math	3
	Social science elective*	3
BA212	Financial Accounting II	4
BA269	Principles of Banking	3
Term 3		
BA206	Business Managment Principles	3
BA213	Managerial Accounting	4
BA214	Business Communications	3
BA278	Law and Banking	3
BA223	Principles of Marketing	3
Term 4		
BA270	Money and Banking	3
	Business elective**	3
	Social science elective*	3
CS121	Computer Environment	3
Ec201	Principles of Economics	3
Term 5		
BA074	Public Relations in Business	
	or	
BA277	Business Ethics	3
	Business elective**	
	or	
Ban280	Cooperative Work Experience	3
	General education elective	3
	Banking elective***	3
Ec202	Principles of Economics	3

Term 6

BA250	Small Business Management	3
	General education elective	3
	Business elective**	
	or	
Ban280	Cooperative Work Experience	3
BA281	Consumer Lending	3
	Banking elective***	3

***Recommended Social Science Electives**

Psy201	General Psychology	3
Psy202	General Psychology	3
Soc204	General Sociology—Introduction	3
Soc205	General Sociology—Institution	3

****Recommended Business Electives**

BA059	Auditing	3
BA074	Public Relations in Business	3
BA224	Personnel Management	3
BA227	Business Law II	3
BA229	Consumer Finance	3
BA260	Real Estate Principles	3
BA263	Real Estate Law	3
BA264	Real Estate Finance	3
BA277	Business Ethics	3
OA121	Typing I	3
OA220	Business Machines	3
RE056	Escrow Procedures I	3
RE061	Real Estate Appraisal I	3

***Any course with a Ban prefix is approved as a banking elective.

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, $525; lab fees, $125; 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 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 and	3	3	2
Ch229, 230 Organic Chemistry Lab or		1	1
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 in 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.

Certificate of Completion

In addition to tuition, estimated costs for students who complete the entire program are books, $465; lab fees, $70; equipment and supplies, $240. 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 69 required credit hours:

Course	Title	Credit Hours
Term 1		
Bld050	Introduction to Uniform Building Code	3
Bld051	Building Codes I	3
Bld063	Structural Inspection—Concrete	3
Com051	Communication Skills I	3
Mth051	Basic Mathematics	3
Term 2		
Bld052	Building Codes II	3
Bld058	Zoning Enforcement and Administration	3
Bld059	Materials of Construction	3
Bld060	Fire Protection for Buildings	3
Bld061	Structural Inspection—Wood	3
Mth052	Introduction to Algebra and Geometry	3
Term 3		
Bld053	Building Codes III	3
Bld054	Dwelling Construction Under the UBC	3
Bld055	Building Department Administration	3
Bld056	Techniques of Inspection	3
Bld062	Structural Inspection—Masonry	3
Mth053	Introduction to Trigonometry with Geometry	3
Term 4		
Bld280	Cooperative Work Experience	12
Com052	Communication Skills II	3
Com053	Technical Report Writing	3

Associate in Science Degree

In addition to tuition, estimated costs for students who complete the entire program are books, $780; lab fees, $95; equipment and supplies, $295. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in Science degree by successfully completing the 104 required credit hours listed below. **Note:** Two-year program students must earn a minimum of 12 credit hours of Cooperative Work Experience which may be substituted for some of the following courses:

Course	Title	Credit Hours
Term 1		
Bld050	Introduction to Uniform Building Code	3
Com051	Communication Skills I	3
Drf059	Print Reading	2
FrP060	Fire Prevention Fundamentals	3
Mth052	Introduction to Algebra and Geometry	3
Psy101	Psychology of Human Relations	3
Term 2		
Bld058	Zoning Enforcement and Administration	3
Bld059	Materials of Construction	3
Bld061	Structural Inspection—Wood	3
Com052	Communication Skills II	3
Drf060	Advanced Print Reading	2
Mth053	Introduction to Trigonometry with Geometry	3
Term 3		
Bld054	Dwelling Construction Under UBC	3
Bld055	Building Department Administration	3
Bld056	Techniques of Inspection	3
Bld060	Fire Protection for Buildings	3
Bld062	Structural Inspection—Masonry	3
Com053	Technical Report Writing	3
Term 4		
Bld051	Building Codes I	3
Bld063	Structural Inspection—Concrete	3
Bld071	Plumbing Codes I	3
CS121	Computer Environment	3
Cvl054	Engineering Fundamentals	3
Cvl059	Soil Mechanics Fundamentals	3
Term 5		
Bld052	Building Codes II	3
Bld064	Structural Inspection—Steel	3
Bld066	Structural Plan Review	3
Bld072	Plumbing Codes II	3
Bld081	Mechanical Codes I	3
Bld091	Electrical Codes I	3
Term 6		
Bld053	Building Codes III	3
Bld067	Non-Structural Plan Review	3
Bld073	Energy Technology for the Inspector	3
Bld082	Mechanical Codes II	3
Bld092	Electrical Codes II	3
FE205	Job Search Techniques	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		
First Year	**1**	**2**	**3**
BA101 Business Environment		4	
Wr121, 122, English Composition		3	3
BA214 Business Communications			3
Mth101 College Algebra	4		
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	**4**	**5**	**6**
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 at Oregon State University and Portland State University. 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.

By adding a third math class and HE250 Personal Health, you may fulfill requirements of the Associate in Arts degree.

	Term		
First Year	**1**	**2**	**3**
Wr121, 122 English Composition	3	3	
BA214 Business Communications			3
Physical education	1	1	1
Humanities sequence	3	3	3
OA111, 112, 113 Shorthand	4	4	4
OA121, 122, 123 Typing	3	3	3
Mth100, 101 Algebra	4	4	
OA116 Office Procedures			3
Second Year	**4**	**5**	**6**
BA211, 212, 213 Accounting	4	4	4
BA251 Office Management			3
OA211, 212 Shorthand	3	3	
Ec201, 202, 203 Economics	3	3	3
CS131 Introduction to Data Processing		3	
Social science sequence	3	3	3
BA206 Business Management Principles	3		
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.

Because of the highly professional and exacting nature of the instruction in chemistry, you should 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, $310; lab fees, $35; 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 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 (UO, 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 State 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; lab fees, $30; 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		
First Year	**1**	**2**	**3**
Ch204, 205, 206 General Chemistry	5	5	5
Mth101 College Algebra Mth102 Trigonometry or Mth078, 079 Applied Trigonometry	4	2-4	
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	3	3	2
Ch229, 230 Organic Chemistry lab		1	1
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 systems. 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, $700; lab fees, $25; equipment and supplies, $250. Contact the financial aid office to find out if you qualify for help with these costs.

An Associate in Science degree is awarded upon the successful completion of the required 101 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	3
Cvl060	Plane Surveying I	4
Cvl099	Engineering Technician Orientation*	2
Drf054	Drafting I	2
Mth081	Technical Mathematics I	4
Psy100	Introduction to Psychology	3
Term 2		
Cvl050	Applied Mechanics	3
Cvl053	Engineering Software*	2
Cvl061	Plane Surveying II	5
Mth082	Technical Mathematics II	4
Ph081	Applied Physics	4
Term 3		
Com053	Technical Report Writing	3
Cvl051	Strength of Materials I	3
Cvl055	Environmental Quality Control	3
Cvl062	Survey Computations	2
Mth083	Technical Mathematics III	4
Term 4		
Cvl052	Strength of Materials II	3
Cvl057	Soil Mechanics	3
Cvl071	Building Materials	3
Cvl079	Contracts and Specifications	3
Drf059	Print Reading	2
Drf084	Land Division and Mapping	3
Term 5		
Com052	Communications Skills II	3
Cvl070	Timber and Steel Construction	4
Cvl075	Hydraulics	4
Cvl077	Construction Estimating	3
Drf082	Civil Engineering Drafting	3
Term 6		
Cvl056	Sanitary Engineering	3
Cvl063	Route Surveying	4
Cvl072	Concrete Construction and Design	3
Drf083	Project Development	3
For088	Methods of Supervision	3

*Meets college's computer course requirement.

Clerical Technology

The Clerical Technology curriculum offers practical training for students interested in working as word processing operators, general office clerks, receptionists, typists, file clerks, transcribing machine operators, and accounting clerks. The program is recommended if you wish to prepare yourself for work in a minimum amount of time. You may enroll part-time or full-time. It is possible to complete the program by taking only night classes.

An advisor will work with you to develop a program to fit your needs for a desired position. Approved electives allow you flexibility to specialize for work in law, real estate, insurance, accounting, medical, engineering, data processing, and word processing offices, and travel agencies.

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 OA280 Cooperative Work Experience and earn college credit hours. We recommend that you take up to six CWE 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, $155; lab fees, $25; 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 by successfully completing these 48 required credit hours:

Course	Title	Credit Hours
Term 1		
Mth061	Business Mathematics	3
OA084	Business English I	3
OA101	Office Careers Survey	1
OA116	Office Procedures I	3
OA121ABC	Typing I	3
	Approved business elective*	3
Term 2		
OA061	Introduction to Calculators	2
OA085	Business English II	3
OA124ABC	Typing Skillbuilding	3
	Social science elective	3
	Approved business electives*	6
Term 3		
BA214	Business Communications	3
OA122ABC	Typing II	3
	Approved business electives*	9

*Meet with your advisor.

Computer Operations

The Computer Operations program features concentrated study and practical experience in operating different types of computer systems including microcomputers, word processing, and an IBM 4341 mainframe. You may select individual courses to meet your needs, or you may work toward a Certificate of Completion.

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

We recommend that you consult with your assigned advisor to plan your course of study before you begin the first term. The college requires you to take English and mathematics placement tests before you apply for admission. If the 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 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, $210; lab fees, $20; equipment and supplies, $75. 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 46 required credit hours:

Course	Title	Credit Hours
Term 1		
CS070	Fundamentals of Computer Programming I	4
CS131	Introduction to Data Processing	3
Mth061	Business Mathematics	3
OA085	Business English II	3
OA121ABC	Typing I	3
Term 2		
BA244	Records Management	3
CS050	Computer Center Operations I	5
CS103	Introduction to Microcomputer Operations	4
OA200	Introduction to Word Processing	3
FE205	Job Search Techniques	1
Term 3		
BA051	Accounting Procedures I	4
CS066	Computer Applications Using BASIC	4
	Approved elective*	3
	Approved elective* (CS280 CWE recommended)	3

***Approved electives:**
Choose courses with BA, CS, or OA prefixes.

Computer Programming

Chemeketa's Computer Programming curriculum is for men and women who wish to become professional computer programmers. The two-year program includes theory and technical information as well as experience in performing actual programming tasks. The curriculum emphasizes accounting and management principles, problem solving, and working effectively with people.

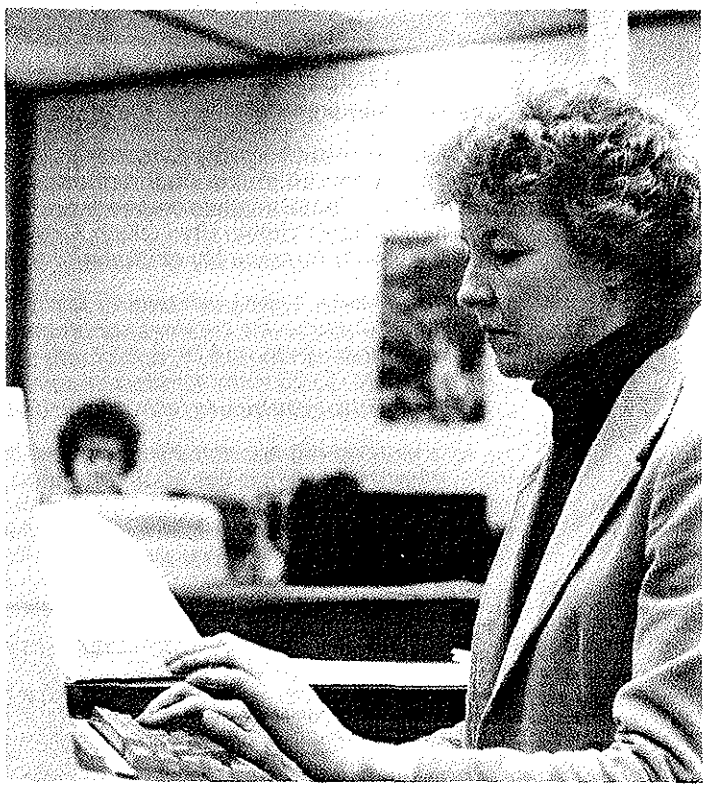
You may select individual courses to meet your needs, or you may work toward an Associate in Science degree. With this degree you will meet the minimum educational and experience requirements to qualify for the State of Oregon employment classification as a computer programmer trainee. After six months 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, $380; lab fees, $25; equipment and supplies, $125. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in Science degree by successfully completing these required 92 credit hours:

Course	Title	Credit Hours
Term 1		
BA051	Accounting Procedures I*	4
CS070	Fundamentals of Computer Programming I	4
CS131	Introduction to Data Processing	3
Mth070	Beginning Algebra	4
Com051	Communication Skills I	
	or	
Wr121	English Composition	3
Term 2		
BA052	Accounting Procedures II*	4
CS071	Fundamentals of Computer Programming II	4
CS263	Computer Organization	4
CS133C	COBOL I	4
Term 3		
CS075	OS/VS Job Control and Utilities	3
CS233C	COBOL II	5
CS244	Systems Analysis I	3
FE205	Job Search Techniques	1
Term 4		
CS133A	Assembler I	5
	or	
CS271	Microcomputer Assembler	4
CS274	Systems Analysis II	3
CS280	Cooperative Work Experience	
	or	
	Business elective	3
	Computer science elective**	3



Term 5		
BA053	Accounting Procedures III*	4
Com053	Technical Report Writing	
	or	
Wr227	Technical Writing	3
CS081	COBOL III	5
CS280	Cooperative Work Experience	
	or	
	Business elective	3
	Computer science elective**	3
Term 6		
	Computer science elective**	3
	General education elective	3
Ec115	Outline of Economics	
	or	
	Social science elective	3
CS280	Cooperative Work Experience	
	or	
	Business elective	3
Sp111	Fundamentals of Speech	
	or	
Sp114	Interpersonal Communication	3

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

****Approved computer science electives:**

CS050	Computer Center Operations I	5
CS068	Microcomputer Graphics	4
CS086	EASYTRIEVE I	3
CS090	Program Design and Testing	4
CS091	On-line Programming	5
CS092	Data Base Development	4
CS093	Structured Maintenance	3
CS104	Advanced Spread Sheet	4
CS106	dBase II for Microcomputer Use	3
CS107	LOTUS Applications	3
CS133F	FORTRAN IV	4
CS135	Microcomputer Graphics	4
CS233B	BASIC for Programmers	4
CS233R	RPG for Programmers	4
CS235	Microcomputer Graphics II	4
CS236	Advanced Languages for Microcomputers	3
CS237	Software Design	4
CS238	Advanced Software Design	4
CS261	Introduction to Computer Science	4

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, Oregon State University, and the University of Oregon.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, $400; lab fees, $25; equipment and supplies, $125. 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
CS261 Introduction to Computer Science		4	
CS262 Techniques for Computer Programming			4
Science requirements	4	4	4
Wr121 English Composition	3		
Physical education	1-3	1	1
Humanities sequence	3	3	3
Second Year			
Mathematics (per placement test)	4	4	4
CS133F FORTRAN IV	4		
CS263 Computer Organization		4	
Communication skills requirements		3	3
Social science sequence	3	3	3
Science requirements or Electives	4		4
Physical education, if required	1	1	1

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, $520; lab fees, $5. Contact the financial aid office to find out if you qualify for help with these costs.

An Associate in 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 or science elective	4
	Physical education elective (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	Introduction to 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
CJ200	Police and Public Policy	3
CJ207	Seminar in Criminal Justice	3
CJ210	Introduction to Criminal Investigation	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.

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.

In addition to tuition, estimated costs for students who complete the entire program are books, $255; lab fees, $275; equipment and supplies, $370; test fees, $60. 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 59 required credit hours:

Course	Title	Credit Hours
Term 1		
Bi060	Basic Science Principles	3
Den050	Introductory Concepts in Dental Assisting	3
Den051	Dental Sciences I	3
Den054	Dental Materials and Instrumentation	4
Den055	Dental Anatomy and Physiology	4
Term 2		
Den052	Dental Sciences II	4
Den059	Dental Assisting Practicum I	3
Den060	Dental Office Management	3
Den061	Principles and Basic Application of Dental Radiology	4
Den066	Expanded Functions I	2
Term 3		
AH071	First Aid	1
Den062	Applied Radiography II	2
Den067	Expanded Functions II	2
Den069	Dental Office Practicum II	3
Den070	Advanced Lab	4
HE261	Cardiopulmonary Resuscitation	1
Sp114	Interpersonal Communications	3
Term 4		
Den079	Dental Office Practicum III	5
Den080	Dental Assistant Seminar	2
Psy101	Psychology of Human Relations	3

Drafting Technology

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 in 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. 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 selected and planned to train you as a technician, to be proficient in freehand lettering, preliminary sketching, pencil and ink drawing, shading, use of color media, transfer graphics, map scribing and plotting, and computer-aided drafting. You practice combining these techniques to produce complete assembled views, working drawings, exploded views, renderings, schematics, plats, maps, and electronically produced images.

In addition to tuition, estimated costs for students who complete the entire program are books, $460; lab fees, $75; equipment and supplies, $230. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in Science degree by successfully completing these required 94 credit hours:

Course	Title	Credit Hours
Term 1		
Com051	Communication Skills I	3
Drf050	Sketching	1
Drf051	Machine Drafting I	4
Mth052	Introduction to Algebra and Geometry	3
Mch053	Manufacturing Processes	3
OA060	Keyboarding	1

Term 2

	General education elective	3
Com052	Communication Skills II	3
Drf052	Machine Drafting II	4
Drf056	Architectural Drafting I	3
Mth053	Introduction to Trigonometry with Geometry	3

Term 3

Cvl066	Surveying for Drafters	4
Drf065	Drafting Room Computations	1
Drf073	Computer Aided Graphics	2
Drf079	Introduction to Specifications	1
Drf081	Mapping and Platting	3
Mth081	Technical Mathematics I	4

Term 4

Cvl054	Engineering Fundamentals	3
Drf074	Descriptive Geometry	3
Drf078	CAD Programming I*	3
Drf089	Structural Drafting	3
	Physical education elective or General education elective	1
Drf057	Architectural Drafting II	
Drf090	Electronic Drafting	3

Term 5

Com053	Technical Report Writing	3
Drf061	Technical Illustration I	3
Drf082	Civil Engineering Drafting	3
Drf055	Architectural Design	
Drf076	Photogrammetry I	
Drf088	CAD Programming II	3
	Physical education elective or General education elective	1
	Science elective	3

Term 6

Drf069	Pipe and Flow Systems	1
Drf070	CAD Pipe Systems	2
Ph081	Applied Physics	4
	General education elective	3
	Approved electives**	6

*Meets college's computer course requirement.

****Approved electives:**

Drf062	Technical Illustration II	3
Drf077	Photogrammetry II	3
Drf083	Project Development	3
Drf092	CAD Electronics	3

Or a course selected from Mechanical Design curriculum by consent of program coordinator. Or Drf280 Cooperative Work Experience or Drf063 Pattern Development when it is offered.

Mechanical Design Option

Mechanical Design is a comprehensive drafting program with practical approaches to engineering and design concepts.

You may train to become a technician in machine, electronic, and control systems drafting. The program emphasizes the use of the computer as a problem-solving tool and the basic concepts of computer-aided drafting.

Instruction in design stresses the use of manufacturers' technical catalogs, technical handbooks, and practical applications of theoretical and mathematical concepts studied in courses taken concurrently.

In addition to tuition, estimated costs for students who complete the entire program are books, $500; lab fees, $45; equipment and supplies, $240. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
Com051	Communication Skills I	3
Drf050	Sketching	1
Drf051	Machine Drafting I	4
Mth081	Technical Mathematics I	4
Mch056	Machine Shop I	3
OA060	Keyboarding	1
Term 2		
Com052	Communication Skills II	3
Drf052	Machine Drafting II	4
Drf065	Drafting Room Computation	1
Drf073	Computer Aided Graphics	2
Mth082	Technical Mathematics II	4
Mch057	Machine Shop II	3
Term 3		
Com053	Technical Report Writing	3
Cvl050	Applied Mechanics	3
Drf074	Descriptive Geometry	3
Mth083	Technical Mathematics III	4
	General education elective	3
	Physical education elective	1
Term 4		
Cvl051	Strength of Materials I	3
Drf078	CAD Programming I*	3
Drf090	Electronic Drafting	3
Drf094	Applied Dynamics	4
	General education elective	3
Term 5		
Cvl052	Strength of Materials II	3
Drf066	Tool Design Lab I	3
Drf086	Power Transmission Design	3
Elt049	Fundamentals of Electronics	3
Drf061	Technical Illustration I	
Drf088	CAD Programming II	
Drf089	Structural Drafting	3
Term 6		
Drf068	Geometric Tolerancing	2
Drf070	CAD Pipe Systems	2
Drf071	Machine Design Lab I	3
Drf087	Industrial Control Systems Design Lab	3
Drf092	CAD Electronics	3
	Physical education elective	1

*Meets college's computer course requirement.

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 in 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, $205; lab fees, $7. 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	
Wr121	English Composition—Exposition	3
ECE062	Development in Childhood II	3
ECE067	Observing and Guiding Behavior	3
CE091	Supervised Field Experience I	3
HDFS233	Family Dynamics	3
Term 3		
AH071	Multimedia First Aid	1
Com053	Communication Skills III	
	or	
Wr122	English Composition—Logic and Style	
	or	
Wr227	Technical Writing	3
ECE071	Creative Activities	3
ECE072	Learning Experiences for Young Children	4
ECE092	Supervised Field Experience II	4

Two-Year Option

In addition to tuition, estimated costs for students who complete the entire program are books, $460; lab fees, $10. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
Com051	Communication Skills I	
	or	
Wr121	English Composition	3
ECE060	Introduction to Early Childhood Education	3
ECE066	Observing and Recording in the Preschool	3
HDFS225	Prenatal and Infant Development	3
Psy100	Introduction to Psychology	
	or	
Psy201	General Psychology	3
Term 2		
AH071	Multimedia First Aid (or valid first aid card)	1
Com053	Technical Report Writing	
	or	
Wr122	English Composition	
	or	
Wr227	Technical Writing	3
ECE062	Development in Childhood II	3
ECE067	Observing and Guiding Behavior	3
HDFS233	Family Dynamics	3
	General education elective	3
Term 3		
ECE071	Creative Activities	3
ECE072	Learning Experiences	4
ECE091	Supervised Field Experience I	3
HDFS222	Partner Relationships	3
Soc206	General Sociology	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
	General education elective	3
Term 5		
CS131	Introduction to Data Processing (or equivalent)	3
ECE075	Music for Young Children	3
ECE079	Child Nutrition	2
	or	
FN225	Nutrition	4
ECE096	Directed Participation I	7
Term 6		
HDFS228	The Exceptional Child	3
ECE085	Administration of Child Care Centers	3
ECE097	Directed Participation II	8
	General education elective	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. 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: Mth103 or BA232)	6	6	6

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

Education (Elementary)

(college transfer)

Upon successfully completing these courses, you may transfer college credits to Eastern Oregon State College, Oregon State University, Portland State University, Southern Oregon State College, the University of Oregon, and Western Oregon State College. Upon admission to one of these professional teacher education programs, you may complete the requirements for a baccalaureate degree within two additional years.

Admission to the professional program is based upon several qualifications, including academic background and demonstrated ability to speak and write adequately. The recommendations below 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 satisfy the 12 credits of theory and practicum (sophomore block) required at OSU by successfully completing these courses which are included in Chemeketa's Educational Aide program: Ed110 Psychology of Learning, Ed133 Instructional Media and Equipment, and Ed210 Education Practicum. You may also transfer some Educational Aide courses as electives. You may transfer as an elective a one-term orientation for students exploring education as a career, Ed209B Practicum, Introductory Observation and Experience.

	Term		
First Year	**1**	**2**	**3**
Wr121, 122, 123 English Composition	3	3	3
Mth191, 192, 193 Mathematics for Elementary Teachers	3	3	3
Humanities (literature sequence recommended)	3	3	3
Social Science*	3	3	3
Science (sequence required at PSU and U of O)	4	4	4
Physical education (OSU and WOSC)	1	1	1
Second Year	**4**	**5**	**6**
Social Science*	3	3	3
Humanities*	3	3	3
Sp111 Fundamentals of Speech (all but EOSC and U of O)			3
HE252 First Aid (a valid first aid card is required for certification)		3	
HE250 Personal Health (U of O)			3
General Education*	3-7	3-7	3-7
Electives	3	6	3

*See a counselor or advisor to learn requirements of a specific college.

Education (Secondary)

(college transfer)

If you plan to become a junior or senior high school teacher, enroll in the transfer program for the subject you plan to teach, adding Sp111 Fundamentals of Speech. The professional program in education begins in the junior year at institutions in the Oregon State System of Higher Education. To be admitted you must meet several qualifications, including academic background and demonstrating your ability to speak and write adequately.

Before you enroll, discuss career planning and placement with a Chemeketa counselor and an advisor at the institution to which you plan to transfer.

Chemeketa's Educational Aide courses may meet requirements for recommended electives for transfer. The Educational Aide program also offers Ed209B Practicum, Introductory Observation and Experience, a one-term orientation for students exploring education as a career.

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

Educational Aide

The Educational Aide program offers the training required to become a classroom aide.

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

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

Second year students specialize in working with children at certain grade levels (kindergarten, elementary or secondary) or in helping with bilingual or handicapped children or in working in vocational-technical education.

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 entire one-year program are books, $300; lab fees, $10. 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		
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
	General education elective	2
Term 2		
AH071	Multimedia First Aid	1
Ed110	Psychology of Learning	3
Ed123	Tutoring and Instructional Practices for Paraprofessionals I	3
Ed210	Practicum	6
Sp111	Fundamentals of Speech or	
Sp114	Interpersonal Communication	3
Term 3		
Ed111	Contemporary Education	3
Ed124	Tutoring and Instructional Practices for Paraprofessionals II	3
Ed211	Advanced Practicum	6
Mth051	Basic Mathematics	3
OA121AB	Typing I, Beginning	2
FE205	Job Search Techniques	1

* You are required to demonstrate competencies in reading, writing, speaking, typing, and mathematics equivalent to Rd010 Basic Reading Tactics II, Com051 Communications Skills I, OA121 Typing I, and Mth051 Basic Mathematics.

Two-Year Options

You may earn an Associate in Science degree after you successfully complete 90 credit hours. These include the 48 credit hours listed under the one-year option; 12 credit hours of required courses as listed below; 15 hours in the option you select, including at least six credits in practicum experience; and 15 hours of elective courses. Before you select elective courses consult with the program coordinator.

Required courses for all options:

Course	Title	Credit Hours
HR154	Community Resources	3
Ed136	Instructional Media and Materials*	3
Ed251	Overview of Handicapping Conditions	3
Psy299	Growth and Development	3

Classroom Aide Options

Kindergarten-Lower Elementary

Mth191	Math for Elementary Teachers	3
Mth192	Math for Elementary Teachers	3
Mth193	Math for Elementary Teachers	3
Ed212	Practicum: Specialized Education	6-18
ECE062	Development in Childhood II	3
ECE070	Environments for Young Children	3
ECE071	Creative Activities	3
ECE072	Learning Experiences for Young Children	4
ECE074	Children's Literature	3
ECE075	Music for Young Children	3
FL225	Development in Childhood I	3
FL250	Developmental Kindergarten	3

Junior-Senior High

	Social sciences sequence	9
	Humanities sequence	9
Ed212	Practicum: Specialized Education	6-18

Bilingual-Bicultural Aide

Ed257	Second Language Teaching Techniques for Paraprofessionals	3
Ed258	Multicultural Education and the Paraprofessional	3
Ed259	Bilingual Methodology for Paraprofessionals	3
	Language requirement	9-12
Ed212	Practicum: Specialized Education	6-18
Hst257	Introduction to Ethnic History—American Indian	3
Hst258	Introduction to Ethnic History—Black American	3
Hst259	Introduction to Ethnic History—Chicano	3

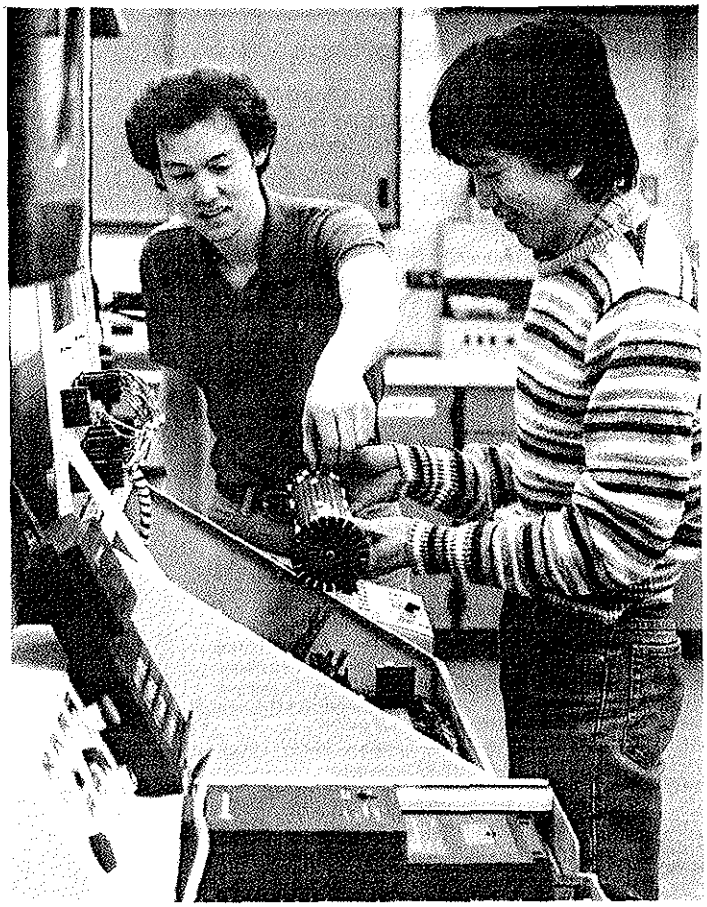
Handicapped Learner Aide

Deaf-Blind

Ed201, Ed202, Ed204	American Sign Language—Beginning I, II, III	9
Ed206	American Sign Language—Intermediate I	3
Ed213	Beginning Interpreting for the Deaf	3
Ed266	Studies in Deafness	3
Ed212	Practicum: Specialized Education	6-18

Mentally Retarded, Physically Disabled, Emotionally Disturbed

Ed268	Introduction to Classroom Management of the Mildly Handicapped	3
Ed269	Introduction to Classroom Management of the Severely Handicapped	3
Ed212	Practicum: Specialized Education	6-18



Vocational-Technical Education Aide

Ed281	Introduction to Vocational-Technical Education	3
Ed292	Occupational Analysis and Curriculum Development	3
Ed210	Practicum	6-18

*Meets college's computer course requirements.

Electronics Technology

Electronics Technology curriculum has two options: Electronic Engineering Technician and Industrial Electronics Technician. The first-year classes are common to both programs. In the second year, you select the program which best fits your needs, interests, and career goals.

If you do not have the necessary background to start the electronics program, Chemeketa offers preparatory courses. Consult wth the counseling center or the electronics program coordinator.

As a graduate of one of these options, you may 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 are interested, before you enroll, 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 Elt280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

First Year

Course	Title	Credit Hours
Term 1		
Com051	Communication Skills I	3
Drf091	Basic Drafting for Electronics	2
Elt051	Electronic Theory I	4
Elt058	Electronics Orientation	2
Elt061	Electronic Problems I	1
Mth081	Technical Mathematics I	
	or	
Elt056	Applied Electronics Calculations I	4
Term 2		
Elt052	Electronic Theory II	4
Elt054	Transistor Fundamentals	5
Elt062	Electronic Problems II	1
Elt066	Digital Fundamentals	4
Mth082	Technical Mathematics II	
	or	
Elt057	Applied Electronics Calculations II	4
Term 3		
Com053	Technical Report Writing	3
Elt053	Electronic Theory III	4
Elt055	Semiconductor Devices	3
Elt064	Pulse Circuit Fundamentals	3
Elt071	Linear IC Fundamentals	4

Electronic Engineering Technician Option

As a graduate of this program, you may assist in the development, manufacture, installation, and service of computers, telecommunication equipment and systems, electronic test instruments, medical measuring and monitoring equipment, consumer electronic systems (stereos, VCRs, video systems), industrial control systems, and office automation products.

In addition to tuition, estimated costs for students who complete the entire program are books, $635; lab fees, $80; 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 in Science degree by successfully completing the required 51 credit hours for the first three terms plus the required 50 credit hours listed below, a total of 101 credit hours.

Course	Title	Credit Hours
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 Transmissions Lines	2
Mth083	Technical Mathematics III	4
	or	
	The second class in an approved computer programming sequence**	4
Ph082	Applied Physics	4
Term 6		
Elt070	Video Display Systems	5
Elt075	Advanced Industrial Electronics	4
Elt077	Telecommunications	3
	Approved electronics elective***	3

Industrial Electronics Technician Option

This option is a blend of mechanical and electronic theories and practices. Graduates may assist in the development, manufacture, installation, and service of electromechanical equipment, industrial controls, instrumentation and measurement systems, and flexible automation systems (robots).

In addition to tuition, estimated costs for students who complete the entire program are books, $690; lab fees, $80. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in Science degree by successfully completing the required 51 credit hours for the first three terms plus the required 49 credit hours listed below, a total of 100 credit hours.

Course	Title	Credit Hours
Term 4		
Elt065	Electronic Circuit Analysis	4
Elt067	Digital Circuit Applications	3
Elt086	Mechanical Devices	3
Ph081	Applied Physics	4
	Computer programming elective*	3
Term 5		
Com052	Communication Skills II	3
Elt068	Microcomputer Systems	5
Elt072	Linear IC Applications	3
Elt087	Electromechanical Devices	4
Ph082	Applied Physics	4
Term 6		
Elt075	Advanced Industrial Electronics	4
Elt079	Introduction to Hydraulics/Pneumatics	3
Elt080	Instrumentation and Measurement Systems	3
Elt084	Robotics and Servos	3

***Computer programming electives:**

CS133B	Introduction to Programming, BASIC	3
CS261	Introduction to Computer Science (PASCAL)	4
Elt078	Computer Programming	3

****Approved computer programming sequence:**

CS235B	Computer Applications	4
CS262	Techniques for Computer Programming	4

*****Approved electronic electives:**

Elt074	FCC License Preparation	3
Elt080	Instrumentation and Measurement Systems	3
Elt081	Logical Troubleshooting	4
Elt084	Robotics and Servos	3
Elt099	Advanced Microcomputer Systems	4
Elt280A	Cooperative Work Experience (For second year students with prior approval of the program coordinator.)	

Approved course substitutions:

Mch077	May be substituted for Elt086
Mch078	May be substituted for Elt079
Mth101	May be substituted for Mth081 or Elt056
Mth102	May be substituted for Mth082 or Elt057
Mth110, Mth200 or Mth106	may be substituted for Mth083
Ph201	May be substituted for Ph081
Ph202	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

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 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 in 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 business electives. To participate, you must have a valid driver's license, current EMT I certification, and valid malpractice insurance approved by the program coordinator. For more information, look under Coopertive 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 B; EMT062 Emergency Medical Technician III, Part C; EMT063 Emergency Medical Technician III, Part D; 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 EMT's, 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 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.

In addition to tuition, estimated costs for students who complete the entire program are books, $410; lab fees, $100; equipment and supplies, $280. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in Science degree by successfully completing these required 101 credit hours:

Course	Title	Credit Hours
Term 1		
Bi071	Body Structure and Function I	3
EMT050	Emergency Medical Technology I	8
Med051	Medical Terminology I	3
Mth051	Basic Mathematics	3
	Communication Elective**	3
Term 2		
Bi072	Body Structure and Function II	3
EMT060	Emergency Medical Technician III, Part A	6
EMT069	Rescue Fundamentals	3
EMT074	Dispatch and Radio Communications	2
Med052	Medical Terminology II	3
	Approved Elective****	3
Term 3		
CS100	Beginning Microcomputer Use*	1
EMT061	Emergency Medical Technician III, Part B	5
FrP056	Fire Service Rescue	4
Med055	Medical Law and Ethics	3
	Social Science Elective***	3
Term 4		
AH059	Survey of Human Disease	
	or	
Med064	Introduction to Medical Science	3
EMT062	Emergency Medical Technician III, Part C	6
EMT075	Introduction to Emergency Medical Services Systems	4
EMT280	Cooperative Work Experience	2
Term 5		
AH050	Health Occupations Overview	1
EMT063	Emergency Medical Technican III, Part D	5
EMT070	Emergency Response Driving	1
EMT079	Disaster Planning and Management	3
HE262	Cardiopulmonary Resuscitation	2
EMT280	Cooperative Work Experience	2
Term 6		
AH080	Crisis Intervention	3
EMT064	Emergency Medical Technician IV	8
EMT280	Cooperative Work Experience	2
	Approved Electives***	3

*Meets college's computer course requirement.

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

Sp114	Interpersonal Communication	3
Sp130	Business and Professional Speaking	3
Wr121	English Composition	3
Com051	Communication Skills I	3
Com052	Communication Skills II	3

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

Ec115	Outline of Economics	3
Ec201	Principles of Economics	3
Ec202	Principles of Economics	3
MS259	Death and Dying	3
PS201	American Government	3
PS203	State and Local Governments	3
PS212	Political Election Campaigning	3
Soc204	General Sociology	3
WS101	Introduction to Women's Studies	3

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

BA074	Public Relations in Business	3
BA101	Business Environment	4
BA206	Business Management	3
BA211	Financial Accounting I	4
BA224	Personnel Management	3
BA226	Business Law I	3
Ed201	American Sign Language Beginning I	3
EMT079	Disaster Planning and Management	3
EMT280	Cooperative Work Experience up to	3
FrP050	Introduction to Fire Protection	3
FrP064	Hazardous Materials I	3
FrP065	Hazardous Materials II	3
HE250	Personal Health	3
HE268	Pharmacodynamics	3
HR101	Alcohol Use, Misuse and Addiction	3
HR150	Self-Awareness and Interpersonal Skills	3
HR154	Community Resources	3
Med066	Medical Reimbursement	3
MS259	Death and Dying	3
Mth103	Probability and Statistics	4
	Physical education electives limited to three credit hours.	3
PE185BS,	BT, BU Bodybuilding	1
PE185CA,	CB, CC Conditioning	1
PE185GP,	GQ, GR Gymnastics	1
PE185HA,	HB, HC Handball	1
PE185JJ,	JK, JL Jogging	1
PE185JQ,	JR, JS Judo	1
PE185KA,	KB, KC Karate	1
PE185PA,	PB, PC Personal Defense	1
PE185RA,	RB, RC Racquetball	1
PE185SD,	SE, SF Swim for Fitness	1
PE185SL,	SM, SN Swimnastics	1
PE185SS,	ST, SU Swimming	1
PE185TL,	TM, TN Track and Field	1
PE185WD,	WE, WF Weight Training	1
PE185WJ,	WK, WL Figure Control	1
Psy100	Introduction to Psychology	3
Psy101	Psychology of Human Relations	3
Psy114	Careers A Personal Perspective	3
Psy119	Processes in Living	3
Psy201	General Psychology	3
Psy246	Introduction to Industrial Psychology	3
Soc291	Introduction to Data Collection and Interpretation	3

Engineering
(college transfer)

Chemeketa offers required lower division transfer coursework in mathematics, science, liberal arts, computer and engineering sciences, and health and physical education for students wanting 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. You are encouraged to talk with Chemeketa's program coordinator for pre-engineering to plan your program.

To enroll in this curriculum, you should be prepared to take Mth200, Calculus with Analytic Geometry. 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, $600; lab fees, $50; equipment and supplies, $50. Contact the financial aid office to find out if you qualify for help with these costs.

Chemeketa also offers Associate in 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		
Ch104	General Chemistry*	5
GE101	Engineering Orientation	2
Mth200	Calculus with Analytic Geometry	4
Wr121	English Composition—Exposition	3
	Physical education elective	1
	Other program requirements*	
Term 2		
GE102	Engineering Computations	2
Ch105	General Chemistry*	5
Mth201	Calculus with Analytic Geometry	4
Sp112	Fundamentals of Persuasion*	3
	Physical education elective	1
	Other program requirements*	
Term 3		
GE103	Engineering Computations	2
Ch106	General Chemistry*	5
Mth202	Calculus with Analytic Geometry	4
Ph211	General Physics for Engineers and Scientists*	5
	Physical education elective	1
	Other program requirements*	
Term 4		
ENGR211	Statics*	4
GE115	Graphics	3
Mth203	Calculus with Analytic Geometry	4
Ph212	General Physics for Engineers and Scientists*	5
Wr227	Technical Report Writing*	3
	Other program requirements*	
Term 5		
ENGR213	Strength of Materials*	4
ENGR221	Electrical Circuit Fundamentals	4
MTH221	Applied Differential Equations	4
Ph213	General Physics for Engineers and Scientists*	5
	Other program requirements*	
Term 6		
ENGR212	Dynamics	4
ENGR222	Electrical Control Fundamentals*	4
MTH241	Linear Algebra*	4
	Other program requirements*	4

* 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.

Course	Title	Credit Hours
Term 1		
Mth101	College Algebra	4
GE115	Graphics	3
GE101	Engineering Orientation	2
Wr121	English Composition—Exposition	3
	Physical education elective	1
	Other program requirements*	
Term 2		
Mth102	Trigonometry	4
Ch104	General Chemistry*	5
GE102	Engineering Computations	2
Sp111	Fundamentals of Speech	3
	Physical education elective	1
	Other program requirements*	
Term 3		
Mth110	Analytic Geometry	4
Ch105	General Chemistry*	5
GE103	Engineering Computations	2
	Physical education elective	1
	Other program requirements*	

* 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. 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
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	**4**	**5**	**6**
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 decisions 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.

Enrollment is limited; 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, $310; lab fees, $25; equipment and supplies, $165. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
Com051	Communication Skills I	
	or	
Wr121	English Composition	3
CS100	Beginning Microcomputer Use*	1
EMT051	Emergency Medical Technology I, Part A	3
FrP050	Introduction to Fire Protection	3
FrP051	Fire Incident Related Experience	3
PE185HP	Human Performance	1
	General education elective	3
Term 2		
EMT052	Emergency Medical Technology I Part B	3
FrP052	Fire Incident Related Experience	3
FrP054	Fire Service Hydraulics	4
FrP055	Elementary Science for Firefighters	3
	or	
GS104	Physical Science	4
	or	
Ch104	General Chemistry	5
	or	
Ph201	General Physics	4
Mth052	Introduction to Algebra and Geometry	3
	or	
Mth100	Intermediate Algebra	4
	or	
Mth101	College Algebra	4
	Physical education elective	1
Term 3		
Com052	Communication Skills II	
	or	
Sp111	Fundamentals of Speech	3
FrP057	Fire Science	3
	or	
GS105	Physical Science	4
	or	
Ch105	General Chemistry	5
	or	
Ph202	General Physics	4
FrP053	Fire Incident Related Experience	3
FrP056	Fire Service Rescue Practices	4
FrP058	Fire Pump Construction and Operation	3
	Physical education elective	1
Term 4		
FrP060	Fundamentals of Fire Prevention	3
FrP061	Fire Incident Related Experience	3
FrP064	Hazardous Materials I	3
	Physical education elective	1
	Approved electives**	6
Term 5		
Com053	Technical Report Writing	
	or	
Wr227	Technical Writing	3
FrP062	Fire Incident Related Experience	3
FrP065	Hazardous Materials II	3
FrP066	Building Construction for Fire Suppression	3
	Physical education elective	1
	Approved electives**	3
Term 6		
FrP063	Fire Incident Related Experience	3
	Physical education elective	1
Psy101	Psychology of Human Relations	3
	Approved electives**	9

*Meets college's computer course requirement.

****Approved Electives (18 hours required):**

BA255	Elements of Supervision	3
Bld050	Introduction to Uniform Building Code	3
Bld051	Building Code I	3
Bld052	Building Code II	3
EMT053	Emergency Medical Technology I, Part C	1
EMT060	Emergency Medical Technology III, Part A	5
EMT061	Emergency Medical Technology III, Part B	5
EMT062	Emergency Medical Technology III, Part C	6
EMT063	Emergency Medical Technology III, Part D	5
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
FrP074	Fire Investigation	3
FrP075	Aircraft Crash/Fire Rescue	1
FrP069	Fire Department Leadership	3
FrP077	Fire Service Instructor Training	2
FrP078	Introduction to Training Programs	1
FrP079	Natural Cover Fire Protection	4
FrP082	Evidence Photography for Fire and Arson Investigation	3
FrP083	Water Distribution Systems	3
FrP085	Industrial Fire Protection	3
FrP086	Advanced Detection and Prevention Systems	3
FrP087	Fire Insurance Fundamentals	3
HE262	CPR 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, $544; lab fees, $31. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
Bld050	Introduction to Uniform Building Code	3
Com051	Communication Skills I	
	or	
Wr121	English Composition—Exposition	3
CS100	Beginning Microcomputer Use*	1
FrP050	Introduction to Fire Protection	3
FrP060	Fundamentals of Fire Prevention	3
	General education elective	3
Term 2		
Com052	Communication Skills II	
	or	
Sp111	Fundamentals of Speech	3
FrP055	Elementary Science for Firefighters	3
	or	
GS104	Physical Science	4
	or	
Ch104	General Chemistry	5
	or	
Ph201	General Physics	4
Bld060	Fire Protection for Buildings	3
FrP072	Fire Codes and Ordinances	3
FrP073	Firefighter's Law	2
Mth052	Introduction to Algebra and Geometry	3
	or	
Mth100	Intermediate Algebra	4
	or	
Mth101	College Algebra	4
Term 3		
Com053	Technical Report Writing	
	or	
Wr227	Technical Writing	3
FrP057	Fire Science	3
	or	
GS105	Physical Science	4
	or	
Ch105	General Chemistry	5
	or	
Ph202	General Physics	4
FrP074	Fire Investigation	3
FrP083	Water Distribution Systems	3
FrP280B	Cooperative Work Experience	2
Psy101	Psychology of Human Relations	3
Term 4		
Bld051	Building Code I	3
FrP064	Hazardous Materials	3
FrP071	Fire Protection Systems and Extinguishers	3
FrP081	Fire Prevention Inspection	3
	Approved electives**	3
Term 5		
Bld052	Building Code II	3
Bld081	Mechanical Code and Inspection I	3
FrP065	Hazardous Materials II	3
FrP280C	Cooperative Work Experience	3
	Approved electives**	3
Term 6		
Bld067	Non-structural Plan Review	3
FrP085	Industrial Fire Protection	3
FrP086	Advance Detection and Prevention Systems	3
FrP087	Fire Insurance Fundamentals	3
FrP280C	Cooperative Work Experience	3
	Approved Electives	3

*Meets college's computer course requirement.

****Approved Electives (nine hours required):**

FrP079	Natural Cover Fire Protection	4
FrP066	Building Construction for Fire Suppression	3
FrP070	Fire Fighting Tactics and Strategy	3
FrP069	Fire Department Leadership	3
FrP077	Fire Service Instructor Training	2
FrP078	Introduction to Training Programs	1
FrP082	Evidence Photography for Fire and Arson Investigation	3
FrP280C	Cooperative Work Experience	3

Food Service Management and Commercial Food Production

Chemeketa offers a career ladder program for students interested in training for food service occupations. We have two options: Food Production, which normally requires three terms (one year), and Food Service Management, which normally requires six terms (two years). The first 49 credit hours are the same for both programs.

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

Commercial Food Production Option

The one-year Commercial Food Production program trains food service workers in quantity food production and service.

The program includes preparatory training if you plan to enter the food trades industry and additional training for you who are already employed in the occupation and wish to increase your knowledge and skills.

As a graduate, you may find work in restaurants, hotels, hospitals, country clubs, military installations, institutions, and other large food complexes.

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, $225; lab fees, $50. 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		
FS050	Quantity Foods Production I	8
FS055	Dining Room Operations I	2
FS061	Sanitation and Safety	2
FS060	Basic Food and Nutrition	2
Mth051	Basic Mathematics	3
Term 2		
FE205	Job Search Techniques	1
FS051	Quantity Food Production II	8
FS056	Dining Room Operations II	2
FS062	Menu Planning	2
FS070	Purchasing and Stores Control	3
OA084	Business English Fundamentals	3
Term 3		
AH071	Multimedia First Aid	1
FS052	Quantity Food Production III	8
FS063	Elementary Food Cost Analysis	2
FS280A	Cooperative Work Experience	1
HE261	Cardiopulmonary Resuscitation	1

Food Service Management Option

Upon graduation, you may enter food service occupations, aiming to become a manager or an assistant manager of a food service establishment, a dining room supervisor, a host or hostess, a food production manager, a kitchen steward, a pantry supervisor, or a sanitation supervisor.

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.

If you do not meet these qualifications, you may choose elective courses with your advisor's approval.

In addition to tuition, estimated costs for students who complete the entire program are books, $250; lab fees, $40. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in Science degree by successfully completing 49 credit hours required for the Commerical Food Production option plus the 54 required credit hours listed below, a total of 103 credit hours.

Course	Title	Credit Hours
Term 4		
FS071	Hospitality Beverages	3
FS072	Food Service Design	3
HRM105	Introduction to Hotel and Restaurant Management	3
Mth061	Business Mathematics	3
Psy101	Psychology of Human Relations	3
	General education electives	4
Term 5		
BA051	Accounting Procedures I	
	or	
BA211	Financial Accounting I	4
BA074	Public Relations in Business	3
BA223	Marketing Principles	3
BA226	Business Law	3
FS077	Food Service Maintenance	3
Term 6		
BA052	Accounting Procedures II	
	or	
BA212	Financial Accounting II	4
BA224	Personnel Management	3
CS121	Computer Environment	
	or	
CS131	Introduction to Data Processing	3
FS073	Food Service Management	3
FS280	Cooperative Work Experience	3
	General education elective	3

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.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, $531. 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		
First Year	**1**	**2**	**3**
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, UO)	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 in 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, $600; lab fees, $70; equipment and supplies, $255. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in Science degree by successfully completing these required 106 credit hours:

Course	Title	Credit Hours
Term 1		
Com051	Communication Skills I	3
Drf054	Drafting	2
For051	General Forestry	3
For052	Tools and Equipment	2
For053	Introduction to Engineering Calculators*	1
For056	Industrial Accident Prevention	3
Mth052	Introduction to Algebra and Geometry	3
Term 2		
AH071	Multimedia First Aid	1
Com052	Communication Skills II	3
Drf085	Project Graphics	2
Ec115	Outline of Economics	3
For061	Tree Identification I	2
For066	Forest Products	4
Mth053	Introduction to Trigonometry with Geometry	3
Term 3		
Cvl060	Plane Surveying I	4
For062	Tree Identification II	2
For067	Forest Sciences	3
For068	Forest Photogrammetry	3
For076	Forest Mensuration I	4
Term 4		
Cvl061	Plane Surveying II	5
For071	Natural Cover Fire Protection	4
For077	Forest Mensuration II	4
For081	Logging Practices	4
Term 5		
For078	Scaling Practices	4
For083	Forestry Reports	3
For085	Forestry Contracts	3
For087	Wood Structure and Identification	3
For091	Silviculture	3
For092	Wood Industry Economics	3
For093	Forestry Seminar	1
Term 6		
Aum091	Power Systems	4
For088	Methods of Supervision	3
For096	Forest Road Survey	4
Ph052	Practical Physics	4
	General education elective	3

*Meets college's computer course requirement.

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, $600; lab fees, $66; equipment and supplies, $255. 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 and 202 General Botany or Bi101, 102,and 103 General Biology	4	4	4
Ch104, 105, 106 General Chemistry	5	5	5
Mathematics (per placement test)	4	4	4
Wr121 English Composition and approved communication electives	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 in 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, $610. 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 in Arts degree by successfully completing the required 93 credit hours.

	Term		
First Year	**1**	**2**	**3**
Wr121, 122, 123, 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
Computer studies	3		
Electives (see an advisor for options—may include up to 12 career program credit hours)	5-7	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, $800. 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 SOSC) or humanities sequence (SOSC)	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		3	
Electives	0-3	0-3	0-6
Second Year	**4**	**5**	**6**
Science sequence(SOSC, PSU, UO)	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 (UO) or Bi101, 102, 103 (OSU)	3-4	3-4	3-4
Physical education	1	1	1
Electives	0-3	0-3	0-3

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, $600; lab fees, $60; equipment and supplies, $60. 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	3	3	3
Mathematics (per placement test)	4	4	4
G201, 202, 203 Geology	4	4	4
Physical education	1		1
HE250 Personal Health		3	
Electives		0-3	0-3
Second Year	**4**	**5**	**6**
Social science sequence (SOSC: Ec201, 202, 203)	3	3	3
Ph201, 202, 203 General Physics	4	4	4
Ch204, 205, 206 General Chemistry	5	5	5
Physical education	1	1	1
Electives	3-4	3-4	3-4

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 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; lab fees, $50. 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	4-5	4-5	4-5
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—U of O, PSU, WOSC	**4**	**5**	**6**
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 Anth101, 102, 103 General Anthropology (environmental health major)			3
Ch226 Organic Chemistry (environmental health major)	3		
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 records technician or medical transcriptionist or complete only two terms to train as a ward clerk. The two-year program trains you to become a medical staff coordinator.

One-Year Programs

In each of these programs, you may earn a Certificate of Completion by successfully completing the required credit hours given below. (Three terms for Medical Office Assistant, Health Records Technician, and Medical Transcriptionist or two terms for Ward Clerk.) You may then qualify for a job as a team member.

Students in the programs must earn grades of C or better in all medically related courses. OA121 Typing I is required for all students.

Medical Office Assistant Program

The Medical Office Assistant program prepares you for a wide range of duties in medical offices. Business responsibilities may include scheduling and receiving patients, keeping medical records, handling telephone calls and correspondence, and purchasing and maintaining

supplies and equipment. Medical office assistants may be responsible for an office and for processing insurance matters, accounts, fees, and collections.

Your clinical duties may include assisting with examinations and treatments, taking medical histories, performing certain diagnostic tests and laboratory procedures in a physician's office, and sterilizing instruments and equipment.

The program offers clinical experience as well as theory and laboratory courses. Students in the program must earn grades of C or better in all medically related courses. OA121 Typing I is required for all students.

This curriculum is accredited by the Council on Allied Health Education of the American Medical Association in collaboration with the American Association of Medical Assistants which certifies graduates by examination.

In addition to tuition, estimated costs for students who complete the entire program are books, $250; lab fees, $40; equipment and supplies, $140. 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 52 required credit hours:

Course	Title	Credit Hours
Term 1		
AH050	Health Occupations Overview	1
AH071	Multimedia First Aid	1
Bi071	Body Structure and Function I	3
HE261	Cardiopulmonary Resuscitation	1
Med051	Medical Terminology I	3
Med055	Medical Law and Ethics	3
Med056	Medical Assisting Basic Procedures	3
OA121	Typing I	3
Term 2		
Bi072	Body Structure and Function II	3
FE205	Job Search Techniques	1
Med052	Medical Terminology II	3
Med054	Medical Office Procedures	4
Med057	Medical Office Assisting. Advanced Procedures	4
Med060	Medical Transcription	3
Term 3		
Med064	Introduction to Medical Science	3
Med078	Medical Practice Seminar	1
Med079	Medical Office Practice	6
OA083	Medical Office Management	3
Psy100	Introduction to Psychology or	
AH080	Crisis Intervention	3

Ward Clerk Program

Graduates are prepared to become a member of a nursing unit team who relays telephone messages and doctors' orders; charts vital signs; performs clerical tasks for admission, discharges and transfers patients; and prepares patient charts before surgery and various diagnostic procedures. Ward clerks work with physicians, various hospital departments, patients' relatives and friends, and other allied health professionals.

In addition to tuition, estimated costs for students who complete the entire program are books, $185; lab fees, $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		
AH050	Health Occupations Overview	1
Bi071	Body Structure and Function I	3
Med051	Medical Terminology I	3
Med061	Health Information Systems Procedures I	4
Med055	Medical Law and Ethics	3
HE261	Cardiopulmonary Resuscitation	1
OA121	Typing I	3
Term 2		
Bi072	Body Structure and Function II	3
Med052	Medical Terminology II	3
Med062	Health Information Systems Procedures II	5
Med079	Medical Office Practicum	6
Med078	Medical Practice Seminar	1

Health Records Technician-Medical Transcriptionist Program

As a graduate of the Health Records Technician-Medical Transcriptionist program, you may become a health record technician, medical transcriptionist, or may continue your education in medical record technology and administration programs at other schools.

Health record technicians primarily perform the technical tasks of handling medical records such as classifying diseases and operations, qualitatively and quantitatively analyzing current and discharged records, assisting in the collection of data for research and special studies, compiling vital and health statistical information, transcribing various medical reports, abstracting medical information for correspondence purposes, admitting patients to hospitals, filing and retrieving medical information, and performing many other duties related to medical records and health information keeping.

Medical transcriptionists must be familiar with medical terminology and proficient in transcribing, using transcription machines, preparing medical reports of all types with accuracy and speed, using the telephone, and performing clerical duties in medical record offices.

If you plan to transfer to Portland Community College to earn an associate degree as a medical records technician, you should take nine credit hours in general education at Chemeketa in addition to the 52 credit hours required for a Certificate of Completion. These nine hours should include CS131 Introduction to Data Processing or an equivalent.

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

$250; lab fees, $40; equipment and supplies, $20. 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 52 required credit hours:

Course	Title	Credit Hours
Term 1		
AH050	Health Occupations Overview	1
Bi071	Body Structure and Function I	3
Med051	Medical Terminology I	3
Med061	Health Information Systems Procedures I	4
Med055	Medical Law and Ethics	3
HE261	Cardiopulmonary Resuscitation	1
OA121ABC	Typing I	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		
Med079	Medical Office Practice	6
Med064	Medical Science	3
Med078	Medical Practice Seminar	1
FE205	Job Search Techniques	1
Med065	Introduction to Medical Coding Systems	3
Com051	Communication Skills I	
	or	
OA200	Introduction to Word Processing	
	or	
Psy201	General Psychology	
	or	
Wr121	English Composition	3
Term 4		
CS121	Computer Environment	3
Med080	Health Service Organizational Structure	3
Med081	Introduction to Medical Services Science	3
	Approved elective*	3
	Approved elective*	3
Term 5		
Med066	Medical Reimbursement Management	3
Med082	Advanced Medical Services Science	3
Med083	Introduction to Health Care Monitoring Systems	3
Psy101	Psychology of Human Relations	3
	Approved elective*	3
Term 6		
Med065	Introduction to Medical Coding Systems	3
Med085	Health Services Externship	6
Med086	Health Services Seminar	1
	Approved elective*	3
	Approved elective*	3

***Approved Electives:**

AH080	Crisis Intervention	3
BA074	Public Relations in Business	3
BA205	Human Relations in Business	3
BA206	Business Management Principles	3
BA214	Business Communication	3
BA224	Personnel Management	3
BA232	Introduction to Business Statistics	3
Com053	Technical Report Writing	3
CS131	Introduction to Data Processing	3
CPL120	Prior Learning Resume	3
Ec115	Outline of Economics	3
Eng101	Introduction to English Literature	3
R150	Self-Awareness and Interpersonal Skills	3
Med053	Medical Terminology III	3
Med280	Cooperative Work Experience	3
Mth061	Business Mathematics	3
PA255	Public Personnel Administration	3
Phl201	Problems of Philosophy	3
Psy101	Psychology of Human Relations	3
Psy206	Introduction to Social Psychology	3
SkD045 A,B,C	Problem Solving and Thinking Skills	3
Sp111	Fundamentals of Speech	3
Sp130	Business and Professional Speaking	3

Two-Year Program

As a graduate of the two-year program in Health Care Support Services, you will be prepared to serve as a medical staff 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 in Science degree by successfully completing the required 98 credit hours. If you have completed a one-year Health Care Support Services program at Chemeketa, you may continue for a second year and earn your degree by completing the 46 credit hours listed below. If you have an extensive work background, you may be evaluated for credit for prior learning and seek admission directly into the second year. Contact the program coordinator for further information.

In addition to tuition, estimated costs for students who complete the entire second year are books, $140; lab fees, $20. Contact the financial aid office to find out if you qualify for help with these costs.

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, $525. 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
Hst 110, 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	**4**	**5**	**6**
Hst201, 202, 203 History of the United States	3	3	3
General education—humanities sequence (UO, 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, $355. 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	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.

Hotel and Restaurant 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 101 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; lab fees, $35. 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**
Wr121, 122, 123 English Composition	3	3	3
Mth 101, 103, 106 Math	4	4	4
HRM105, 106 Hotel and Restaurant Management	3	3	
Physical education	1	1	1
Sp112 Fundamentals of Speech			3
CS131 Introduction to Data Processing			3
Ch104, 105, 106 Chemistry	5	5	5
Second Year	**4**	**5**	**6**
Ec201, 202, 203 Principles of Economics	3	3	3
Art11 5, 116, 117 Basic Design	3	3	3
FS050 Quantity Food Production I	8		
FN225 Nutrition	4		
Psy101 Psychology of Human Relations		3	
Bi123 Microbiology		4	
BA226 Business Law		3	
BA211 Financial Accounting			4
HE250 Personal Health			3
Humanities elective			3

Human Resource

The Human Resource program offers training for entry-level positions in human resource agencies. The program combines academic work with 25 credit hours of supervised field work in human service agencies. You may select individual courses to meet your needs, or you may work toward an Associate in Science degree.

The curriculum includes courses in basic skills in observing, interviewing, and in individual and group counseling. You may 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 program are books, $520; lab fees, $5. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
HR150	Self Awareness and Interpersonal Skills	3
HR154	Community Resources	3
HR170	Introduction to Field Experience	3
Psy201	General Psychology	3
Wr121	English Composition	3
Term 2		
HE261	Cardiopulmonary Resuscitation	1
HR155	Interviewing Theory and Techniques	3
HR291-296	Practicum	3-8
Mth051	Basic Mathematics	3
Psy202	General Psychology	3
Term 3		
HR260	Group Dynamics	3
HR291-296	Practicum	3-8
Psy299	Growth and Development	3
	Computer science elective	3
	Approved elective*	3
Term 4		
AH071	First Aid	1
HR265	Intervention Strategies I	3
HR291-296	Practicum	3-8
Soc204	General Sociology	3
	Approved electives*	3
Term 5		
HR266	Intervention Strategies II	3
HR291-296	Practicum	3-8
Soc205	General Sociology	3
	Approved electives*	3-8
Term 6		
FE205	Job Search Techniques	1
HR267	Intervention Strategies III	3
HR291-296	Practicum	3-8
	Approved elective*	6

*Approved electives (17 hours total) to include three hours ethnic studies, three hours speech, and the remaining hours to be selected from classes in chemical dependency studies, early childhood education, educational aide, gerontology, juvenile corrections, mental retardation, sign language, or independent studies, with the approval of the academic advisor and program coordinator.

Industrial Technology and Apprenticeship

Industrial Technology

Chemeketa Community College grants an Associate in Science degree in industrial technology. You may earn credits for on-the-job training and related instruction. To earn the degree, you must meet the following requirements:

1. Be a journeyman level tradesman in a skilled occupation.
2. Complete a minimum of 30 credit hours at Chemeketa Community College.
3. Complete at least 18 credit hours of general education courses.
4. Complete at least six credit hours of communication skills.
5. Compile a total of at least 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, radio and television technicians, automotive mechanics, machinists, welders, bakers, and mechanical systems specialists.

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 U of O, but may be transferred as electives.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, $565. 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 U of O.

	Term		
First Year	**1**	**2**	**3**
Wr121, 122, 123 English Composition	3	3	3
Literature courses	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 courses	3	3	3
Literature courses	3	3	3
Ec201, 202, 203 Principles of Economics	3	3	3
Foreign language or Social science courses	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, $290. 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**
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 in 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 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, $380; lab fees, $10; equipment and supplies, $145. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
BA101	Business Environment	4
BA211	Financial Accounting I	
	or	
BA051	Accounting Procedures I*	4
OA085	Business English II**	3
OA121	Typing I	3
Mth061	Business Mathematics**	3
Term 2		
BA212	Financial Accounting II	
	or	
BA052	Accounting Procedures II*	4
BA214	Business Communications	3
CS131	Introduction to Data Processing	
	or	
CS121	Computer Environment	3
Mth062	Applied Business Mathematics**	3
	Psychology	
	or	
	Approved elective***	3
Term 3		
BA206	Business Management Principles	3
BA213	Managerial Accounting	
	or	
BA053	Accounting Procedures III*	4
BA223	Marketing Principles	3
	Business elective	3
	Approved elective***	3
Term 4		
BA215	Cost Accounting	3
BA226	Business Law I	3
CS065	Selecting Data Processing Systems	3
Ec201	Principles of Economics	3
FE205	Job Search Techniques	1
	Business elective	3
Term 5		
BA222	Financial Management	3
BA227	Business Law II	3
Sp111	Fundamentals of Speech	3
Wr227	Technical Report Writing	3
	Business elective (BA280 Cooperative Work Experience recommended)	3
Term 6		
BA224	Personnel Management	3
Sp130	Business and Professional Speaking	3
	Business elective	3
	Business elective (BA280 Cooperative Work Experience recommended)	6

*If you take the Accounting Procedures sequence you must complete BA213 for a business elective before enrolling in BA215.

**College transfer courses may be substituted.

***Choose from Psy100, 101, 201, 202, 203; Soc204, 205, 206; Hst110, 111, 112, Hst201, 202, 203; Geog199.

Manufacturing Engineering Technology

The Manufacturing Engineering Technology program offers training in manufacturing trades skills. Workers may become involved in research and development, make prototypes, do routine manufacturing or complete simple to complex repairs. You may enroll in the three-term Manufacturing Operations option, the six-term Manufacturing Technology option, or the six-term Manufacturing Engineering Technology transfer option. You may select individual courses to meet your needs, or you may work toward an Associate in 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 Mch280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

Manufacturing Operations Option

The Manufacturing Operations option provides training in the basic setup and operation of manufacturing tools, such as lathes, drills, mills, saws, and grinders; bench and layout work; print reading; and sketching relating to manufacturing careers. As a graduate, you may qualify to be a machine operator or an entry-level machinist.

In addition to tuition, estimated costs for students who complete the entire program are books, $250; lab fees, $120; 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 45 required credit hours.

Course	Title	Credit Hours
Term 1		
Mch058	Machine Shop Operations I	3
Mch061	Machine Tool Processes I	6
Mch063	Manufacturing, Print Reading, and Sketching	6
Mth051	Basic Mathematics	3
Term 2		
Mch058A	Machine Shop Operations II	3
Mch067	Machine Tool Processes II	6
Mth052	Introduction to Algebra and Geometry	3
Term 3		
Mch058B	Machine Shop Operations III	3
Mch071	Machine Tool Processes III	6
Mch097	Industrial Working Relations	3
Mch280	Cooperative Work Experience	3

Manufacturing Technology Option

The Manufacturing Technology option offers training in the knowledge and skills used by workers in machine shops and related occupations. The curriculum includes courses in manufacturing materials and processes, manufacturing, print reading, sketching, layout practices, and in written and verbal communication skills.

In this option, you set up and operate machine and shop tools including drill presses, engine lathes, milling machines, grinders, and saws. You work from prints or sketches to make mechanical items in a variety of materials. This requires planning layout operations, making and using jigs, fixtures, and patterns, and using computer control equipment.

As a graduate, you may qualify for positions in manufacturing including job repair, production, specialty, maintenance, machine setup, operation inspection, and 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, $465; lab fees, $155; 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 in Science degree by successfully completing these 100 required credit hours:

Course	Title	Credit Hours
Term 1		
Com051	Communication Skills I**	3
Mch061	Machine Tool Processes I	6
Mch063	Manufacturing, Print Reading, and Sketching	6
Mth051	Basic Mathematics**	3
Term 2		
Com052	Communication Skills II**	3
Mch067	Machine Tool Processes II	6
Mth052	Introduction to Algebra and Geometry**	3
Wld077	Welding	4
Term 3		
Mch071	Machine Tool Processes III	6
Mch097	Industrial Working Relations	3
Mch280	Cooperative Work Experience or Approved elective***	3
Mth053	Introduction to Trigonometry with Geometry**	3
Ph052	Practical Physics**	4
Term 4		
Mch072	Manufacturing Materials and Processes	5
Mch073	Applied Manufacturing Mathematics	3
Mch088	Fluid Power Systems	4
Mch093	Fundamentals of NC/CNC Manufacturing*	3
Term 5		
Mch082	Advanced Milling Practices	6
Mch280	Cooperative Work Experience or Approved elective***	3
Ph051	Practical Physics**	4
Psy246	Introduction to Industrial Psychology	3
Term 6		
Mch077	Mechanical Systems	4
Mch081	Advanced Lathe Practices	6
Mch091	Job Shop Machining Practices	6

*Meets college's computer course requirement.

**College transfer courses may be substituted with approval of program coordinator.

***Approved electives:

Com053	Technical Report Writing	3
CS133B	Introduction to Programming, BASIC	3
Drf051	Machine Drafting I	4
Drf052	Machine Drafting II	4
Drf073	Computer Aided Graphics	3
For088	Methods of Supervision	3
HR150	Self-Awareness and Interpersonal Skills	3
OA121A-C	Typing	3
Psy102	Assertiveness Training	3
Rd115	Accelerated Reading Tactics I	3
Rd117	Advanced Reading Tactics II	3
SkD045A-C	Problem Solving/Thinking	3
SkD031A-C	Advanced Reading Tactics II	3
Wld098	Metallurgy	3

Manufacturing Engineering Technology

(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 control workers; designing tools; planning plant layouts; handling materials; and overseeing plant safety. You might also become a technical field representative, 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, $710; lab fees, $110; equipment and supplies, $185. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
Drf053	Drafting—Industrial Graphics	4
GE101	Engineering Orientation	2
Mch061	Machine Tool Processes I	6
Mth101	College Algebra	4
Wr121	English Composition—Exposition	3
Term 2		
Drf058	Manufacturing Graphics I	4
Mch067	Machine Tool Processes II	6
Mth102	Trigonometry	4
Wld077	Welding	4
Wr122	English Composition—Logic and Style	3
Term 3		
Ch104	General Chemistry I	5
Drf064	Manufacturing Graphics II	4
Mth200	Calculus	4
Ph052	Practical Physics	4
WFb081	Elements of Metallurgy	3

Term 4

CS133F	Fortran IV	4
Mch072	Manufacturing Materials and Processes	5
Mch093	Fundamentals of NC/CNC Manufacturing	3
PE185	Physical education elective	1
WFb082	Heat Treatment of Steel	3

Term 5

Ph051	Practical Physics	4
Psy246	Introduction to Industrial Psychology	3
Wr227	Technical Writing	3
	Approved elective*	3
HE250	Personal Health	3
PE185	Physical education elective	1

Term 6

Mch077	Mechanical Systems	4
Mch097	Industrial Working Relations	3
	Physical education elective	1
	Approved elective*	3
	Social science elective**	3

*Art201, 205, 206; Mus201, 202, 203, or 299; Phl201, 202, or 203; or English literature or world literature with course number 100 or higher.

**Transfer courses in economics, sociology, geography, psychology, history, and anthropology.

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, $500. 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	3	3	3
Non-mathematical science (OSU, PSU, SOSC) or foreign language or non-mathematical science or social science (UO, 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

Nursing

Chemeketa offers a career ladder program in nursing for women and men who want to become licensed practical nurses or registered nurses.

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 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, $375; lab fees, $45; equipment and supplies, $225; test fees, $55. 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 53 credit hours. You must earn grades of C or better in all required courses.

Course	Title	Credit Hours
Term 1		
AH050	Health Occupational Overview	1
Bi121	Human Anatomy and Physiology	4
Nur106	Nursing	10
Psy201	General Psychology	3
Term 2		
Bi122	Human Anatomy and Physiology	4
Nur108	Nursing	10
Psy299	Growth and Development	3
Term 3		
Bi124	Medical Microbiology	4
Nur104	Nurse at Work	1
Nur109	Nursing	10
Wr121	English Composition	3

Level II

Registered Nurse

A registered nurse, or RN, applies knowledge drawn from a broad, indepth education in the social and physical sciences. RNs assess, plan, order, give, delegate, teach, and supervise care which promote 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, $425; lab fees, $70; equipment and supplies, $245; licensure exam fees, $75. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in Science degree by successfully completing 103 required credit hours, including the 53 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		
Nur204A	Nurse at Work	1
Nur206	Nursing	11
Ch140	Physiological Chemistry	3
	or	
Ch102 and Ch103	Chemistry for Allied Health*	4
	Elective**	3
Term 5		
Nur204B	Nurse at Work	1
Nur208	Nursing	11
	Elective**	3
	Sociology elective	3
Term 6		
Nur209	Nursing	8
	Elective**	3
	Elective**	3

*If you choose Ch102 and Ch103 you may receive only three credits toward a Chemeketa Associate in Science degree, but four-year institutions accept six credit hours as college transfer courses.

**Twelve credit hours of electives combined with required courses must meet these Oregon State Board of Nursing minimum requirements.

Six credit hours—humanities or social science courses having course numbers 100 or higher which may be transferred to a four-year college. These include courses in anthropology, art, composition, economics, geography, history, journalism, language, literature, music, philosophy, political science, psychology, reading, religion, speech, sociology, women's studies.

Three credit hours—computer science elective: CS121 Computer Environment, CS131 Introduction to Data Processing, CS261 Introduction to Computer Science, CS133B Introduction to Programming, BASIC.

Three credit hours—college transfer or occupational courses. Recommended: medical terminology, nutrition, pharmacology, and other health-related courses.

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 nurse who wants to continue your education, you may take general education courses which may be transferred to a four-year institution. See information under Nursing (college transfer).

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. Read the course descriptions for Nur111 LPN Re-entry and Nur211 RN Re-entry. Re-entry courses are offered fall term only.

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.

Preprofessional 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.

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		3	
Ch104, 105, 106 or Ch204, 205, 206 General Chemistry	5	5	5
FN225 Nutrition			3-4
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

Office Administration-Secretarial

The Office Administration-Secretarial program is designed for persons 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 further your training to increase or add to your skills to advance in your career, you may also benefit from this training. You may select individual courses to meet your needs, or you may work toward an Associate in Science degree.

Office support personnel are vital to the workings of a company or institution. Jobs are interesting and challenging. The work is varied. It may be highly specialized, or it may be closely related to the management level personnel concerned with policy decisions.

The Office Administration Secretarial program has four options: Engineering Secretary, Legal Secretary, Medical Secretary, and Office Administration.

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 tests 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 relating to your program. With the approval of the program coordinator, you may enroll in OA280 Cooperative Work Experience and earn college credit hours. For more information, look under Cooperative Work Experience in the catalog index.

You may earn an Associate in Science degree by successfully completing the credit hours required for each option.

Engineering Secretary Option

The engineering secretary option prepares you to go to work for a consulting firm, a civil or structural engineering business, or a drafting and architectural company. As a secretary 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 secretarial skills.

In addition to tuition, estimated costs for students who complete the entire program are books, $515; lab fees, $45; 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 in Science degree by successfully completing these required 94 credit hours:

Course	Title	Credit Hours
Term 1		
BA101	Business Environment	4
Mth070	Beginning Algebra	3
OA084	Business English I	3
OA111	Shorthand I	
	or	
OA114	Briefhand I	4
OA121ABC	Typing I	3
Term 2		
Cvl099	Engineering Technician Orientation	2
Mth081	Technical Mathematics I	4
OA085	Business English II	3
OA101	Office Careers Survey	1
OA112	Shorthand II	
	or	
OA072	Briefhand II	4
OA122ABC	Typing II	3

Term 3

BA214	Business Communications	3
Mth082	Technical Mathematics II	4
A113	Shorthand III	
	or	
OA073	Briefhand III	4
OA116	Office Procedures I	3

Term 4

Cvl079	Contracts and Specifications	3
CS131	Introduction to Data Processing	
	or	
CS121	Computer Environment	3
OA117	Office Procedures II	3
OA225	Machine Transcription I	3
OA211	Shorthand/Briefhand Skillbuilding	
	or	
	Office Administration elective	3

Term 5

BA211	Financial Accounting I	
	or	
BA051	Accounting Procedures I	4
BA244	Records Management	3
OA062	Reprographics	3
OA200	Introduction to Word Processing	3
	Engineering elective	
	or	
	Business elective	3

Term 6

BA226	Business Law	3
Ec115	Outline of Economics	
	or	
Ec201	Principles of Economics	3
	Engineering elective	
	or	
	Business elective	3
	Social science elective	3
	Business elective (OA280 Cooperative Work Experience recommended)	3

Legal Secretary Option

The legal secretary option prepares you for a beginning secretarial position in a law office or in the legal department of a company or agency.

The program emphasizes training in shorthand 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, wills and estates, and corporations and partnerships.

Supervised on-the-job training gives you an opportunity to use your skills, and acquire the knowledge and attitudes required of a legal secretary.

In addition to tuition, estimated costs for students who complete the entire program are books, $580; lab fees, $85; 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 in Science degree by successfully completing these required 95 credit hours:

Course	Title	Credit Hours
Term 1		
Mth061	Business Mathematics	3
OA084	Business English I	3
OA101	Office Careers Survey	1
OA111	Shorthand I	
	or	
OA114	Briefhand I	4
OA121ABC	Typing I	3
OA116	Office Procedures I	3
Term 2		
OA085	Business English II	3
OA112	Shorthand II	
	or	
OA072	Briefhand II	4
OA075	Legal Terminology	3
OA122ABC	Typing II	3
OA117	Office Procedures II	3
Term 3		
BA214	Business Communications	3
OA113	Shorthand III	
	or	
OA073	Briefhand III	4
OA225	Machine Transcription I	3
OA200	Introduction to Word Processing	3
OA076	Legal Office Procedures	3
Term 4		
BA244	Records Management	3
CS131	Introduction to Data Processing	
	or	
CS121	Computer Environment	3
OA077	Legal Transcription I	3
OA201	Word Processing Procedures I	3
OA211	Shorthand/Briefhand Skillbuilding	3
Term 5		
BA251	Office Management	3
BA101	Business Environment	4
BA211	Financial Accounting I	
	or	
BA051	Accounting Procedures I	4
OA062	Reprographics	3
OA061	Introduction to Calculators	2
Term 6		
BA226	Business Law I	3
	Business elective (OA280 Cooperative Work Experience recommended)	6
	Social science elective	3
	Office Administration elective	3

Medical Secretary Option

The Medical Secretary curriculum 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, $560; lab fees, $60; 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 in Science degree by successfully completing these required 93 credit hours:

Course	Title	Credit Hours
Term 1		
AH071	Multimedia First Aid	1
Med051	Medical Terminology I	3
OA084	Business English I	3
OA101	Office Careers Survey	1
OA111	Shorthand I	
	or	
OA114	Briefhand I	4
OA121ABC	Typing I	3
Term 2		
Mth061	Business Mathematics	3
Med052	Medical Terminology II	3
OA085	Business English II	3
OA112	Shorthand II	
	or	
OA072	Briefhand II	4
OA122ABC	Typing II	3

Term 3

BA214	Business Communications	3
Med055	Medical Law and Ethics	3
OA061	Introduction to Calculators	2
OA113	Shorthand III	
	or	
OA073	Briefhand III	4
OA225	Machine Transcription I	3

Term 4

BA244	Records Management	3
Bi071	Body Structure and Function I	3
CS131	Introduction to Data Processing	
	or	
CS121	Computer Environment	3
OA080	Medical Machine Transcription I	3
	Office Administration elective	3

Term 5

BA051	Accounting Procedures I	
	or	
BA211	Financial Accounting I	4
BA251	Office Management	3
Bi072	Body Structure and Function II	3
Med054	Medical Office Procedures	4
	Office Administration elective	3

Term 6

Ec115	Outline of Economics	
	or	
Ec201	Business Economics	3
Med064	Introduction to Medical Science	3
	Social science elective	3
	Business elective (OA280 Cooperative Work Experience recommended)	3
	Business elective	3

Office Administration Option (Professional Secretary)

The Office Administration options prepare you for a variety of office 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 English usage, typing, transcribing from machine or shorthand dictation, business machine operation, records management, word processing, data processing, accounting, and general office procedures.

In addition to tuition, estimated costs for students who complete the first three terms are books, $255; lab fees, $50; equipment and supplies, $45. Contact the financial aid office to find out if you qualify for help with these costs.

If you satisfactorily complete the curriculum requirements, you may sit for the Certified Professional Secretary examination in the spring of your second year during your final term.

Course	Title	Credit Hours
Term 1		
Mth061	Business Mathematics	3
OA084	Business English I	3
OA101	Office Careers Survey	1
OA111	Shorthand I	
	or	
OA114	Briefhand I	4
OA121ABC	Typing I	3
OA116	Office Procedures I	3
Term 2		
OA085	Business English II	3
OA112	Shorthand II	
	or	
OA078	Briefhand II	4
OA122ABC	Typing II	3
OA200	Introduction to Word Processing	3
OA061	Introduction to Calculators	2
Term 3		
BA214	Business Communications	3
OA062	Reprographics	3
OA113	Shorthand III	
	or	
OA073	Briefhand III	4
OA117	Office Procedures II	3
OA201	Word Processing Procedures I	3

Second Year-Option A

In addition to tuition, estimated costs for students who complete terms 4, 5, and 6 are books, $310; lab fees, $15; equipment an supplies, $45. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in Science degree by successfully completing 96 required credit hours, 48 during first three terms and the following 48:

Course	Title	Credit Hours
Term 4		
BA101	Business Environment	4
BA244	Records Management	3
CS131	Introduction to Data Processing	
	or	
CS121	Computer Environment	3
OA211	Shorthand/Briefhand Skillbuilding	3
OA225	Machine Transcription I	3
Term 5		
BA211	Financial Accounting I	
	or	
BA051	Accounting Procedures I	4
BA226	Business Law	3
BA251	Office Management	3
	Office Administration electives	6
Term 6		
BA212	Financial Accounting II	
	or	
BA052	Accounting Procedures II	4
Ec115	Outline of Economics	
	or	
Ec201	Principles of Economics	3
	Business elective (OA280 Cooperative Work Experience recommended)	6
	Social Science elective	3

Second Year-Option B

This option includes two terms during which you are employed in a full-time position while earning 24 credit hours. This enables you to integrate your secretarial skills and knowledge with practical and valuable on-the-job experience in businesses or government agencies.

In addition to tuition, estimated costs for students who complete terms 4, 5, and 6 are books, $290; lab fees, $15; equipment an supplies, $30. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in Science degree by successfully completing 105 required credit hours, 48 during the first three terms and the following 57:

Course	Title	Credit Hours
Term 4		
OA280	Cooperative Work Experience	12
Term 5		
BA101	Business Environment	4
BA211	Financial Accounting I	
	or	
BA051	Accounting Procedures I	4
CS131	Introduction to Data Processing	
	or	
CS121	Computer Environment	3
OA211	Shorthand/Briefhand Skillbuilding	
	or	
OA225	Machine Transcription I	3
	Social Science elective	3
Term 6		
OA280	Cooperative Work Experience	12
Term 7		
BA226	Business Law I	3
BA251	Office Management	3
BA212	Financial Accounting II	
	or	
BA052	Accounting Procedures II	4
BA244	Records Management	3
Ec115	Outline of Economics	
	or	
Ec201	Principles of Economics	3

Office Occupations

Office Occupations is an open-entry, open-exit program for people who want to develop or refresh their clerical skills in order to qualify for office work. Training is completed when you attain certain competency goals. You may select individual courses to meet your needs, or you may work toward a Certificate of Completion.

The Office Occupations program is offered on the Salem campus and Chemeketa centers in Dallas, McMinnville, and Woodburn. You may enroll any Monday when openings exist. For additional information, call 399-5114 in Salem, 623-5567 in Dallas, 472-9482 in McMinnville, and 981-8820 in Woodburn.

The program allows you to concentrate on developing the basic skills required of receptionists, file clerks, bookkeepers, typists, and other related positions. Independent study and individualized instruction give you a comprehensive review of typing, filing, business English and mathematics, calculators, machine transcription, and bookkeeping.

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.

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 OA280 Cooperative Work Experience and earn college credit hours. For more in formation, look under Cooperative Work Experience in the catalog index.

In addition to tuition, estimated costs for students who complete the entire program are books, $100; lab fees, $15; equipment and supplies, $20. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn a Certificate of Completion and a proficiency statement by successfully completing the required credit hours listed below. If you enroll weekly, you may also earn a proficiency statement.

Required Courses:

Course	Title	Credit Hours
OA050	Civil Service Exam Prep I	3
OA051	Civil Service Exam Prep II	3
OA052	Clerical Procedures	3
OA053	Individualized Filing	3
OA054AB	Introduction to Machine Transcription	2
OA061AB	Introduction to Calculators	2
OA099	Proofreading	1
OA121ABC	Typing I	3
OA124A	Typing Skillbuilding	1

Optional Courses:

OA058AB	Shorthand Refresher I and II	2
OA090	Bookkeeping I	3
OA091	Bookkeeping II	3
OA092	Payroll Procedures	3
OA122ABC	Typing II	3
OA123	Typing III	3
OA280	Cooperative Work Experience	maximum 6

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. 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
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	4	5	6
Hst110, 111, 112 History of World Civilization	3	3	3
Phl201, 202 Problems of Philosophy, Phl203 Elementary 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.

In addition to tuition, estimated costs for students who complete the entire Chemeketa program are books, $500; lab fees, $50. 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
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	**4**	**5**	**6**
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, HE199E Nutrition and Weight Control, and physical fitness classes 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 in 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; lab fees, $25. Contact the financial aid office to find out if you qualify for help with these costs.

	Term		
	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, $670; lab fees, $60; equipment and supplies, $30. 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		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, $640. 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 and 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, $415; 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 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 General Chemistry 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		3	
Electives			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, $710. 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		3	
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

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 insitution to which you plan to transfer.

	Term		
First Year	**1**	**2**	**3**
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	**4**	**5**	**6**
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, and graphic designers. You may learn to operate a variety of graphic equipment including process cameras, printing presses, densitometers, enlargers, and phototypesetters. You may take lower division college transfer courses instead of general education, mathematics, and science classes to complete program requirements. Any other changes in your program must be approved by the program coordinator.

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 VC280 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, $350; lab fees, $110; equipment and supplies, $125. Contact the financial aid office to find out if you qualify for help with these costs.

You may earn an Associate in 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 System	6
Term 2		
Mth052	Introduction to Algebra and Geometry	3
Com052	Communication Skills II	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 41 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	
VC062	Image Conversion and Image Carriers for Offset Lithography	
	or	
VC063	Advanced Presswork	6
Term 5		
	General education elective	3
	Select one:**	
	VC061, VC062 or VC063 (see term 4)	6
	VC071, VC072, VC081, VC082 Special Problems in Graphic Communication***to equal	7
Term 6		
	VC071, VC072, VC081, VC082 Special Problems in Graphic Communication*** to equal	16

* Meets college's computer course requirement.

** VC051, VC052, VC053, VC061, VC062 and VC063 are offered concurrently each term. You are counseled individually on enrollment.

***VC071, VC072, VC081 and VC082 are offered concurrently each term. You are counseled individually on enrollment.

Welding Technology

The Welding Technology program has three options: Welding, which requires three terms; Welding Fabrication, which requires six terms; and Nondestructive Testing, which requires six terms. You may select individual courses to meet your needs, or you may work toward an Associate in Science degree or a Certificate of Completion.

As a graduate of one of these programs 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.

Welding Option

The Welding option 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.

This option prepares you for a variety of positions in job speciality production and maintenance shops, as oxyacetylene burner, 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, $105; lab fees, $150; equipment and supplies, $280; test fees, $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 45 required credit hours:

Course	Title	Credit Hours
Term 1		
Mth051	Basic Mathematics	3
Wld051	Basic Arc Welding	5
Wld056	Blueprint Reading and Sketching	2
Wld061	Basic Gas Metal Arc Welding (MIG)	2
Wld071	Basic Oxyacetylene Welding	2
Wld074	Weld Shop Safety	1
Term 2		
Wld052	Intermediate Arc Welding	5
Wld057	Layout Practices	1
Wld062	Intermediate Gas Metal Arc Welding (MIG)	2
Wld072	Oxyacetylene Cutting	2
Wld073	Basic Gas Tungsten Arc Welding (TIG)	3
Wld081	Welding Metallurgy I	2
Term 3		
Wld053	Advanced Arc Welding	3
Wld058	Welding Shop Problems	7
Wld063	Advance Gas Metal Arc Welding (MIG)	3
Wld082	Welding Metallurgy II	2

Welding Fabrication Option

The Welding Fabrication option 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, and 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 semiautomatic welding, automatic flame cutter operation, millwright welding, plant maintenance, and quality control and development.

The program offers you a background in manufacturing materials, processes, and systems including shear and press brake operation, blueprint reading, and shop drawing and layout. The curriculum includes written and oral communications and general education classes and emphasizes related scientific, mathematical, and general mechanical principles.

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, $260; lab fees, $225; equipment and supplies, $280; test fees, $45. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
Com051	Communication Skills I*	3
Mch056	Machine Shop I	3
Mth051	Basic Mathematics	3
Wld051	Basic Arc Welding	5
Wld056	Blueprint Welding and Sketching	2
Wld074	Weld Shop Safety	1
Term 2		
Com052	Communication Skills II*	3
Mth052	Introduction to Algebra and Geometry*	3
Psy100	Introduction to Psychology	3
WFb091	Fabrication Procedures	2
Wld057	Layout Practices	1
Wld071	Basic Oxyacetylene Welding	2

Term 3

Mth053	Introduction to Trigonometry with Geometry*	3
Ph052	Practical Physics*	4
WFb081	Elements of Metallurgy	3
WFb083	Fabrication Practice I	2
Wld061	Basic Gas Metal Arc Welding (MIG)	2
Wld073	Basic Gas Tungsten Arc Welding (TIG)	3

Term 4

WFb082	Heat Treatment of Steel	3
WFb086	Fabrication Practice II	3
WFb092	Fabrication Shop Problems I	3
Wld052	Intermediate Arc Welding	5

Term 5

Mch057	Machine Shop II	3
Ph051	Practical Physics*	4
WFb087	Fabrication Shop Practice III	3
WFb093	Fabrication Shop Problems II	3
Wld062	Intermediate Gas Metal Arc Welding (MIG)	2
	General education elective or	
WFb280	Cooperative Work Experience	3

Term 6

Mch097	Industrial Working Relations	3
WFb088	Fabrication Practice IV	3
WFb096	Shop Projects	2
	General education elective or	
WFb280	Cooperative Work Experience	3
Wld053	Advanced Arc Welding	3
Wld063	Advanced Gas Metal Arc Welding (MIG)	3

*College transfer courses may be substituted with approval of the program coordinator.

Nondestructive Testing Option

The Nondestructive Testing option is for persons who wish to combine technical knowledge with learning the skills of welding, fabrication, and testing materials.

In this option, you practice basic welding and fabrication skills and study the theories, techniques, and equipment used in ultrasonic, Eddy current, magnetic particle, liquid penetrant, and radiographic testing. The curriculum also includes written and oral communications, general education, and applied physics courses.

In this program, you may gain a background in welding and fabrication technology and methods in testing which meet the standards of the American Society of Nondestructive Testing. At the end of the training, you make take the examination to qualify for Level I certification by the American Society of Nondestructive Testing.

As a graduate, you may qualify for several types of positions in business and industry. These include a manufacturer's representative, welding inspector, quality control technician, sales agent, application specialist, qualified inspector or supervisor, and radiography technician.

In addition to tuition, estimated costs for students who complete the entire program are books, $378; lab fees, $236; equipment and supplies, $250; test fees, $400. Contact the financial aid office to find out if you qualify for help with these costs.

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

Course	Title	Credit Hours
Term 1		
Com051	Communication Skills I**	3
Mch056	Machine Shop I	3
Mch060	Shop Safety	1
Mth051	Basic Mathematics**	3
Wld051	Basic Arc Welding	5
Wld056	Blueprint Reading and Sketching	2
Term 2		
Com052	Communication Skills II**	3
Mth052	Introduction to Algebra and Geometry**	3
Psy100	Introduction to Psychology	3
WFb091	Fabrication Procedures	2
Wld057	Layout Practices	1
Wld071	Basic Oxyacetylene Welding	2
Term 3		
Mth053	Introduction to Trigonometry with Geometry	3
Ph052	Practical Physics	4
WFb081	Elements of Metallurgy	3
WFb083	Fabrication Practices I	2
Wld061	Basic Gas Metal Arc Welding (MIG)	2
Wld073	Basic Gas Tungsten Arc Welding (TIG)	3
Term 4		
Com053	Technical Report Writing	3
NDT051	Nondestructive Testing I—Magnetic Partical and Liquid Penetrant	2
WFb086	Fabrication Practices II	3
Wld052	Intermediate Arc Welding	5
Wld098	Metallurgy	3
Term 5		
CS133B	Introduction to Programming, BASIC*	3
NDT061	Nondestructive Testing II—Ultrasonics and Eddy Current	3
Ph051	Practical Physics	4
WFb087	Fabrication Practices III	3
Wld062	Intermediate Gas Metal Arc Welding (MIG)	2
	General education elective or	
WFb280	Cooperative Work Experience	3
Term 6		
Mch097	Industrial Working Relations	3
NDT071	Nondestructive Testing III—Radiography	3
WFb088	Fabrication Practices IV	3
WFb097	Welding Codes and Standards	3
Wld053	Advanced Arc Welding	3
Wld063	Advanced Gas Metal Arc Welding (MIG)	3

*Meets college's computer course requirement.

**College transfer courses may be substituted with approval of the program coordinator.

Course Descriptions

Course Descriptions

This list of course descriptions reflects the diversity and scope of the many credit courses Chemeketa currently offers. All current courses may not be included here; the college may add new classes after this catalog is published.

The letters **F, W, Sp** and **Su** at the end of a course description indicate the term (fall, winter, spring and 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 quarterly schedules of classes.

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.

Accounting, see Business Administration

Agriculture

Agr050 Introduction to Agriculture
1 class hr/wk, 1 cr.
Survey of employment opportunities in agricultural fields, including marketing, sales, management processing, and production. Guest speakers discuss employment, training, the nature of the work activities, salary, etc. **F**

Agr051 Introduction to Oregon Soils
2 class hrs and 4 lab hrs/wk, 4 cr.
Survey of types of soils, problems of soil preparation, drainage, organic matter, soil supplement, pH and soil microorganisms, etc. How to evaluate soil and correct major soil problems for crop production. Lab fee, $2. **F**

Agr052 Soil Management and Fertilizers
2 class hrs and 4 lab hrs/wk, 4 cr.
Covers principles and practices of basic soil management and fertilization. Includes soil-crop relationships and soil analysis. **Prerequisite:** Agr051. Lab fee, $2. **Sp**

Agr053 Fertilizers and Plant Nutrition
2 class hrs and 4 lab hrs/wk, 4 cr.
Types of fertilizers, fertilizer requirements and regulations, fertilizers and crop problems, and fertilizer calculations and analysis. **Prerequisite:** Fertilizers, Mth051, Mth052, Agr051, and Agr052 (if possible) or consent of instructor. Lab fee, $2 **Offered as needed.**

Agr054 Farm Surveying and Measurement
2 class hrs and 2 lab hrs/wk, 3 cr.
Methods of surveying and equipment used to measure distance, directions, and elevations. Includes ground measurements, aerial photography, mapping, legal descriptions of deeds. Includes computation skills used in farm management. **Prerequisite:** Mth052 or equivalent, concurrent registration in Agr055 or placement test and consent of instructor. Lab fee, $1. **Offered as needed.**

Agr055 Irrigation and Drainage
2 class hrs and 2 lab hrs/wk, 3 cr.
Basic methods of irrigation and drainage. How to select and design irrigation and drainage systems. **Prerequisites:** Mth051, Mth052 or consent of instructor. Lab fee, $2. **W**

Agr056 Soil Preparation, Equipment Operation, and Maintenance
2 class hrs and 3 lab hrs/wk, 3 cr.
Review of basic soil preparation, equipment operation and maintenance, and the timing of fall and spring activities. Lab fee, $1. **Offered as needed.**

Agr057 Farm Equipment Management and Maintenance
2 class hrs and 4 lab hrs/wk, 4 cr.
A review of the principles of maintenance and repair of farm equipment emphasizing locally used equipment. **Prerequisites:** Mth051, and Mth052. Lab fee, $2. **W**

Agr058 Spray Equipment, Operation, and Maintenance
2 class hrs and 3 lab hrs/wk, 3 cr.
Basic operations, calibrations, and maintenance of power equipment. How to assemble and calibrate different types of power sprayers. **Prerequisite:** Mth051, Mth052 or consent of instructor. Lab fee, $1. **Offered as needed.**

Agr059 Construction of Farm Buildings and Farm Building Codes
3 class hrs/wk, 3 cr.
Proper design and material selection for agriculture building construction. Includes pole buildings, greenhouses, fencing, and other farm structures. Covers land use and building code regulations related to agriculture. **Offered as needed.**

Agr061 Plant Science
2 class hrs and 4 lab hrs/wk, 4 cr.
A basic course in anatomy, physiology, morphology, and genetics of agricultural plants. Covers basics of plant identification. Lab fee, $3. **F**

Agr062 Plant Identification (Agricultural and Ornamental)
2 class hrs and 2 lab hrs/wk, 3 cr.
How to recognize common agricultural and ornamental plants. Students prepare a plant collection. **Prerequisite:** Agr061 or consent of instructor. Lab fee, $2. **Sp**

Agr063 Plant Propagation
2 class hrs and 4 lab hrs/wk, 4 cr.
Methods of propagation of fruit and ornamental crops. Lab fee, $4. **Offered as needed.**

Agr064 Nursery and Greenhouse Operations
2 class hrs and 4 lab hrs/wk, 4 cr.
Management aspects of a commercial nursery or improving an existing nursery business. Covers three major areas of greenhouse production, container production, and field grown nursery production. Lab fee, $4. **Offered as needed.**

Agr065 Nursery and Greenhouse Practices and Procedures
2 class hrs and 4 lab hrs/wk,4 cr.
Basic study of pest management (weeds, insects, and diseases), nutrition, soil mixes, and water and other plant cultural requirements. Includes information on selling, salesmanship, and state laws regulating nursery stock. Prepares students to take the Certified Nurseryman's test sponsored by the Oregon Association of Nurserymen. Lab fee, $4. **Offered as needed.**

Agr066 Field Crop Production
2 class hrs and 4 lab hrs/wk, 4 cr.
Management and production of grain and legume crops. Includes preparation and management of field crops and harvesting equipment. **Prerequisite:** Agr051, Agr061, Agr062 or consent of instructor. Lab fee, $2. **Offered as needed.**

Agr067 Vegetable Crop Production
2 class hrs and 4 lab hrs/wk, 4 cr.
Production and management of vegetable and seed crops, preparation, fertilization, weed and pest control, and harvesting equipment. Lab fee, $2. **Offered as needed.**

Agr070 Pesticide Safety and Regulations
2 class hrs/wk, 2 cr.
Covers major topics in pesticide safety and current state and federal regulations. Preparation for both private and commercial pesticide applicators license exams. **F**

Agr071 Weed Identification and Control
2 class hrs and 2 lab hrs/wk, 3 cr.
How to recognize most of the common agricultural weed problems in the valley. Methods of weed control and management. Students prepare weed collections. Lab fee, $3. **Sp**

Agr072 Pest Management Diseases
2 class hrs and 2 lab hrs/wk, 3 cr.
Survey and management of common diseases responsible for damage to crops. Recognition of diseases of agricultural crops through laboratory and field studies. Lab fee, $2. **W**

Agr073 Pest Management Insects
2 class hrs and 2 lab hrs/wk, 3 cr.
Common insects and their damage to crops. Insect survey and management, lab and field study. Students prepare insect collections. Lab fee, $2. **Sp**

Agr077 Orchard Production and Practices
2 class hrs and 4 lab hrs/wk, 4 cr.
Management and production of new and established orchard crops. Includes basic production principles and basic skills in layout, fertilization, pest management, pruning and training, grafting, harvesting, marketing and orchard equipment. **Prerequisite:** Agr051, Agr061 or consent of instructor. Lab fee, $4. **Offered as needed.**

Agr078 Small Fruit Production
2 class hrs and 3 lab hrs/wk, 4 cr.
Fundamentals of the establishment, operation, management, and marketing of small fruits. Lab fee, $2. **Offered as needed.**

Agr079 Christmas Tree Production
2 class hrs and 3 lab hrs/wk, 3 cr.
Methods of establishing, operating, and managing Christmas tree farms. Lab fee, $1. **Offered as needed.**

Agr080 Grape Production and Management
3 class hrs and 3 lab hrs/wk, 4 cr.
Establishing, training, managing, and marketing grapes in the Willamette Valley. **Offered as needed.**

Agr086 Agricultural Economics and Farm Management Seminar
1 class hr/wk, 1 cr.
Introduction to basic economics theory and how it relates to farm management practices. **Prerequisite:** Mth051 and concurrent enrollment in Ec201. **F**

Agr087 Agricultural Marketing Seminar
1 class hr/wk, 1 cr.
Methods of marketing agricultural products, cooperative marketing, price determination, margins, costs, profits, marketing agreements, and commodity markets. **Prerequisites:** Mth051 and concurrent enrollment in BA223. **W**

Agr088 Managing Agriculture Finances
3 class hrs/wk, 3 cr.
Management of farm finance. Includes finance requirements, credit arrangements and sources, cash flow, costs analysis, taxes, insurance, and farm capital. **Sp**

Agr089 Farm Records
3 class hrs/wk, 3 cr.
Farm record keeping and budget analysis. Cost accounting of different farm operations. **Prerequisite:** Mth051, Mth052 or consent of instructor. Lab fee, $6. **W**

Agr090 Agriculture Seminar
1 class hr/wk, 1 cr.
Formal presentation and discussions of topics in agriculture technology. Includes students and instructors. **Offered as needed.**

Agr091 Meat Animal Production Beef, Sheep, Swine
3 class hrs and 2 lab hrs/wk, 4 cr.
Fundamentals of the physiology, selection, and improvement of animals. Stresses improved practices in the modern livestock industry. Covers technical knowledge, management practices and performance skills used by successful producers. Lab fee, $2. **Offered as needed.**

Agr280A-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.**

Allied Health, see also Dental Assisting, Emergency Medical Technology, Health Education, Medical Assisting, and Nursing

AH050 Health Occupations Overview
1 class hr/wk, 1 cr.
Organization of resources for health care and services, the role of health workers as members of a health team, and the rights and responsibilities of patients as members of a health team. **F, W, Sp, Su**

AH059 Survey of Human Disease
3 class hrs/wk, 3 cr.
An overview of human pathology, including etiology, injury and illness. **Offered as needed.**

AH071 Multimedia First Aid
1 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. **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.**

AH199B Health Care Issues
3 class hrs/wk, 3 cr.
A review of contemporary issues and developments in health care and related fields. **Offered as needed.**

AH199C-F EMT Issues
Variable class hrs/wk, variable cr.
Focuses on important current topics in emergency medical technology such as laws, practices, equipment, techniques, and recent developments. **Prerequisite:** Consent of instructor. **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**

Art

Art115, 116, 117 Basic Design
2 class hrs and 2 lab hrs/wk, 3 cr.
An introduction to basic principles of design. Art115: form, line, shape, value, texture. Art116: color. Art117: three-dimensional design. **Prerequisite:** Courses taken in sequence or with consent of instructor. **Art115: F; 116: W; 117: Sp**

Art154 Pottery I—Handbuilding
6 lab hrs/wk, 3 cr.
Three-dimensional design, shape, form, basic construction techniques for beginners. Lab fee, $8. **F, W, Sp**

Art155 Pottery II—Beginning Wheel Throwing
6 lab hrs/wk, 3 cr.
Wheel throwing methods, glaze calculations, and kiln firing techniques. **Prerequisite:** Art154 or consent of instructor. Lab fee, $8. **W, Sp**

Art156 Pottery III—Intermediate Techniques
6 lab hrs/wk, 3 cr.
Individual development of techniques, directions, and ideas. Includes marketing, sales, and public showings. **Prerequisite:** Art155. Lab fee, $8. **Sp**

Art204, 205, 206 Introduction to Art History
3 class hrs/wk, 3 cr.
Visual arts from prehistoric to modern times. Studies selected works of painting, sculpture, architecture, and other arts in relation to the cultures that produced them. **Art204: F; 205: W; 206: 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. **W, Sp**

Art233 Contemporary Drawing Media
6 lab hrs/wk, 3 cr.
Continuation of Art232 emphasizing development of personal style and expression, personal imagery, and mixed media approaches. **Prerequisite:** Art232. **Sp**

Art244 Stained Glass
6 hrs/wk, 3 cr.
Basic techniques of stained glass construction, choosing materials and tools, designing, cutting, leading, foiling, soldering, and finishing. Emphasis on design. May be repeated. **F, W, Sp**

Art260 General Photography
2 class hrs and 4 lab hrs/wk, 3 cr.
Fundamental and technical aspects of photography. Covers types of cameras, f/systems, shutter speeds, film types and specifications, developing, basic enlarging, composition, familiarity with basic materials and processing, vocabulary, and equipment. Directed photographic assignments and photo lab work. Students supply cameras, film, paper, exposure meters, tripods, and flash equipment. College furnishes enlargers, chemicals, and other incidental darkroom equipment for students interested in photography as a part of general education. **W, Sp, Su**

Art261 Intermediate Photography
2 class hrs and 4 lab hrs/wk, 3 cr.
Covers varied materials and processsing 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 VC067 or Art260 or a passing score on the final exam, and acceptance of student's portfolio or consent of instructor. **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. Lab fee $8. **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 Lab fee, $8. **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. Lab fee, $8. **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. May be repeated. **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.
Introduces the properties and characteristics of selected materials of sculpture. Elementary considerations of form through technical and compositional exercises. **F**

Art292 Ceramic Sculpture
6 lab hrs/wk, 3 cr.
An introduction to the potential and characteristics of clay as a creative sculptural medium. **W**

Art293 Sculpture/Lost Wax Casting
6 lab hrs/wk, 3 cr.
An introduction to lost wax casting processes using non-ferrous metals as casting materials. **Prerequisite:** One of the following: Art117, 154, 291, 292 or consent of instructor. Lab fee, $8. **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. Lab fee, $8. **F, W, Sp**

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 hrs and 9 lab hrs/wk, 6 cr.
Construction, working principles, and methods of servicing internal combustion engines. Proper use of tools and equipment. Engines are disassembled, studied, serviced, and reassembled properly, using accepted rebuilding and servicing procedures. Lab fee, $12. **F**

Aum052 Automotive Machine Shop
2 class hrs and 3 lab hrs/wk, 3 cr.
Automotive machine shop operations including cylinder head and block reconditioning. Stresses precision machining such as knurling, boring, honing, and bearings fitting. **Prerequisite:** Aum051 or consent of program coordinator. Lab fee, $8. **Sp**

Aum056 Automotive Shop Safety
1 class hr/wk, 1 cr.
A survey of principles of safety for the auto industry. Uses films and case studies to develop awareness of hazards and positive attitudes toward the prevention of accidents. **F**

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. Lab fee, $5. **F**

Aum058 Auto Steering and Suspension
2 class hrs and 3 lab hrs/wk, 3 cr.
Theory and service of automotive front and rear suspension systems, power and manual steering mechanisms, wheel balancing, and front-end alignment. Lab fee, $5. **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 drive shafts and universal joints, clutches and linkage, manual transmissions, rear axles, and differentials, open and limited slip. Lab fee, $8. **W**

Aum063 Automatic Transmissions
3 class hrs and 4 lab hrs/wk, 4 cr.
Fundamentals of automatic transmission operation, including methods of gear change, power flows, and basic hydraulic principles used in automatic transmissions. Emphasizes servicing and proper overhaul of automatic transmissions. Lab 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.
Theory and service of fuel systems; selected one-, two-, and four-barrel carburetors; multiple carburetion; and automotive fuel injection (introduction). Includes service and adjustment of carburetors, and manifolding, carburetor special features, gasoline and air-fuel ratios coverage. **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. Lab fee, $10. **Sp**

Aum072 Automotive Repair II
1 class hr and 9 lab hrs/wk, 4 cr.
Continuation of Aum071, with other jobs to provide experience and develop speed. **Prerequisite:** Fourth term standing or approval of program coordinator. Lab fee, $10. **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. Lab fee, $10. **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.
Theory and service of automotive ignitions, conventional and electronic; charging systems; starting systems and batteries; pertinent solid-state, devices, oscilloscopes and instruments. **Prerequisite:** Aum076 or consent of program coordinator. Lab fee, $5. **W**

Aum078 Automotive Service Operations
2 class hrs/wk, 2 cr.
Duties and responsibilities of parts and service managers. Covers methods of organizing service personnel and shop facilities, introduction to shop layout, operation of parts rooms, and problems common to both parts and service departments. **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. Keyed to experience on components and vehicles during lab periods. **Prerequisite:** Aum067 and Aum077 or consent of program coordinator. Lab fee, $10. **Sp**

Aum082 New Automotive Developments
3 class hrs/wk, 3 cr.
Changes in the automotive field, including various emission control devices of major brand automobiles. Covers fuel injection systems, turbo-charging, and electronic engine control devices. **Prerequisite:** Aum066, Aum067, Aum076, Aum077. **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. Lab fee, $5. **W**

Aum087 Advanced Automotive Engines
3 class hrs and 3 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. Lab 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. Lab 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**

Aum280 Cooperative Work Experience, see Agr280.

Auto Parts Sales

AuP08l 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.
Fundamental principles of automotive fluid power systems relating to brakes. Covers basic components of fluid power systems and how to combine them to build circuits. Emphasizes location and identification of various parts and components. Compares after-market parts with original equipment. **F**

AuP083 Auto Parts I
2 class hrs and 6 lab hrs/wk, 4 cr.
An in-depth study of the automotive parts industry, from manufacturer and rebuilder to retail automotive parts outlet. Includes methods of parts catalog layout, supplements, revisions, catalog indexing, price sheets, identification of serviceable parts, and filling of 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.
Parts salesmanship and the operation of an automotive parts store. Covers automotive service tools and equipment, shop supplies, chemicals, and related automotive items. Includes practical experience. **Sp**

AuP280 Cooperative Work Experience
see Agr280.

Banking and Finance, see also Business Administration

Ban054 Inside Commercial Banking
3 class hrs/wk, 3 cr.
Identifies topics and issues pertinent to bankers and discusses solutions and responses. Includes an historical overview of American banking, demands made on banks by changing constituencies, and modern approaches to planning and to obtaining and utilizing funds. **Prerequisite:** background of experience or training in banking recommended. **Offered as needed.**

Ban054A New Deposit Instruments
3 class hrs/wk, 1 cr. for 5 weeks
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.**

Ban055 Interviewing/Counseling
3 class hr/wk, 1 cr.
An in-depth study of various aspects of interviewing and counseling. May help students in supervising others and improving management skills. **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, perfections, 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.**

Ban060 Management Skills for Bankers
3 class hrs/wk, 3 cr.
For bank officers, bank managers, and employees interested in becoming managers. Covers planning, decision making, communicating, and management by objectives. **Offered as needed.**

Ban062 New Accounts Seminar—AIB
3 class hr/wk, 1 cr.
Basic handling of new accounts. Covers functions, identification and protection, elements of a check, endorsements, and marketing services of other banks. **Offered as needed.**

Ban063 Product Knowledge
3 class hrs/wk, 1 cr. for 5 weeks
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.**

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, 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. **Prerequisite:** Employment in a bank or enrollment in Banking and Finance program. **Offered as needed.**

Ban068 Time Management Seminar
15 class hrs/wk, 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.**

Ban072 Branch Management Module I
3 class hrs/wk, for 5 weeks, 1 cr.
First in a series of three courses which present a comprehensive overview of branch functions and the manager's role. Covers motivation, management by objectives, performance evaluation, and conflict resolution. **Prerequisite:** BA269 and current enrollment in the Banking and Finance program or current employment in a financial institution. **Offered as needed.**

Ban072A Branch Management Module II
3 class hrs/wk, for 5 weeks, 1 cr.
Second in a series. Concentrates on lending-loan documentation, collateral, financial statements. **Prerequisite:** BA269 and current enrollment in the Banking and Finance program or current employment in a financial institution. **Offered as needed.**

Ban072B Branch Management Module III
3 class hrs/wk, for 5 weeks, 1 cr.
Third of a series. Covers branch organization, teller and platform functions, and budgeting. **Prerequisite:** BA269 and current enrollment in the Banking and Finance program or current employment in a financial institution. **Offered as needed.**

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.**

Ban082 Corporate Banking
3 class hrs/wk, 3 cr.
A practical, technical (rather than theoretical) approach to understanding the lending environment within a bank and the sequential nature of the lending process. **Prerequisite:** BA269, current employment in a financial institution or current enrollment in Banking and Finance program. **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.**

Ban086 Consumer Counselor Training
3 class hrs/wk, 3 cr.
Effective interview techniques and strategies for discovering and meeting customer needs. Assertiveness training to help students develop expertise in effective communication with customers. **Prerequisite:** Business experience desirable. **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.**

Ban280 Cooperative Work Experience, see Agr 280.

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. Lab fee, $4. **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. Lab fee, $4. **F**

Bi072 Body Structure and Function II
2 class hrs and 2 lab hrs/wk, 3 cr.
A continuation of Bi071. **Prerequisite:** Bi071. Lab fee, $4. **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. Lab fee, $6. **F**

Bi102 General Biology
3 class hrs and 3 lab hrs/wk, 4 cr.
Genetics, evolution, and behavior. See Bi101. Lab fee, $6. **W**

Bi103 General Biology
3 class hrs and 3 lab hrs/wk, 4 cr.
Cell biology, plant and animal physiology, human biology. See Bi101. Lab fee, $6. **Sp**

Bi121 Human Anatomy and Physiology
3 class hrs and 3 lab hrs/wk, 4 cr.
In-depth examination of the structure and function of the human body. First of a two-term sequence. Includes review of chemical principles and cell characteristics as a basis for structure and function, plus study of the integumentary, skeletal, muscular, and nervous ystems. **Prerequisite:** Ch101 or equivalent. Lab fee, $6. **F, W, Sp, Su**

Bi122 Human Anatomy and Physiology
3 class hrs and 3 lab hrs/wk, 4 cr.
Continuation of Bi121. Covers endocrine, circulatory, respiratory, digestive, excretory, and reproductive systems, plus an introduction to human genetics. **Prerequisite:** Bi121 or consent of instructor. Lab fee, $6. **F, W, Sp, Su**

Bi124 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 mechanisms of control. **Prerequisite:** Ch101 or equivalent. Lab fee, $6. **F, W, Sp, Su**

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, photosynthesis, and respiration. Lab fee, $6. **F**

Bot202 General Botany
3 class hrs and 3 lab hrs/wk, 4 cr.
A continuation of Bot201. Covers plant genetics and evolution of the plant kingdom. Includes bacteria, fungi, and algae. Lab fee, $6. **W**

Bot203 General Botany
3 class hrs and 3 lab hrs/wk, 4 cr.
A continuation of Bot201 and 202. Covers mosses, ferns, conifers and flowering plants; includes identification of native plants. Lab fee, $6. **Sp**

Building Inspection

Bld050 Introduction to Uniform Building Code
3 class hrs/wk, 3 cr.
Historical and legal foundations of building codes. Compares performance versus specification standards. Covers Uniform Building

Code, Uniform Building Code Standards, Uniform Mechanical Code, Uniform Plumbing Code, Uniform Housing Code, and National Electrical Code. Introduction to usage, development, and format of Uniform Building Code and supporting codes. **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.
Continuation of Bld051. Covers hazards in building construction, such as vertical shafts, treatment of exterior and interior surfaces, detailed 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.
An introduction to Oregon law as it relates to the building code. Includes problems in administering the code, enforcement of the law, legal remedies, and case histories. **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. Lab fee, $5. **Sp**

Bld057 Techniques of Inspection II
8 lab hrs/wk, 3 cr.
On-the-job training, under the supervision of an instructor or inspector. Students inspect buildings under construction and hold discussions during day-long field trips. **Prerequisite:** Bld056. Lab fee, $5. **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. Lab fee, $5. **W**

Bld059 Materials of Construction
2 class hrs and 4 lab hrs/wk, 3 cr.
Materials and processes regulated by the building code. Testing standards as a quality control of traditional and non-traditional building materials. Lab fee, $5. **W**

Bld060 Fire Protection for Buildings
3 class hrs/wk, 3 cr.
Installation, functions, and requirements of sprinkler systems. **W**

Bld061 Structural Inspection—Wood
2 class hrs and 4 lab hrs/wk, 3 cr.
Introduces basic methods of wood framing. Deals with allowable stresses, loads, and fundamental design of wood products and construction systems. Lab fee, $5. **W**

Bld062 Stuctural Inspection—Masonry
2 class hrs and 4 lab hrs/wk, 3 cr.
Specific code requirements for all types of masonry construction, both structural and non-structural. Includes an introduction to fireplace construction. Lab fee, $5. **Sp**

Bld063 Structural Inspection—Concrete
2 class hrs and 4 lab 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. Lab fee, $5. **F**

Bld064 Structural Inspection—Steel
2 class hrs and 4 lab 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. Lab fee, $5. **W**

Bld066 Structural Plan Review
2 class hrs and 3 lab hrs/wk, 3 cr.
Structural requirements of construction for building inspectors. **Prerequisite:** Mth052 or Mth053 and Cvl054. **W**

Bld067 Non-structural 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 lec 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. **Prerequisite:** Bld054, Bld071, Bld081. **Sp**

Bld08l 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.
Helps students gain a working knowledge of the Uniform Mechanical Code as it relates to cooling systems, refrigerating systems, incinerators, commerical kitchen equipment, fuel gas piping, and testing standards. **Prerequisite:** Bld081. **Sp**

Bld091 Electrical Codes I
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.
Helps students understand the National Electrical Code as it applies to special occupancies, special equipment, special conditions, and communication systems. **Prerequisite:** Bld091 or consent of instructor. **Sp**

Bld280 Cooperative Work Experience, see Agr280.

Business Administration

BA031 Fundamentals of Modern Marketing
2.5 class hrs/wk, 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. Lab fee, $45. **Offered as needed.**

BA044 A Manager's Guide to Human Behavior
2.5 class hrs/wk, 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. Lab fee, $45. **Offered as needed.**

BA045 How to Build Memory Skills
2.5 class hrs/wk, 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. Lab fee, $45. **Offered as needed.**

BA048 Leadership Skills for Managers
2.5 class hrs/wk, 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. Lab fee, $45. **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:** Mth010 or Mth061. **W, Sp**

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.
Continuation of BA052. Relates to partnerships, corporations, and manufacturing businesses. For students who do not plan to enroll in Chemeketa's two-year accounting program or to attend a four-year college. **Prerequisite:** BA052 and Mth062. **Sp**

BA054 Governmental Accounting
3 class hrs/wk, 3 cr.
Comprehensive study of accounting for governmental and non-profit entities. Considers budgets, accounting for general funds, special revenue funds, revenue accounting, expenditure accounting, 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. **Sp**

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 in BA213. **F**

BA057 Intermediate Financial Accounting II
4 class hrs/wk, 4 cr.
Comprehensive study of plant assets, depreciation, depletion, intangible assets, long-term liabilities, stockholders equity, earnings per share, and long-term investments. **Prerequisite:** BA056. **W**

BA058 Intermediate Financial Accounting III
4 class hrs/wk, 4 cr.
Comprehensive study of revenue recognition, accounting changes, error analysis, income taxes, pension plans, leases, statement of changes in financial position, financial statement analysis, full disclosure, and price level adjusted financial statements. **Prerequisite:** BA057. **Sp**

BA059 Auditing
3 class hrs/wk, 3 cr.
A survey of the responsibilities and duties of an independent, external auditor. How to apply the ten auditing standards, assist a CPA making financial audit, use audit work papers, and become aware of critical auditing decisions. Emphasizes the importance of internal control and collection of sufficient evidence. Includes an examination and preparation of audit reports that are issued by CPA auditors. **Prerequisite:** BA057. **Sp**

BA061 Accounting for Managers
2.5 class hrs/wk, 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. Lab fee, $45. **Offered as needed.**

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. **Sp**

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. **Sp**

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.**

BA096 Work Analysis/Simplification
3 class hrs/wk, 3 cr.
Concepts and techniques of work simplification for employees. How to increase productivity through improved use of time and available resources. **F, W, Sp**

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 members of the business community; ethics and social responsibility; employment opportunities in various business fields. **F, W, Sp, Su**

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. **F**

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. **F, W, Sp, Su**

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, Mth070 or concurrent enrollment. **F, W, Sp, Su**

BA212 Financial Accounting II
4 class hrs/wk, 4 cr.
Studies of liabilities associated with payrolls, recording of payroll transactions, special payroll records and forms, current and long-term liabilities, formation and division of partnerships earnings, changes in ownership and liquidation, capital acquisition and reporting, dividends, stock splits, donated capital. Also analyzing and using financial statements, theory and practice of measuring earnings, reporting income taxes on financial statements, corporate bonds, corporation accounting principles, and stating changes in a financial position. **Prerequisite:** BA211 and Mth062. **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, and term loans and leases. **Prerequisite:** BA212. **W, Sp**

BA223 Principles of Marketing
3 class hrs/wk, 3 cr.
Marketing research and product development, sale of products or services, feedback of consumer acceptance, and marketing planning and strategy as dictated by the consumer. Previews marketing as a foundation for advanced marketing courses. **Prerequisite:** BA101. **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. **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, Su**

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**

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 Salesmanship
2 class hrs and 2 lab hrs/wk, 3 cr.
Sales as an integral part of total marketing functions. How selling applies to the behavioral sciences, with special emphasis on sales, psychology, sales techniques, and the fundamental principles of sales communication. **F**

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. **F, Sp**

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 how insurance companies view investments and insurance as part of an investor's portfolio. **Prerequisite:** BA101, BA211 or equivalent. **Offered as needed.**

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, W, Sp**

BA244 Records Management
3 class hrs/wk, 3 cr.
Principles of efficient control of business records including criteria for determining storage, disposition or retention. Includes guidelines for selection of equipment and supplies. **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. **Sp**

BA251 Office Management
3 class hrs/wk, 3 cr.
The broad scope of responsibilities of an administrative manager. Includes centralization of office services which require planning, organizing, and controlling business services, systems, and procedures. **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 discusses the role of supervision in business and industry. **Offered as needed.**

BA256 Income Tax Accounting I
3 class hrs/wk, 3 cr.
Basic course on preparation of individual federal income tax returns. BA256 is the first half of the basic course required to take the Oregon tax preparer's licensing examination. Enroll in BA257 for a more complete study of individual tax returns. **Prerequisite:** BA211 or BA051. **F, Su**

BA257 Income Tax Accounting II
3 class hrs/wk, 3 cr.
Basic individual income tax return preparation for federal and state personal income taxes. Includes a study of Oregon tax service law and code of professional conduct. Completes the required basic course for taking the Oregon tax preparer's licensing examination. **Prerequisite:** BA256. **F**

BA260 Real Estate Principles
3 class hrs/wk, 3 cr.
The nature, importance, and character of real property, real estate business, state markets, and brokerages; taxes and assessment; contracts; and ownership. **F, W, Sp**

BA261 Land Use Economics
Land use, taxation, valuation, planning, zoning and development with emphasis on their relationships to economic and social problems. Evaluates the overall real estate community and it's participants. **Prerequisite:** BA260. **W**

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. Some field work involves public records and title data. **Prerequisite:** BA263 and BA264. **F, W, Sp**

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 an agent's role in the agency relationship between broker and client. **F, W, Sp**

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. **F, W, Sp**

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**

BA277 Business Ethics
3 class hrs/wk, 3 cr.
A comparative study of ethical and economic systems designed to increase decision making capabilites. Emphasizes issues and policy formation in varied business settings. **F, W, Su**

BA278 Law and Banking
3 class hrs/wk, 3 cr.
The legal aspects of banking. Presents a non-technical understanding of all aspects of the legal system that directly affect banking. **Prerequisite:** BA269. **Sp**

BA280 Cooperative Work Experience.
See Agr280.

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 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 at Chemeketa. **Offered as needed.**

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 (one-year) or Mth070. Lab fee, $6. **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. Lab fee, $6. **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. Lab fee, $6. **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. Lab fee, $6. **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. Lab fee, $6. **W, Sp**

Ch106 General Chemistry
4 class hrs and 3 lab hrs/wk, 5 cr.
A continuation of Ch104 and Ch105. Includes oxidation-reduction, radioactivity and nuclear chemistry, organic chemistry, and introduction to biochemistry. Three lectures, one lecture-discussion, and one laboratory period per week. **Prerequisite:** Ch105. Lab fee, $6. **F, Sp**

Ch115 Consumer Chemistry
3 class hrs and 2 lab hrs/wk, 4 cr.
Introduction to chemical principles. Includes atomic structure, radiation hazards, applications of radiochemistry, nuclear power generation, chemical bonding, organic chemistry, solution chemistry, carbohydrates, and energy. Lab fee, $4. **F**

Ch116 Consumer Chemistry
3 class hrs and 2 lab hrs/wk, 4 cr.
Includes air and water pollution, how your garden grows, insect control, alcoholic beverages, baking and dairy products. Lab fee, $4. **W**

Ch117 Consumer Chemistry
3 class hrs and 2 lab hrs/wk, 4 cr.
Includes food preservation, fats and oils, home products, immunochemistry, chemotherapy for the treatment of disease and drug abuse, steroids and birth control. Lab fee, $4. **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. Lab fee, $6. **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 equilbrium, and acid-base theory. **Prerequisite:** Ch204. Lab fee, $6. **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, complex ions, oxidation and reduction, electrochemistry, quantitative analysis, transition-metal chemistry, organic chemistry, and nuclear chemistry. **Prerequisite:** Ch205 or Ch106. Lab fee, $6. **F, Sp**

Ch226 Organic Chemistry
3 class hrs/wk, 3 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. **F**

Ch227 Organic Chemistry
3 class hrs/wk, 3 cr.
Includes benzene and the aromatics, carboxylic acids, esters, amides, anhydrides, amines, and carbohydrates. **Prerequisite:** Ch226. **W**

Ch228 Organic Chemistry
2 class hrs/wk, 2 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. **Sp**

Ch229 Organic Chemistry Laboratory I
3 lab hrs/wk, 1 cr.
Accompanies Ch226, 227, 228. Introduces experimental organic chemistry to students in the biological and allied health areas. **Prerequisite:** Ch226 or consent of instructor. Lab fee, $6. **W**

Ch230 Organic Chemistry Laboratory II
3 lab hrs/wk, 1 cr.
A continuation of Ch229. Introduces experimental organic chemistry to students in the biological and allied health areas. **Prerequisite:** Ch227 and Ch229. Lab fee, $6. **Sp**

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**

Cvl050 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. **W, Sp**

Cvl051 Strength of Materials I
2 class hrs and 3 lab hrs/wk, 3 cr.
A study of stresses and strains which affect bodies subjected to tensile, compressive, and shearing forces. Covers stress and deformation, engineering materials and their properties, riveted and welded joints, thin-wall pressure vessels, torsion, centroids and moment of inertia of areas, and shear and moment in beams. **Prerequisite:** Mth082 or equivalent and Cvl050 or consent of instructor. **F, Sp**

Cvl052 Strength of Materials II
2 class hrs and 3 lab hrs/wk, 3 cr.
Fundamentals of beam and column design, including statically indeterminate beams. Includes centroids and moment of inertia of areas, shear and moment diagrams, deflection of beams, and combined stresses. **Prerequisite:** Mth083 or equivalent and Cvl051. **F**

Cvl053 Engineering Software
1 class hr and 3 lab hrs/wk, 2 cr.
How to solve typical civil engineering problems using software. Students work with an Apple II computer, an HP41C calculator, and a Monroe plotter. The equipment is programmed; students solve problems and obtain correct solutions by properly inputting data and using available software. **Prerequisite:** Cvl099. **W**

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. **F**

Cvl055 Environmental Quality Control
2 class hrs and 3 lab hrs/wk, 3 cr.
Major aspects of air and water pollution, their causes, the harmful effects to the environment, and methods of prevention and treatment. Includes water storage, treatment, and distribution. **Prerequisite:** Mth081. **Sp**

Cvl056 Sanitary Engineering
2 class hrs and 3 lab hrs/wk, 3 cr.
Studies domestic and industrial water supply and waste disposal, collection, storage, and treatment facilities. **Prerequisite:** Cvl055. **Sp**

Cvl057 Soil Mechanics
2 class hrs and 3 lab hrs/wk, 3 cr.
Properties of soils including soil index properties, strength, compaction, permeability, and lateral pressures. Laboratory experiments cover each phase of study. **Prerequisite:** Second year standing, Cvl050 and Mth081. **F**

Cvl059 Soil Mechanics Fundamentals
2 class hrs and 3 lab 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. **F**

Cvl060 Plane Surveying I
2 class hrs and 6 lab hrs/wk, 4 cr.
Fundamental concepts and methods in making surveying measurements for land surveying, mapping, construction, and civil engineering using conventional tapes, levels, rods, and compasses. Field labs provide practical applications. **Prerequisite:** Engineers: Mth081 or enrolled concurrently; Foresters: Mth052 or enrolled concurrently. Lab fee, $5. **F**

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:** Engineers, Cvl060 and Mth082; Foresters, Cvl060 and Mth052 or concurrent enrollment. Lab fee, $5. **W**

Cvl062 Surveying Computations
1 class hr and 3 lab hrs/wk, 2 cr.
More surveying problems in addition to those studied in Cvl060 and Cvl061. **Prerequisite:** Cvl061, Cvl099 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. Lab fee, $5. **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. Lab fee $5. **Sp**

Cvl070 Timber and Steel Construction
3 class hrs and 3 lab hrs/wk, 4 cr.
Fundamentals of wood and steel design and construction. How to analyze and design beams, columns, and connections within the parameters established by the Uniform Building Code, American Institute of Steel Construction, and the National Design Specifications, Recommended Practice for Structural Design by National Forest Products Association. **Prerequisite:** Cvl052 and Mth083 or equivalent. **W**

Cvl071 Building Materials
2 class hrs and 3 lab hrs/wk, 3 cr.
Covers the manufacture, uses, and properties of common materials used in building construction. **F**

Cvl072 Concrete Construction and Design
2 class hrs and 3 lab hrs/wk, 3 cr.
Theory and design of reinforced concrete structural members and design and control of concrete mixtures. Includes construction inspection and field and laboratory testing procedures. **Prerequisite:** Cvl052 and Mth083 or equivalent. Lab fee, $5. **Sp**

Cvl075 Hydraulics
3 class hrs and 2 lab hrs/wk, 4 cr.
Static and dynamic hydraulics and how to solve problems associated with them. Experiments allow students to visualize reaction of water as a force. **Prerequisite:** Cvl050 and Mth083 or consent of instructor. **W**

Cvl077 Construction Estimating
2 class hrs and 3 lab hrs/wk, 3 cr.
Estimating amounts and costs of materials and labor costs of various types of construction. **W**

Cvl079 Contracts and Specifications
3 class hrs/wk, 3 cr.
Common usage and practices in the preparation of contracts and attendant specifications. Practical problems apply to theories. **F**

Cvl099 Engineering Technician Orientation
1 class hr and 2 lab hrs/wk, 2 cr.
How to operate an engineering calculator. (Calculators are evaluated for three weeks before the students must have one.) Includes a brief history of the engineering field and a study of the many details of the engineering curriculum. **Prerequisite:** High school algebra or consent of instructor. **F**

Cvl280 Cooperative Work Experience
see Agr280.

Clothing/Textiles

CT2l0 Clothing Construction
6 lab hrs/wk, 3 cr.
Applies principles and techniques of construction to individual projects. **F**

CT2ll Clothing and Man
3 class hrs/wk, 3 cr.
Sociological, psychological, economic, and aesthetic factors affecting the selection of clothing. **Offered as needed.**

CT2l2 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.**

CT250 Textiles
3 class hrs/wk, 3 cr.
Properties, identification, selection, use, and care of textile fibers and fabrics. **Offered as needed.**

Communication Skills, see also Reading, Writing

Com05l 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. **F, W, Sp**

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. **W, Sp**

Com053 Technical Report Writing
3 class hrs/wk, 3 cr.
Why reports are written, types of reports, makeup, effectiveness of writing styles, gathering facts, planning documentation, methods of writing, layout, typing, and visual aids. See also Wr227. **Prerequisite:** Com05l or consent of instructor. **W, Sp**

Com091 Technical Communicator, Term 1
3 class hrs/wk, 3 cr.
First of three-term indepth 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 Com051 and 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**

Computer Science

CS050 Computer Center Operations
3 class hrs and 8 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 4341 computer. **F, W, Sp**

CS066 Computer Applications Using BASIC
3 class hrs and 2 lab hrs/wk, 4 cr.
How to load and access typical diskette files on small office computers. How to prepare reports, letters, and financial documents from computer files. **Prerequisite:** CS070 and CS133B or equivalent. Lab fee, $5. **F, Sp**

CS068 Microcomputer Graphics
3 class hrs and 1 lab hr/wk, 4 cr.
How to code a microcomputer to produce lines, graphics, and charts. Includes stationary and changing shapes. **Prerequisite:** CS233B. Lab fee, $5. **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, Sp**

CS075 OS Concepts and Facilities
3 class hrs/wk, 3 cr.
Concepts and facilities of the IBM's OS/VS1 operating system. Introduces IBM OS job control language. Students run exercises on the college's IBM system. **Prerequisite:** CS071 and CS263. **Sp**

CS076 Data Communications
2 class hrs/wk, 2 cr.
Concepts of data communication and real time data collection. Includes systems related 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:** CS274 and CS233C. Lab fee, $5. **W**

CS086 EASYTRIEVE I
3 class hrs/wk, 3 cr.
An introduction to EASYTRIEVE. How to code simple business-oriented programs. Emphasizes language structure and rules of file management and retrieval. **Prerequisite:** CS131 or equivalent.

CS090 Program Logic and Testing
3 class hrs and 1 lab hr/wk, 4 cr.
Program design and testing techniques which may improve a programmer's debugging skills. **Prerequisite:** CS133A or CS233C. Lab fee, $5. **F, W**

CS091 On-Line Programming Techniques
3 class hrs and 2 lab hrs/wk, 5 cr.
Studies on-line computer software. Includes coding on-line programs. **Prerequisite:** CS133A or CS233C. Lab fee, $5. **F, W**

CS093 Structured Maintenance
3 class hrs/wk, 3 cr.
An in-depth and practical study of software rehabilitation and preventative maintenance. **Prerequisite:** CS133C and CS233C or consent of instructor. **W**

CS100 Beginning Microcomputer Use
1 class hr and 5 lab hrs/wk, 1 cr.
A brief survey of hardware and software. How to plan proper utilization of equipment, use purchased programs, and write new programs in BASIC. **F, W, Sp**

CS103 Introduction to Microcomputer Operations
3 class hrs and 1 lab hr/wk, 4 cr.
How to use a microcomputer in an office. Covers operation, use of purchased program packages, and maintenance of computer files. **Prerequisite:** CS121 or CS131 and OA121. Lab fee, $5. **F, W, Sp**

CS104 Advanced Spread Sheet Systems
3 class hrs and 3 lab hrs/wk, 4 cr.
How to use electronic spread sheets in a multi-worksheet environment. May vary from term to term (i.e. VisiCalc, AceCalc, MultiPlan). **Prerequisite:** CS103. Lab fee, $5. **F, W, Sp**

CS106 dBase II for Microcomputer Use
3 class hrs/wk, 3 cr.
Covers relational data base (dBase II) for use in government and business offices. **Prerequisite:** CS103. Lab fee, $5. **F, Sp**

CS107 LOTUS Applications
3 class hrs/wk, 3 cr.
Covers use of LOTUS 1-2-3 user package. **Prerequisite:** CS103. Lab fee, $5. **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. **Sp**

CS121 Computer Environment
3 class hrs/wk, 3 cr.
Computer systems and how they affect our lives. Includes brief introduction to BASIC programming. **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. Lab fee, $5. **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. Lab fee, $5. **F**

CS133B Introduction to Programming, BASIC
3 class hrs and 1 lab hr/wk, 3 cr.
Computer programming using the BASIC language. Analysis of problems, writing and entering programs, locating and correcting errors, and completing successful runs. Students submit programs to cover each programming concept, but may choose a specific application from his or her own interest area. No previous knowledge of computers expected. **Prerequisite:** Mth010 or Mth052 or consent of instructor. Lab fee, $2. **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. **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. **F, W, Sp**

CS133R RPG for Operators (CS062)
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. **Offered as needed.**

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:** BA212, CS103, and CS131. **W, Sp**

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. Lab fee, $5. **Prerequisite:** CS133A. **W**

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. **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. Lab fee, $5. **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. Lab fee, $5. **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. Lab fee, $5. **W, Sp**

CS235B Computer Applications in Science and Technology
3 class hrs and 2 lab hrs/wk, 4 cr.
Continuation of CS133B for science and engineering students. How to use roots of equations, graphing, curve fitting, numerical integration, differential equations, files, and simulation techniques to solve practical problems of scientific interest. Emphasizes structured programming on a personal computer system. **Prerequisite:** CS133B and Mth101 or their equivalents. Lab fee, $2. **W**

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: CS066, CS233B, or a course in any other programming language. Lab fee, $5. **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:** CS068 and CS271. Lab fee, $5. **W, Sp**

CS238 Advanced Software Design
3 class hrs and 3 lab hrs/wk, 4 cr. Continuation of CS237. **Prerequisite:** CS237. Lab fee, $5. **F, Sp**

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. **Sp**

CS261 Introduction to Computer Science
3 class hrs and 3 lab hrs/wk, 4 cr.
Computer programs in PASCAL language writing emphasizing structure and style. CS261 and CS262 are preparatory courses for college transfer students planning to continue in upper division courses in computer science. **Prerequisite:** Mth100 or Mth082 or consent of instructor. Lab fee, $2. **F, W, Sp, Su**

CS262 Techniques for Computer Programming
3 class hrs and 1 lab hr/wk, 4 cr.
Continuation of CS261. Emphasizes systems analysis, top-down programming. Introduces data structures in PASCAL language. **Prerequisite:** CS261 or equivalent experience with PASCAL language. Lab fee, $2. **W, Sp**

CS263 Computer Organization
4 class hrs/wk, 4 cr.
Hardware and software components of modern computer systems and introduction to job control language and utilities. **Prerequisite:** CS131 or CS261. **W**

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. Lab fee, $5. **F, W**

CS274 Systems Analysis II
3 class hrs/wk, 3 cr.
Fundamentals of automated data systems and procedures. Techniques and principles of systems analysis, forms, design and control, systems economics, feasibility studies, and installation of electronic data processing systems. **F**

CS275 Data Base Program Development
3 class hrs and 1 lab hr/wk, 4 cr.
Developing application programs in a database environment with emphasis on loading, modifying, and querying the database using a host language. Discusses storage devices, data administration, and data analysis. **Prerequisite:** CS233C, CS244. Lab fee, $5. **W**

CS280 Cooperative Work Experience
see Agr280.

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.**

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.). Lab 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 scheduled.**

CJ110 Introduction to Law Enforcement
3 class hrs/wk, 3 cr.
An orientation in law enforcement, 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 scheduled.**

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 scheduled.**

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 scheduled.**

CJ195A 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 scheduled.**

CJ199 Issues in Criminal Justice
variable hours, variable credit.
Series of forums on special issues in criminal justice. **Prerequisite:** Consent of instructor. **Offered as scheduled.**

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 scheduled.**

CJ202 Violence and Agression
3 class hrs/wk, 3 cr.
Causes and extent of violence in the family and preventive measures available in the community. **Offered as scheduled.**

CJ206 Crime and Delinquency
3 class hrs/wk, 3 cr.
Crime and delinquency data variations of crime and delinquency rates with age, sex, race, poverty, educational status, urbanization, and other variables. Makes an in-depth inquiry into victimological studies together with collective and policitcal criminality. Discusses class culture and its relationship with gang delinquency. **Offered as scheduled.**

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 scheduled.**

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 scheduled.**

CJ214 Crime Scene Technician
3 class hrs/wk, 3 cr.
Basic principles and techniques of crime scene search, identification, collection and preservation of physical evidence, and courtroom preparation and presentation. Emphasizes the technical and scientific aspects of crime scene search and physical evidence. **Offered as scheduled.**

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 scheduled.**

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 scheduled.**

CJ223 Rules of Evidence
3 class hrs/wk, 3 cr.
Basic principles of the law of criminal evidence. **Offered as scheduled.**

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 scheduled.**

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 scheduled.**

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 scheduled.**

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 scheduled.**

CJ233 Introduction to Community Based Corrections
3 class hrs/wk, 3 cr.
Pretrial intervention, work release programs, halfway houses, juvenile offenders, roles of volunteers and para-professionals, probation, and parole. **Offered as scheduled.**

CJ280 Cooperative Work Experience
see Agr280.

Dance, see Physical Education

Dental Assisting

Den050 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:** High school graduate or equivalent. **F**

Den051 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:** Den050, Bi060 or equivalent. **F**

Den052 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:** Den051. **W**

Den054 Dental Materials and Instrumentation
2 class hrs and 4 lab hrs/wk, 4 cr.
An introduction to and demonstrations of materials and instruments used in dental offices. Includes use, identification, chemistry, and manipulation of dental materials, and use, identification, transfer, manipulation, and care of the dental instruments and equipment. Lab fee, $5. **F**

Den055 Dental Anatomy and Physiology
3 class hrs and 3 lab hrs/wk, 4 cr.
Basic general and oral anatomical terminology and related physiological processes with emphasis on the mouth and associated structure. Covers the skeletal system, blood supply, innervation and musculature of various oral structures, and developmental, anatomical, and functional characteristics of human dentition. Lab fee, $5. **F**

Den059 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:** Bi060, Den050, Den051, Den054, Den055. Lab fee, $5. **W**

Den060 Dental Office Management
2 class hrs and 3 lab hrs/wk, 3 cr.
Personal and vocational relationships, including telephone reception and business office procedures, purchases, storage and care of supplies, and maintenance of office and equipment. **W**

Den061 Principles and Basic Application of Dental Radiology
2 class hrs and 3 lab hrs/wk, 4 cr.
Practical application of principles of radiology and practice in placement of film, cone angulation, machine manipulation, and film processing to develop proficiency in taking x-rays. **Prerequisite:** Den055, Den050 or equivalent. Lab fee, $5. **W**

Den062 Applied Radiography II
0.5 class hr and 2 lab hrs/wk, 2 cr.
Continuation of Den061. Develops further skills in producing diagnostic radiographs. **Prerequisite:** Den061. Lab fee, $3. **Sp**

Den066 Expanded Functions I
1 class hr and 3 lab hrs/wk, 2 cr.
Theory and practice of new procedural responsibilities delegated to dental auxiliary personnel. Includes discussion, demonstration, and practical application of polishing silver alloys, rubber dam placement and removal on simulated and real patients, and removal of excess cement from orthodontic bands on simulated patients. **Prerequisite:** Den050, Den055 or equivalent. Lab fee, $5. **W**

Den067 Expanded Functions II
1 class hr and 3 lab hrs/wk, 2 cr.
Continuation of Den066. Includes discussion, demonstration, and practical application of preventive dentistry presentations, including diet analysis and nutritional counseling, topical fluoride application on real patients, and taking alginate impressions on simulated and real patients. **Prerequisite:** Den066. Lab fee, $5. **Sp**

Den069 Dental Office Practicum II
8 lab hrs/wk, 3 cr.
Practice and observation in an approved dental office. **Prerequisite:** Completion of terms 1 and 2 in dental assisting curriculum. Lab fee, $5. **Sp**

Den070 Advanced Laboratory Procedures
2 class hrs and 4 lab hrs/wk, 4 cr.
Principles of full and partial denture prosthesis and the use of laboratory equipment. Includes experience in investing and casting crowns and bridges and assisting in other advanced laboratory procedures. **Prerequisite:** Den059 and Den054. Lab fee, $4. **Sp**

Den079 Dental Office Practicum III
16 lab hrs/wk, 5 cr.
Practice and observation in an approved dental office. **Prerequisite:** Successful completion of Den069. Lab fee, $5. **Su**

Den080 Dental Assistant Seminar
2 class hrs/wk, 2 cr.
Preparation for employment. Emphasizes professionalism, employment preparation and opportunities and dental specialty fields. **Prerequisite:** Successful completion of terms 1, 2, and 3 of dental assisting program. **Su**

Den280 Cooperative Work Experience
see Agr280.

Drafting Technology

Drf040 Introductory Drafting
3 class hrs and 9 lab hrs/wk, 1 cr.
A 12-hour introductory course covering fundamentals of drafting and basic drawing techniques. Emphasizes proper use of drafting equipment and different types of drafting. **Su**

Drf050 Sketching
3 labs/wk, 1 cr.
Development of basic freehand technical sketching skills and techniques used in drafting and practical pictorial communication. **F, W, Sp, Su**

Drf051 Machine Drafting I
1 class hr and 7 lab hrs/wk, 4 cr.
Introduction to technical drawing. Includes familiarization with drafting equipment, freehand lettering, orthographic projections, dimensioning techniques, pictorial drawing, geometric construction, and introduction to welding drawing. Problems based on individual machine parts. **Prerequisite:** Admission to Drafting Technology program or consent of program coordinator. **F, W, Sp**

Drf052 Machine Drafting II
1 class hr and 7 lab hrs/wk, 4 cr.
Continuation of Drf051. Emphasizes lettering, line quality, and drafting techniques. Projects include auxiliary views, sectional views, and production drawings. Technical subjects include tolerancing, geometric tolerancing, and fasteners and their application in drafting. **Prerequisite:** Drf051. Lab fee, $5. **W, Sp, Su**

Drf053 Drafting/Industrial Graphics
2 class hrs and 6 lab hrs/wk, 4 cr.
An introduction to basic technical drafting as it relates to industrial manufacturing. Covers basic drafting, dimensioning and producing simple machine drawings using the Computer-Aided Drafting (CAD) system. Lab fee, $5. **F**

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. Lab 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. Lab fee, $5. **W**

Drf056 Architectural Drafting I
8 lab hrs/wk, 3 cr.
Basic architectural drafting techniques and methods. Covers architectural lettering, layout, arrangements, symbols, and conventional construction methods used in residential or light commercial buildings. **Prerequisite:** Drf051, Drf054 or consent of program coordinator. Lab fee, $5. **W, Sp**

Drf057 Architectural Drafting II
8 lab hrs/wk, 3 cr.
Basic architectural drafting techniques, symbols, and methods. Includes advance planning, detailing, design, and application of related resource materials. Working detail drawings of projects completed in Drf056. **Prerequisite:** Drf056. Lab fee, $5. **F**

Drf058 Manufacturing Graphics I
2 class hrs and 6 lab hrs/wk, 4 cr.
Continuation of Drf053. Covers design, drawings, and tolerancing using conventional drafting and CAD techniques. **Prerequisite:** Drf053 or consent of instructor. Lab fee, $5. **W**

Drf059 Print Reading
4 lab hrs/wk, 2 cr.
Discusses information from the assigned chapters of textbooks. Includes reading and interpreting drawings in the texts. Competency tests given on all assigned chapters and on prints of local architects. **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. Lab fee, $5. **W**

Drf062 Technical Illustration II
8 lab hrs/wk, 3 cr.
Continuation of Drf061. More complex pictorial presentations, exploded views, and charting methods. Use of a variety of media and techniques. **Prerequisite:** Drf061. Lab 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. Lab fee, $5. **Su**

Drf064 Manufacturing Graphics II
2 class hrs and 6 lab hrs/wk, 4 cr.
Continuation of Drf058. Includes auxiliary views, pattern development, isometric drawings, and an introduction to tool design. **Prerequisite:** Drf058 or consent of instructor. Lab fee, $5. **Sp**

Drf065 Drafting Room Computations
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 Mth053 and Drf051 or consent of program coordinator. **W, Sp, Su**

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 Mch072 or consent of program coordinator. Lab fee, $5. **W, Su**

Drf067 Tool Design Lab II
8 lab hrs/wk, 3 cr.
Continuation of Drf066, with advanced problems in jig and fixture design and detailing. Emphasizes applications of tooling materials, and components. **Prerequisite:** Drf066 or consent of program coordinator. Lab fee, $5. **Offered as needed.**

Drf068 Geometric Tolerancing
2 class hrs/wk, 2 cr.
A study of geometric tolerancing in product design, machine drafting and production. Stresses the close relationship between geometric tolerancing, gauging, and quality control. **Prerequisite:** Drf052 or consent of program coordinator. **Sp**

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. **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. **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, Mch072 or consent of program coordinator. **Sp**

Drf072 Machine Design Lab II
8 lab hrs/wk, 3 cr.
Designing and drafting of machines which require automatic control systems. Includes geometric tolerancing, welding structure design, power transmission design, and automated control systems. Emphasizes selection of stock components from manufacturers' catalogs. **Prerequisite:** Drf071, Drf086 or consent of program coordinator. **Sp**

Drf073 Computer-Aided Graphics
1 class hr and 3 lab hrs/wk, 2 cr.
How to use a 16-bit desktop computer, disk storage, plotter, printer, and graphics tablet and use a computer to aid in generating drawings. Covers interactive input of data to generate single view, multiview, isometric, electronic schematic, plat, logic symbol, and logic diagram drawings. Computer drawing aids include digitizing, mirroring, translating, automatic dimensioning, programmed symbols, grids, menu display on CRT, and editing techniques. **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 program coordinator. **F, Sp**

Drf076 Photogrammetry I
8 lab hrs/wk, 3 cr.
An introduction to mapping procedures and development of aerial photo interpretation skills. Includes planimetric map construction by standard methods and equipment. **Prerequisite:** Drf081 or consent of program coordinator. **W**

Drf077 Photogrammetry II
8 lab hrs/wk, 3 cr.
Continuation of aerial photo interpretation methods. Develops topographic map construction skills using anaglyphic mapping equipment. **Prerequisite:** Drf076. **Sp**

Drf078 CAD Programming I
2 class hrs and 3 lab hrs/wk, 3 cr.
Programming of geometric forms, development of interactive drawings capabilities, storage and retrieval of drawings and use of a graphics tablet. The interactive graphics program developed may be expanded upon and utilized in advanced drafting application. **Prerequisite:** Drf073, Mth053 or Mth082. **F**

Drf079 Introduction to Specifications
1 class hr/wk, 1 cr.
Development, composition, legal aspects, and writing of construction contract documents. Includes office practices, cash flow, and bidding processes. **Sp**

Drf081 Mapping and Platting
1 class hr and 7 lab hrs/wk, 3 cr.
An introduction to basic components of maps, subdivisions, and plats with particular emphasis on drafting skills and techniques. **Prerequisite:** Drf052. Lab 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, as assigned. **Prerequisite:** Drf052 or consent of program coordinator. Lab fee, $5. **W**

Drf083 Project Development
8 lab hrs/wk, 3 cr.
Development of plot plans, working drawings, and plotting field data. Includes laying out (staking) structures on plots of ground. **Prerequisite:** Drf054 and Drf082. **Sp**

Drf084 Land Division and Mapping
1 class hr and 5 lab hrs/wk, 3 cr.
An introduction to basic map components, principles of land subdivision, and basic photo interpretation using photogrammetric methods. Prerequisite: Fourth term standing or consent of program coordinator. **F**

Drf085 Project Graphics
4 lab hrs/wk, 2 cr.
Plot plans, working drawings, and plotting field data used in forestry and civil engineering. **Prerequisite:** Drf054 or consent of program coordinator. **W**

Drf086 Power Transmission Design
2 class hrs and 3 lab hrs/wk, 3 cr.
An introduction to mechanical devices used in industrial material handling 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:** Cvl050, Mth082 or consent of program coordinator. **W**

Drf087 Industrial Control Systems Design Lab
2 class and 3 lab hrs/wk, 3 cr.
An introduction to industrial control circuits, their use and design. Hydraulic, pneumatic, and electronic circuits will be designed to control direction, speed, and sequence of operations. Covers digital design, fluid components, Boolean algebra, combinational logic, sequential logic and electronic components. Applies theories by using an industrial robot and programmable controllers. **Prerequisite:** Drf086 or consent of program coordinator. **Sp**

Drf088 CAD Programming II
2 class hrs, 3 lab hrs/wk, 3 cr.
Continuation of Drf078. Incorporates methods for manipulating graphic shapes with interactive graphics developed in Drf078. Includes translation, mirror images, editing, matrix-based symbols, solid shapes, and solid transformation. **Prerequisite:** Drf078. Lab fee, $5. **W**

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:** Consent of program coordinator. Lab 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. Lab fee, $5. **F, Su**

Drf091 Basic Drafting for Electronics
4 lab hrs/wk, 2 cr.
Basic drafting techniques and standards. Includes use of materials and equipment, freehand lettering, orthographic projection, dimensioning practices, and graphic and symbolic drafting language. Stresses line work, lettering, and appearance of finished drawings. Lab fee, $5. **F, W, Sp, Su**

Drf092 CADD Electronics
2 class hrs and 3 lab hrs/wk, 3 cr.
Relates computer-aided drafting/design to electronics industries. Includes schematics, wiring diagrams, block and flow diagrams, PC board layout, I.C. applications, and graphic drawings. **Prerequisite:** Drf090, Drf091, Elt053 or consent of program coordinator. Lab fee, $5. **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:** Cvl050 and Mth082 or consent of program coordinator. **F**

Drf096 Architectural Drafting I
3 lab hrs/wk, 1 cr.
Solving of architectural design problems to meet assigned program requirements. **Offered as needed.**

Drf097 Architectural Drafting II
3 lab hrs/wk, 1 cr.
Basic architectural drafting techniques and methods. Covers architectural lettering, layout, arrangement, symbols, and conventional construction methods for residential or light commercial buildings. **Offered as needed.**

Drf098 Architectural Drafting III
3 lab hrs/wk, 1 cr.
Development of basic architectural drafting techniques, symbols and methods, advance planning, detailing, design and applied related resource materials. **Offered as needed.**

Drf099 Introduction to Drafting
3 lab hrs/wk, 1 cr.
Fundamentals of drafting. Use of drafting instruments, standard orthographic projection, layout procedures, ASA-approved lettering techniques. Geometric construction, selection of views, sectional and auxiliary views, revolutions, heads, and standard dimensioning practices. **Offered as needed.**

Drf280 Cooperative Work Experience
see Agr280.

Early Childhood Education, see also Family Living

ECE050 STEP—Systematic Training for Effective Parenting
3 class hrs/wk, 3 cr.
Deals with parent-child relationships. Students share experiences of common concern, identify typical responses to family problem situations, and practice specific child-training principles and techniques. **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 preschools, nursery schools, kindergartens, day care centers, Head Start, and parent cooperatives. **F, occasionally Sp**

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. **Prerequisite:** HDFS225 or consent of instructor. **W**

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 improvement 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. Lab fee, $5. **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. Lab 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. **Prerequisite:** Second year standing in early childhood education or consent of instructor. **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. **W**

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**

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. **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. **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. **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. **F, W, Sp**

ECE280 Cooperative Work Experience
see Agr280.

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**

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 non-readers. Covers problems of illiterates and implications, 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 Tutoring Practices for Paraprofessionals I
3 class hrs/wk, 3 cr.
First of two courses on basic tutoring theory and techniques in reading and the language arts. How to carry out specific prescriptions from teachers, tutor pupils individually and in small groups, assess pupils' progress, and maintain appropriate records. **W**

Ed124 Tutoring Practices for Paraprofessionals II
3 class hrs/wk, 3 cr.
Continuation of Ed123. Covers tutoring in mathematics, science, social science, art, music, and physical education. **Sp**

Ed125A, B, C Techniques for Tutoring Adults
1 class hr and 2-4 lab hrs/wk, 1-3 cr.
Individualized to teach required skills and provide practice necessary for becoming an effective tutor of adult learners. Includes reading, writing, spelling, mathematics, and English as a second language. **W**

Ed131 Teaching Techniques
3 class hrs/wk, 3 cr.
Instructional and evaluative techniques commonly used by educational aides. **F**

Ed132 Evaluation Techniques
3 class hrs/wk, 3 cr.
An introduction to methods and tools of measurement and evaluation. **Offered as needed.**

Ed133 Instructional Media and Equipment
3 class hrs/wk, 3 cr.
Purpose and use of instructional media and equipment commonly used in schools and functions of school media centers. **F, Sp**

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 Instructional Media Techniques
3 class hrs/wk, 3 cr.
Techniques, methods and processes in producing instructional media materials. **W, Su**

Ed199A Spanish Language Development for the Spanish Speaker
3 class hrs/wk, 3 cr.
First of three courses to help Spanish speaking teacher aides improve their 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.
Continuation of Ed201 to improve receptive and expressive skills. **Prerequisite:** Ed201. **F, W, Sp**

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. **Offered as needed.**

Ed206 American Sign Language—Intermediate I
3 class hrs/wk, 3 cr.
Continuation of Ed204. Emphasizes conversational signing through use of structured dialogues. **Prerequisite:** Ed201, Ed202, Ed204. **Offered as needed.**

Ed209A Practicum: Introductory Observation and Experience
3 class hrs/wk, 3 cr.
Introduction to role and work of educational aides. Provides experience in educational settings. **F, W, Sp, Su**

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. **F, 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 educational aide 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**

Ed251 Overview of Handicapping Conditions
3 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**

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 in bilingual and bicultural classroom. **W**

Ed259 Bilingual Methodology
3 class hrs/wk, 3 cr.
Continuation of Ed257 and Ed258. Examines the philosophy, rationale, and legal implications of bilingual/bicultural programs and the management and use of English and Spanish reading in a bilingual classroom. **Sp**

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 handicapped persons. **Prerequisite:** Ed251 or consent of instructor. **F, Su**

Ed268 Introduction to Classroom Management of the Mildly Handicapped
3 class hrs/wk, 3 cr.
Continuation of Ed267. Covers theories and techniques of working with mildly handicapped students and services and funding available for them. **Prerequisite:** Ed251 or consent of instructor. **W**

Ed269 Introduction to Classroom Management of the Severely Handicapped
3 class hrs/wk, 3 cr.
Continuation of Ed267 and Ed268. Covers theories and techniques of working with severely handicapped students and the services and funding available for them. **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.**

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

Elt048 Fundamentals of Electronics
2 class hrs and 2 lab hrs/wk, 3 cr.
Includes basic concepts used in electronics and the history of electronics. For students exploring a career in electronics or just interested in electronics. Lab fee, $9. **F, Sp, Su**

Elt049 Electronics Fundamentals
2 class and 2 lab hrs/wk, 3 cr.
A survey of electronics for students not majoring in electronics. Stresses theory and practical concepts in lab and lecture. **Prerequisite:** High school algebra. Lab fee, $9. **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 equivalent. Lab fee, $9. **F, W**

Elt051A Electronic Theory IA
3 class hrs and 5 lab hrs/wk, 5 cr.
First in a sequence covering electric circuit analysis and atomic theory applicable to passive circuits used in electronics. Stresses resistive circuit analysis. Emphasizes calculations, scientific notation, forumula manipulation, and use of the calculator in solving problems associated with electronics. **Prerequisite:** High school algebra or consent of instructor. Lab fee, $9. **F, W**

Elt052 Electronic Theory II
3 class hrs and 3 lab hrs/wk, 4 cr.
A continuation of Elt051. Focuses on reactive circuit analysis. **Prerequisite:** Elt051 and concurrent trigonometry course or consent of instructor. Lab fee, $9. **W, Sp**

Elt052A Electronics Theory IIA
3 class hrs and 5 lab hrs/wk, 5 cr.
Second in a sequence. Stresses reactive circuit analysis. Includes procedures for dimensional analysis, recognition and use of unit systems, preparation and use of graphs, vectors and logarithms/d B. Representative problems apply to the electronics curriculum. Lab fee, $9. **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. Lab fee $9. **F, Sp, Su**

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. Lab fee, $9. **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 uninjunction transistor, special diodes, thyristors (triacs, SCRs, etc.) and photoelectric devices. **Prerequisite:** Elt054 or consent of instructor. Lab fee, $9. **F**

Elt056 Applied Electronic Calculations I
3 class hrs and 2 lab hrs/wk, 4 cr.
Calculations which apply to electronic circuits. Includes methods of calculation and practical story problem solving. **Prerequisite:** Mth070 or equivalent. **F**

Elt057 Applied Electronic Calculations II
3 class hrs and 2 lab hrs/wk, 4 cr.
Continuation of Elt056. **Prerequisite:** Elt056 or equivalent. **W**

Elt058 Electronics Orientation
1 class and 2 lab hrs/wk, 2 cr.
Introduces the field of electronics including career opportunities, component identification, soldering, tool identification, safety, and hardware. Lab fee, $9. **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. Lab fee, $9. **F, Sp**

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. Lab fee, $9. **F, W**

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 and concurrent enrollment in Elt052 and Elt054. Lab fee, $9. **F, Sp**

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. Lab fee, $9. **F, W, Su**

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. Lab fee, $9. **W, Sp**

Elt070 Video Display Systems
3 class hrs and 6 lab hrs/wk, 5 cr.
Circuit analysis of video systems. Includes theories of operation and troubleshooting techniques. **Prerequisite:** Elt054 or consent of instructor. Lab fee, $9. **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. Lab fee, $9. **F, 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 related to industrial applications. **Prerequisite:** Elt071 or consent of instructor. Lab fee, $9. **W, 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:** Sixth term standing or consent of instructor. **F, Sp**

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. Lab fee, $9. **W, F**

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:** Elt076 or consent of instructor. **W, F**

Elt077 Telecommunications
2 class hrs and 3 lab hrs/wk, 3 cr.
Modern communications by air ways, land lines, and satellites. An update on transmission systems, teleprocessing, and data communications. **Prerequisite:** Elt076. Lab fee, $9. **F, Sp**

Elt078 Computer Programming
2 class hrs and 2 lab hrs/wk, 3 cr.
Applied programming using BASIC and Assembly languages related to control systems and industrial uses. **Prerequisite:** Mth081. **W**

Elt079 Introduction to Hydraulics/Pneumatics
2 class hrs and 3 lab hrs/wk, 3 cr.
Theory, operation, and design of basic hydraulic and pneumatic control systems and their components. **Prerequisite:** Mth081. Lab fee, $9. **W**

Elt080 Instrumentation and Measurement Systems
2 class hrs and 3 lab hrs/wk, 3 cr.
Devices used to measure physical quantities, including humidity, flow, pH, and biochemical oxygen demand. Instrumentation systems as they apply to process control. **Prerequisite:** Second year of electronics program. Lab fee, $9. **Sp**

Elt081 Logical Troubleshooting
3 class hrs and 3 lab hrs/wk, 4 cr.
A logical approach to troubleshooting emphasizing approaching, finding, and solving problems, and using servicing equipment. **Prerequisite:** Second year of electronics program. Lab fee, $9. **Sp**

Elt084 Robotics and Servos
2 class hrs and 3 lab hrs/wk, 3 cr.
Explains the theories of operation of open and closed loop control systems. Discusses applications of these systems and reasons for selecting a specific system. Laboratory work includes testing and evaluating these control systems and the devices used to implement them. **Prerequisite:** Mth082 or equivalent. Lab fee, $9. **Sp**

Elt086 Mechanical Devices
2 class hrs and 3 lab hrs/wk, 3 cr.
An introduction to mechanical devices and rotational actuators used in electromechanical systems. Covers theory of rotational actuators, belt and chain drives, gears, bearings, and clutches. Lab sessions provide experience in integrating rotational actuators and mechanical devices into drive and power train systems. **Prerequisite:** Mth082. Lab fee, $9. **Sp**

Elt087 Electromechanical Devices
3 class hrs and 3 lab hrs/wk, 4 cr.
Introduces electromechanical sensing and actuating devices. Combines these devices with units studied in Elt086, into basic control systems. Studies the effects of alignment, loading, and system response. **Prerequisite:** Elt086. Lab fee, $9. **W**

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. Lab fee, $7. **F, Su**

Elt099 Advanced Microcomputer Applications
2 class hrs and 4 lab hrs/wk, 4 cr.
Covers interfacing of microcomputers, both software and hardware. Students must have a working knowledge of logic circuits and machine language programming before enrolling. **Prerequisite:** Elt068 and a high level programming language. Lab fee, $9. **F, W, Sp**

Elt280 Cooperative Work Experience
see Agr280.

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, firefighters, emergency rescuers, police, mountain rescuers, and industrial emergency care persons. **Prerequisites:** 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. Meets current state requirements. Lab fee, $10. **F, W, Sp**

EMT051 EMT Basic 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. Lab 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. Lab 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. Lab 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**

EMT060 Emergency Medical Technician III, Part A
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. **W**

EMT061 Emergency Medical Technician III, Part B
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. Lab fee, $10. **Sp**

EMT062 Emergency Medical Technician III, Part C
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. Lab fee, $10. **F**

EMT063 Emergency Medical Technician III, Part D
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. Lab fee, $10. **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 Lab fee, $10. **Sp**

EMT068 Extrication for EMTsements.
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 certification. **Prerequisite:** Current EMT I certification or consent of instructor. **W, Sp, Su**

EMT069 Rescue Fundamentals
2 class hrs and 2 lab hrs/wk, 3 cr.
Elementary procedures of rescue practices, systems, components, support and control of rescue operations including ladder procedures, rope use and knots, nets, lines, and basic rescue tools. Practicum includes using rescue items and integrating basic rescue principles. **W**

EMT070 Emergency Response Driving
1 class hr and 1 lab hr/wk, 1 cr.
Defensive driving tactics, evasive maneuvers, traffic hazards, weather, road conditions, regulations, laws and procedures for safe operation of an emergency response vehicle, vehicle selection and maintenance, and route planning. Lab 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 Services Systems
4 class hrs/wk, 4 cr.
An overview of emergency medical services systems and federal, state, and local emergency services organizations. Includes history, trends, future expectations, legislation, funding mechanisms, controls, and regulations. Personnel involvement in operations and management of ambulance services. **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.

EMT280 Cooperative Work Experience
see Agr280.

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
1 class hr and 2 lab hrs/wk, 2 cr.
To acquaint engineering students with the use and the operation of the apple computer for solutions to anayltical problems. Fundamental ORTRAN programs will be developed and used by students in the computer laboratory. **Prerequisite:** GE101. **W**

GE103 Engineering Computation II
1 class hr and 2 lab hrs/wk, 2 cr.
Extended applications of computer programming to solve problems in major engineering disciplines. Students develop and use Fortran programs. **Prerequisite:** GE102 or another Fortran programming course. **Sp**

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. Lab fee, $5. **Offered as needed.**

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. **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**

ENGR221 Electrical Circuit Fundamentals
3 class hrs and 2 lab hrs/wk, 4 cr.
Studies electrical circuit theory including voltage and current relationships and fundamental methods of circuit analysis. Includes electrical circuit parameters: resistance, inductance and capacitance; steady-state circuits and systems. **Prerequisite:** Mth201. Lab fee, $5. **W**

ENGR222 Electrical Control Fundamentals
3 class hrs and 2 lab hrs/wk, 4 cr.
Studies transformers, electronic amplifiers, and linear control systems and transient and steady-state analysis of circuits and systems. **Prerequisite:** ENGR221. Lab fee, $5. **Sp**

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. **F, W, 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**

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. **W, Sp**

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. **Sp**

Eng107, 108, 109 Introduction to World Literature
3 class hrs/wk, 3 cr.
A sequence on outstanding works of ancient, medieval, and modern literature that have had permanent and wide appeal outside their own countries. **Eng107: F; 108:W; 109:Sp**

Eng116 College Vocabulary
3 class hrs/wk, 3 cr.
A study of affixes, root words, derived forms, loan words, etymologies, and connotations. Emphasizes correct pronunciation. Introduces the history of the English language. **Prerequisite:** score of ninth-grade-level vocabulary or above on diagnostic test. **Offered as needed.**

Eng161 Introduction to Literature of the Technological Age
3 class hrs/wk, 3 cr.
An introduction to essays, short stories, novels, poems, and plays through discussion and individual study. Includes nonfiction works coupled with modern novels. Emphasizes how events affecting characters in literature relate to modern technology. **Sp**

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 of them. Eng201, tragedies; Eng202, comedies; and Eng203, histories and late romances. **Eng 201: F; 202: W; 203: 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 Paine, Washington Irving, Nathaniel Hawthorne, Edgar Allan Poe, Anne Bradstreet, Jonathan Edwards, Thomas 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 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**

Eng261 Science Fiction
3 class hrs/wk, 3 cr.
Emphasizes the appreciation of ideas in science fiction: technology, social engineering, fantasy and the future, as well as artistic uses of setting, symbol, and characters. **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.**

English as a Non-Native Language

ENL010 English as a Second Language—Speaking
3 class hrs and 2 lab hrs/wk, 3 cr.
Practice in speaking and comprehending essential English language structures to prepare second language learners for advanced work. Recommended that students enroll in ENL015 concurrently. **Prerequisite:** STEL test. **F, W, Sp**

ENL015 English as a Second Language—Writing
3 class hrs and 2 lab hrs/wk, 3 cr.
Writing basic and essential English language structures to prepare second language students for advanced work. Recommended that students enroll in ENL010 concurrently. **Prerequisite:** STEL test. **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 comprehension of spoken English, accent improvement, and oral reports. **Prerequisite:** STEL test. **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 structures, writing paragraphs, and increasing vocabulary. **Prerequisite:** STEL test. **F, W**

ENL112 English as a Non-Native Language III
3 class hrs and 2 lab hrs/wk, 4 cr.
For advanced-level students whose first language is not English. Emphasizes different organizational methods for preparing written essays. Preparation for Wr121. **Prerequisite:** STEL test. **W, 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 Agr280.

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. In-class film viewing and discussion. How to evaluate a variety of stylistic approaches. Lab fee, $8. **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 one or two directors in an effort to understand and critique individual films as the works of artists, especially within the context of a body of work expressing a particular and unique view of the world. Lab fee, $8. **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. Lab fee, $8. **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. **F, W, Sp**

FrP054 Fire Service Hydraulics
3 class hrs and 2 lab hrs/wk, 4 cr.
Hydraulic laws and formulas as applied to fire service. Includes a review of basic math and application of formulas and mental calculations to hydraulic problems. **Prerequisite:** Mth051 or consent of instructor. **W**

FrP055 Elementary Science/Firefighters
2 class hrs and 2 lab hrs/wk, 3 cr.
Practical general science. Covers matter, laws of motion and force, work and machines, mechanics of liquids, principles of chemistry, combustion and heat, magnets and magnetism, electricity, atomic energy and radiation. Laboratory time provides help in clarifying the principles and procedures covered in class. Lab fee, $4. **W**

FrP056 Fire Service Rescue Practices
2 class hrs and 5 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. **Sp**

FrP057 Fire Science
2 class hrs and 2 lab hrs/wk, 3 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. Lab fee, $4. **Sp**

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." **F**

FrP061, 062, 063. See FrP05l, etc.

FrP064 Hazardous Materials I
3 class hrs/wk, 3 cr.
The chemistry of fires; hazards of flammable materials and what to do about them. Includes flammable liquids, pressurized gases, liquified gases, cryogenics, flammable solids, combustible metals, plastics, and oxidizing aguctor. **F**

FrP065 Hazardous Materials II055 or consent of instr 3 class hrs/wk, 3 cr.
Handling of emergencies involving explosive and unstable materials, rocket propellants, water reactive materials, poisons, corrosives, combustion products, and radioactive materials. **Prerequisite:** FrP064 or consent of instructor. **W**

FrP066 Building Construction for Fire Suppression
3 class hrs/wk, 3 cr.
Fire problems inherent in structural elements of buildings. How knowledge gathered through interpretation of blueprints and inspection of various building types provides a basis for applying effective extinguishment practices, with adequate safeguards for personnel. **W**

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. **Sp**

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. **W**

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. **W**

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. **Sp**

FrP075 Aircraft Crash/Fire Rescue
1 class hr and 3 lab hrs/for 4 wks, 1 cr.
Pre-planning activities for on-airport and off-port 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.**

FrP078 Introduction to Training Programs
10 class hrs and 6 lab hrs, 1 cr.
Purposes of drills and training programs, planning training schedules and drill activities, records and reports, evaluation methods, ISO training requirements and records, motivating personnel to train. **Prerequisite:** Completion of Fire Service Instructor Training or three years full-time experience. **Offered as needed.**

FrP079 Natural Cover Fire Protection
3 class hrs and 2 lab hrs/wk, 4 cr.
Studies causes and prevention of fires in fields, brush, and forest. An analysis of community resources for use under extreme fire conditions. A study of fire weather and map reading, tactics and strategy of fighting fires involving grain fields, brush and timber, often in populated areas. **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. Lab 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.**

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 Agr280.

Foods/Nutrition

FN225 Nutrition
4 class hrs/wk, 4 cr.
The relationship of food and its components to health. Considers current national and international concerns. **F, W, Sp**

Food Service

FS050 Quantity Foods Production I
3 class hrs and 20 lab hrs/wk, 8 cr.
Supervised preparation of quantity foods in a commercial kitchen. Includes preparation of various breakfast items, salads, entrees, stocks, soups, sauces, bakery, desserts, and short order cooking by standardized recipes following professional preparation techniques. Includes handling of tools, equipment, and materials. Lab fee, $15. **F**

FS051 Quantity Foods Production II
3 class hrs and 20 lab hrs/wk, 8 cr.
Preparation of quantity foods in an operating kitchen under professional guidance. Assigned projects in international cuisine and service. **Prerequisite:** FS050. Lab fee, $15. **W**

FS052 Quantity Foods Production III
3 class hrs and 20 lab hrs/wk, 8 cr.
Preparation of quantity foods in an operating kitchen under professional guidance. Includes classical buffet and garde-manger cookery. **Prerequisite:** FS051. Lab fee, $15. **Sp**

FS055 Dining Room Operation I
1 class hr and 20 lab hrs/term, 2 cr.
Current methods and techniques used in restaurants. Discusses appearance, attitude, efficiency, and customer relations. **F**

FS056 Dining Room Operations II
1 class hr and 2 lab hrs/wk, 2 cr.
Continuation of FS055. Includes American, French, and Russian service techniques; importance of guest checks; methods of payment; IRS tipping laws and regulations; and the system for reporting tips. **W**

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 USHA 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 Food Cost Analysis
2 class hrs/wk, 2 cr.
Basic methods of computing food costs, including costs of standard recipes, yield of raw food, standard portions, analysis of daily food costs, and the steward's report. **Prerequisite:** FS064 or equivalent. **Sp**

FS070 Purchasing and Store 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 Hospitality Beverages
3 class hrs/wk, 3 cr.
Introduction and survey of wine, beer, and distilled spirits, emphasizing historical origin, evolution, production techniques, geographical and stylistic differences. Covers economic values in the hospitality industry and problems of control and abuse. On-site visitations to brewery, wholesale operation, and restaurant. **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 Food Service Management
3 class hrs/wk, 3 cr.
Methods and techniques for effective, efficient restaurant operations. Includes methods and procedures of personnel selection, training, motivation, communications, labor relations, work systems, financial systems, licensing regulations, customer relations, and prognosis of business. **W**

FS077 Food Service Maintenance
3 class hrs/wk, 3 cr.
Organization of maintenance and engineering of food service operations. Includes discussion of energy supplies, equipment, preparation, service, sanitation, employee and public safety, preventative care and service, and influence of regulations and service costs. **W**

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. **Sp**

FS280 Cooperative Work Experience
see Agr280.

Foreign Languages

CHN101 First Year Chinese, Term I
4 class hrs/wk, 4 cr.
Introduction to spoken and written Mandarin Chinese. **F**

CHN102 First Year Chinese, Term II
4 class hrs/wk, 4 cr.
Introduces Chinese characters. Emphasizes speaking and reading with drills in grammatical patterns and illustrative sentences. Stresses vocabulary building. **Prerequisite:** CHN101 or consent of instructor. **W**

CHN103 First Year Chinese, Term III
4 class hrs/wk, 4 cr.
A continuation of the study of Mandarin Chinese providing exposure to conversational Chinese and written Chinese characters. **Prerequisite:** CHN102. **Sp**

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: FR102 or one year of high school French or consent of instructor. **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 consent of instructor. FR203: FR202 or consent of instructor. **Fr201:F; 202:W; 203:Sp**

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. **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: One year of college German or two years of high school German or consent of instructor. GER202: GER201 or consent of instructor. GER203: GER202 or consent of instructor. **GER201:F; 202:W; 203:Sp**

JPN101, 102, 103 First Year Japanese, Terms I, II, III
4 class hrs/wk, 4 cr.
Pronunciation, conversation, and grammar for beginners. **Prerequisite:** JPN102: JPN101 or consent of instructor. JPN103: JPN102 or one year high school Japanese or consent of instructor. **JPN101:F; 102:W; 103:Sp**

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. **NOR101:F; 102:W; 103:Sp**

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. **Prerequisite:** SPAN067: SPAN066 or consent of instructor. SPAN068:SPAN067 or consent of instructor. **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 consent of instructor. SPAN103: SPAN102 or one year of high school Spanish or consent of instructor. **SPAN101:F; 102:W; 103: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: SPAN201 or consent of instructor. SPAN203: SPAN202 or consent of instructor. **SPAN201:F; 202:W; 203: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, W**

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, peevees, wedges, mauls, and crosscut and chain saws. Includes practical work for cooperating individuals and agencies. Discussion and practice of foremanship. Lab fee, $5. **F, Sp**

For053 Introduction to Engineering Calculators
3 lab hrs/wk, 1 cr.
Hands-on experience using a variety of calculators to solve forestry and surveying problems. **F, W, Sp**

For054 Introduction to Forestry
3 hrs/wk and 9 lab hrs/wk, 1 cr.
An overview of careers offered in forestry occupations. Students sample a variety of field and laboratory exercises representative of training offered in this program. **Su**

For056 Industrial Accident Prevention
3 class hrs/wk, 3 cr.
An extensive study of accident causes and costs to employer and employee. Combines reading, lecture, and Workers' Compensation Board films on accident prevention and safety awareness from the standpoint of employer and employee, examining the role of each in promoting safe work practices. **F, Sp**

For061 Tree Identification I
1 class hr and 2 lab hrs/wk, 2 cr.
A review of basic botany related to tree identification. Includes taxonomy, flower, and plant parts emphasizing fruit, bark, and twig characteristics. Deals with the common commercial coniferous species of the Pacific Northwest especially native Oregon species. Practices use of the dichotomous key, and studies scientific names and the economic importance of each tree. **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. Lab 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. Lab fee, $5. **Sp**

For071 Natural Cover Fire Protection
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**

For076 Forest Mensuration I
3 class hrs and 4 lab hrs/wk, 4 cr.
First of two courses. Care and use of forestry instruments, measurement and appraisal of trees, stands and forest sites. Field labs emphasize mapping, fixed-plot and variable-plot cruising. **Prerequisite:** For061, Mth052 (or concurrent enrollment), and Cvl060 (or concurrent enrollment). Lab fee $5. **Sp**

For077 Forest Mensuration II
3 class hrs and 4 lab hrs/wk, 4 cr.
Second of two courses. Reviews For076 and 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. Lab fee, $5. **F**

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. Lab 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. Lab 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.
The basic techniques of supervision. Covers leadership, organization, communications, morale, job analysis, job training, accident prevention, planning time studies, cost analysis, etc. **Sp**

For091 Silviculture
3 class hrs/wk, 3 cr.
Tree habits, forest ecology, and silvicultural practices in the management of Pacific Northwest forest lands and timber. **Prerequisite:** For051, For061, For062, For067 and For076. **W**

For092 Wood Industry Economics
3 class hrs/wk, 3 cr.
Economic fundamentals unique to forest land and products management. Emphasizes long term and unique characteristics of the resources and conversion methods and goals to supply the nation's consumers. Notes exports, imports, and the pressures for varied uses of the land. **Prerequisite:** Ec115 and Mth052 are recommended. **W**

For093 Forestry Seminar
1 class hr/wk, 1 cr.
A continuing discussion of the essentials necessary for successful employment in a forestry situation. Includes resumes, interviews, working conditions, safety, evaluations, and review of technical subjects. **Prerequisite:** Second year standing. **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, including locations in field, grades, profiles, drainage, curves, cross-sections, earthwork computations, slope-staking, and referencing. **Prerequisite:** Mth053, Cvl060, Cvl061. Lab fee, $5. **Sp**

For280 Cooperative Work Experience, see Agr280.

General Engineering, see Engineering

General Sciences

GS104 Physical Science
3 class hrs and 2 lab hrs/wk, 4 cr.
An integrated study of forces and motions in the physical world.Lab fee, $4. **F**

GS105 Physical Science
3 class hrs and 2 lab hrs/wk, 4 cr.
A broad, nonquantitative, descriptive survey of chemical principles which are relevant to everyday life. Lab fee, $4. **W**

GS106 Physical Science
3 class hrs and 2 lab hrs/wk, 4 cr.
Introduces various branches of earth sciences. Includes basic terminology, fundamental processes and respective interrelations. Lab fee, $4. **Sp**

GS119 Solar Energy
3 class hrs/wk, 3 cr.
An introduction to solar radiation, flat plate collectors, active and passive solar heating systems, solar thermal electric generating schemes, and photovoltaic devices. **Offered as needed.**

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/wk, 3 cr.
An introduction to the solar system which includes an examination of the earth and moon, planets, and comets. **Prerequisite:** Mth070 or equivalent recommended. **F**

GS208 Astronomy
3 class hrs/wk, 3 cr.
The nature of stars. Includes stellar classification, evolution, techniques of observation, black holes, and neutron stars. **Prerequisite:** Mth070 recommended. **W**

GS209 Astronomy
3 class hrs/wk, 3 cr.
A descriptive treatment of stellar associations. Includes star clusters, gas clouds, the Milky Way and other galaxies. Discusses theories on the origin and evolution of the universe. **Prerequisite:** Mth070 recommended. **Sp**

GS210, 211, 212 Astronomy Lab
2 class hrs/wk, 1 cr.
Each course requires an exercise in practical application of observational or theoretical astronomy. Each lab illustrates some aspect of the lecture to aid students in their understanding of astronomy. GS210: Solve laboratory problems that explore physical laws related to planets and minor members of the solar system. GS211: Solve laboratory problems related to stars and the sun, their dynamics and physical appearance. GS212: Solve laboratory problems related to the Milky Way and other galaxies. **Prerequisite:** Concurrent enrollment in, or completion of, GS207, 208, 209. **GS210: F, 211: W, 212: Sp**

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.**

Geology

G101 Geology of Western Oregon
3 class hrs and 2 lab hrs/wk, 4 cr.
An introduction to evolution of the western Oregon landscape. Lab fee, $4. **F**

G102 Oregon Geology
3 class hrs and 2 lab hrs/wk, 4 cr.
An introduction to evaluation of Oregon's earth and mineral resources. Requires only elementary knowledge of basic earth science concepts. Lab fee, $4. **W**

G103 Geology Eastern Oregon
3 class hrs and 2 lab hrs/wk, 4 cr.
The exceptional nature of the geology of eastern Oregon. Discusses how physical and temporal conditions have affected the region's geology. Lab fee, $4. **Sp**

G199 Geological Field Studies
1 class hr and 4 lab hrs/wk, 3 cr.
An introductory weekend field trip. Includes a planning session and a follow-up discussion seminar. Students write a geological descriptive report (roadlog) and a topical term paper. Lab fee, $2. **Offered as needed.**

G199A Geological Field Studies
1 class hr and 2 lab hrs/wk, 2 cr.
Introductory weekend field trip with a mandatory planning session. Students write a geological descriptive report (roadlog). Lab fee, $2. **Offered as needed.**

G199B Geological Field Studies
2 lab hrs/wk, 1 cr.
Introductory class with weekend field trip and mandatory planning session. Lab fee, $2. **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. Lab fee, $4. **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. Lab fee, $4. **W**

G203 Geology
3 class hrs and 3 lab hrs/wk, 4 cr.
Earth's history interpreted through geophysics and plate tectonics. Couples paleontologic laboratory work with field trips. Lab fee, $4. **Sp**

G208 Volcanoes
3 class hrs/wk, 3 cr.
A comprehensive study of volcanic phenomena. **Offered as needed.**

Health Care Support Services, see Allied Health, Medical Assisting

Health Education, see also Allied Health

HE199A Alcohol and Other Drugs
3 class hrs/wk 3 cr.
Presentation of basic information concerning alcohol and other drugs. Information focuses on "wellness" approach to drug use and abuse. **F, W, Sp, Su**

HE199B Personal Health and Human Sexuality
3 class hrs/wk, 3 cr.
Personal health attitudes and behavior in relation to sexuality. Covers environmental conditioning and its relationship to identity, self-esteem, love, role definition, and physiology in relationship to environmental conditioning and human sexual response. **F, W, Sp, Su**

HE199D Consumer's Guide to Health
3 class hrs/wk, 3 cr.
A look at health resources available to consumers: doctors, nurses, hospitals, drugs, insurance, welfare, the law, alternatives, psychologists. How to choose and use them and stay healthy when possible. **Sp**

HE199E Nutrition, Weight Control, and Physical Fitness
3 class hrs/wk, 3 cr.
Methods of maintaining or improving fitness by considering diets and dieting, obsesity, types of exercise, physical testing, cardiovascular fitness, and nutritional concepts. **F, W, Sp, Su**

HE199F, G, H Health and Wholeness
1-3 class hrs/wk, 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. Lab fee, $9. **F, W, Sp**

HE250 Personal Health
3 class hrs/wk, 3 cr.
Survey of current health concerns facing Americans today. An analysis of causes, effects, and possible solutions to health problems. **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 1 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. Lab Fee, $2. **F, W, Sp, Su**

HE260 Emergency Medical Care—First Response
2 class hrs and 2 lab hrs/wk, 3 cr.
A 40-hour training program specifically for law enforcement officers who are usually the first persons at the scene of traffic accidents. Covers life-threatening emergencies including airway care, pulmonary and cardiopulmonary resuscitation, control of bleeding, and prevention and control of shock. Emphasizes practical aspects of emergency care required at an accident scene, emergency childbirth, poisons and drugs, burns, and exposure to heat and cold. Lab fee, $2. **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. Lab fee, $2. **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. **Prerequisite:** Valid CPR card. Lab 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**

History

Hst110, 111, 112 History of World Civilization
3 class hrs/wk, 3 cr.
Human cultural, social, economic, and political development of world civilizations. Hst110—from ancient times to 1500 A.D.; Hst111—from 1500 to 1914; Hst112—the twentieth century. **Hst110: F, W; 111: W, Sp; 112: Sp**

Hst157 History of the Middle East and Africa
3 class hrs/wk, 3 cr.
A survey of cultural, social, economic, and political development in the Middle East and Africa. **Offered as needed.**

Hst158 History of Latin America
3 class hrs/wk, 3 cr.
A survey of cultural, social, economic, and political development in Latin America. **Offered as needed.**

Hst159 History of Asia
3 class hrs/wk, 3 cr.
A survey of cultural, social, economic, and political development in Asia. **Offered as needed.**

Hst201, 202, 203 History of the United States
3 class hrs/wk, 3 cr.
A study of the cultural, economic, social, and political development of the United States. Hst201—1492 to 1865; Hst202—1865 to 1920; Hst203—1920 to the present. **Hst201: F, W, 202: W, Sp; 203: Sp**

Hst210 Futurism: Alternatives for the Future
3 class hrs/wk, 3 cr.
Examines trends of the past and present. Projects the future as a "zone of potentiality." **Offered as needed.**

Hst257 Introduction to Ethnic History—American Indian
3 class hrs/wk, 3 cr.
Native Americans as a minority group, 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.**

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 Agr280.

Hotel and Restaurant Management

HRM105 Introduction to Hotel and Restaurant Management
3 class hrs/wk, 3 cr.
Covers various aspects of hotel, food service, and club management and operation. **F**

HRM106 Hotel and Restaurant Organization
3 class hrs/wk, 3 cr.
An analysis of advanced organization and management theories of hotel, and restaurant, club, and travel systems. Emphasizes marketing and organization. Covers housekeeping functions, conventions, banquets, room sales, food and beverage departments. **Prerequisite:** HRM105. **W**

Human Development and Family Studies

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:** ECE061 and ECE062 or consent of instructor. **Sp**

HDFS230 Single Parent/ Step-parent Experience
3 class hrs/wk, 3 cr.
A practical, functional approach for families with single parents and/or step-parents. **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 constructive communication techniques. **W**

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.**

HDFS291 Parenting and Preschool
1 class hr/wk, 1 cr.
Parents participate in educational activities directed by staff members of the child development center on the Salem campus. Parents select from a wide variety of activities those which meet their needs. **Prerequisite:** Parent must have a child enrolled in the child development center. **F, W, Sp**

Human Resource

HR101 Alcohol Use, Misuse, and Addiction
3 class hrs/wk, 3 cr.
Presents basic information concerning alcohol, particularly in relation to physiological effects of alcohol on the human body. Information focuses on a "holistic" approach to alcohol problems. **F, W, Sp**

HR150 Self-awareness and Interpersonal Skills
3 class hrs/wk, 3 cr.
An introduction to self-awareness, communication skills, and interpersonal skills. Primarily for human service trainees. Features individual and small group exercises to help students improve skills in communication, values clarification, problem solving, decision making, and stress management. A prerequisite for most human resource courses and practicums. **F, W, Sp**

HR151 Human Potential Seminar
3 class hrs/wk, 3 cr.
An advanced course in personal growth and empowerment. Students explore and experience inner-directedness, personal respon-

sibility, and risk-taking. Covers value systems which enhance personal growth and empowerment, and strategies to overcome avoidance and resistance. **Prerequisite:** consent of instructor. **F, W, Sp**

HR152 Relaxation Techniques
1 class hr/wk, 1 cr.
An introduction to relaxation techniques. Includes progressive relaxation, breathing, and mediation techniques, guided imagery, autogenics, and biofeedback. **F, W, Sp**

HR153 Introduction to Residential Youth Care
3 class hrs/wk, 3 cr.
Training for child care workers, foster parents, and persons interested in working in residential child-care facilities. Includes developmental planning, developmental needs, separation, the cottage, discipline, groups, and job settings. **Offered as needed.**

HR154 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**

HR155 Interviewing Theory and Techniques
2 class hrs and 2 lab hrs/wk, 3 cr.
Theoretical background and specific interviewing techniques. Practice in interviewing situations and peer and professional observation and feedback. **W, Sp**

HR167 Gerontology
3 class hrs/wk, 3 cr.
Physical, mental, and cultural dynamics of aging as a continuation of human growth. An orientation of involvement of the aging with life rather than preparation for death. **W**

HR170 Introduction to Field Experience
3 class hrs/wk, 3 cr.
Background and specific skills for researching, obtaining, and succeeding in field placements. Required for first term of Human Resource program and a prerequisite for Human Resource practicum courses HR201-296. **Prerequisite:** Admission to Human Resource program. **F, W, Sp**

HR199A Issues in Human Resources Technology
3 class hrs/wk, 3 cr.
In-depth study of current problems and topics in human services. **Offered as needed.**

HR199H Counseling the Older Adult
3 class hrs/wk, 3 cr.
Communication, counseling, and basic information regarding older adults. For human services workers who provide and plan to provide services for the elderly. **Prerequisite:** HR167. **Sp, offered as needed.**

HR201 Family Alcoholism
3 class hrs/wk, 3 cr.
Presents information and research on how alcoholism and chemical dependency affects all family members. Includes in-depth looks at family dynamics, a family-oriented approach to recovery, and knowledge of community resources which support family recovery. **Prerequisite:** HR101. Alcohol Use, Misuse, and Addiction or consent of instructor. **W, Sp**

HR202 Counseling the Chemically Dependent Person
3 class hrs/wk, 3 cr.
Provides basic information and experience in counseling chemically dependent clients. Includes group and individual skills, client file management, Johnson intervention and aftercare. **Prerequisite:** HR101 or consent of instructor. **Sp**

HR210 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. **F**

HR211 Clinical Applications of Biofeedback
2.5 Class hrs and 1 lab hr/wk, 3 cr.
Introduction to clinical applications of biofeedback to psychosomatic disorders and general stress management. Covers common clinical applications of a temperature trainer, electromyograph, electrodermal unit, and the electroencephalograph. **Prerequisite:** HR210. **W**

HR212 Biofeedback and Control of Hypertension
2.5 class hrs/wk, .5 lab hrs/wk, 3 cr.
An introduction to psychophysiologic self-regulation for control of essential hypertension. Lectures and biofeedback training for individuals wanting to reduce high blood pressure. **F, Sp**

HR248A-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.**

HR260 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. **W, Sp**

HR265 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, W**

HR266 Intervention Strategies II
3 class hrs/wk, 3 cr.
A continuation of HR265. Includes theory and practice in client centered, cognitive, and holistic intervention strategies. Rationale for and techniques used in managing stress. **Prerequisite:** HR155, HR265. **W, Sp**

HR267 Intervention Strategies III
3 class hrs/wk, 3 cr.
A continuation of HR265 and HR266. Includes theory and practice in family, group, and community intervention strategies. **Prerequisite:** HR155, HR265, HR266. **Sp**

HR291-296 Practicum: Human Resources Technology
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:** HR170. **F, W, Sp (Su as needed)**

Humanities

Hum100 Introduction to the Humanities
3 class hrs/wk, 3 cr.
Helps students become more keenly aware of values, self, and society. Assists in helping students develop critical skills that will be useful in making decisions that have a positive effect on self and society. **F, W, Sp**

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**

Legal

LA101 Introduction to Law and Law Ethics
3 class hrs/wk, 3 cr.
Covers structure of the court system, operation of a law office, and law ethics. Includes an overview of various substantive law fields. **Offered as needed.**

LA104 Introduction to Legal Research and Library Use
2 class hrs and 2 lab hrs/wk, 3 cr.
Covers organization and contents of a law library used for legal research. Reviews sources of the law and the judicial system. Includes procedures used to gather materials used by an attorney for case briefing, shepardizing, and digesting. **Prerequisite:** BA226, OA074 or equivalent. **Offered as needed.**

LA214 Legal Interviews
3 class hrs/wk, 3 cr.
Principles and techniques used in interviewing clients to obtain information needed in specific legal situations. Students conduct simulated interviews in a legal setting. **Prerequisite:** OA074 and LA101 or equivalent. **Sp**

Literature, see English

Machine Technology

Mch050 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. Lab fee, $5. **Su**

Mch053 Manufacturing Processes
2 class hrs and 3 lab hrs/wk, 3 cr.
Provides basic knowledge of various manufacturing materials and methods in cold working processes. Covers various types of machine tools, tooling, measuring, and inspection procedures. Lab fee, $8. **W**

Mch056 Machine Shop 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. Lab fee, $10. **F, W, Sp**

Mch057 Machine Shop II
2 class hrs and 3 lab hrs/wk, 3 cr.
Continuation of Mch056. Includes machine operations and setups. Prerequisite: Mch056 or consent of program coordinator. Lab fee, $10. **F, W, Sp**

Mch058 Machine Shop Operations I
9 lab hrs/wk, 3 cr.
A basic lab course for developing skills in setups, procedures, and operations of the following machine shop tools and processes: bench work, hand tools, measuring tools, layout tools, arbor and shop presses, keyway broaching, materials and mechanical fasteners, drilling machines, power saws, bench and pedestal grinders. **Prerequisite:** Current enrollment in Mch061 or approval of program coordinator. Lab fee, $15. **F, W, Sp**

Mch058A Machine Shop Operations II
9 lab hrs/wk, 3 cr.
A basic lab course for developing skills in setups, procedures, and operations of engine lathes. **Prerequisite:** Current enrollment in Mch067 or approval of program coordinator. Lab fee, $15. **F, W, Sp**

Mch058B Machine Shop Operations III
9 lab hrs/wk, 3 cr.
Basic skills in setup, procedures, and operations of milling and grinding machines. **Prerequisite:** Current enrollment in Mch071 or approval of program coordinator. Lab fee, $15. **F, W, Sp**

Mch060 Introduction to Machine Mechanics—Special Services
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. Lab fee, $5. **Su**

Mch061 Machine Tool Processes I
3 class hrs and 9 lab hrs/wk, 6 cr.
Basic machine shop operations, introducing principles and operations of basic machine tools and procedures. Includes bench work, measuring tools, layout tools, hand tools, arbor and shop presses, keyway broaching, materials and mechanical fasteners, drilling machines, power saws, bench and pedestal grinders. Lab fee, $15. **F, W, Sp**

Mch063 Manufacturing, Print Reading, and Sketching
3 class hrs and 9 lab hrs/wk, 6 cr.
Instruction and skill development in blueprint reading, sketching, basic drawing techniques, and geometric constructions. **F**

Mch067 Machine Tool Processes II
3 class hrs and 9 lab hrs/wk, 6 cr.
Basic engine lathe processes. Includes principles, setups, and operations of engine lathes. Lab fee, $15. **F**

Mch070 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. Lab fee, $5. **Su**

Mch071 Machine Tool Processes III
3 class hrs and 9 lab hrs/wk, 6 cr.
Basic machine tool processes including principles, setup, and operations of milling and grinding machines. Lab fee, $15. **Sp**

Mch072 Manufacturing Materials and Processes
3 class hrs and 6 lab hrs/wk, 5 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-metalic materials. Production procedures of parts from manufacturing through heat treatment, grinding, finishing, and assembly. Includes demonstrations of finishing processes such as hard surfacing, chrome platting, and metal spraying. **Prerequisite:** Mch061, Mch067, and Mch071 or consent of program coordinator. Lab fee, $15. **F, W, Sp**

Mch073 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. **F**

Mch076 Machine Shop Practices
3 class hrs and 9 lab hrs/wk, 6 cr.
Working conditions of typical machine shops and short-run production techniques. Skill in machine repair. Emphasizes work habits, attitudes, shop safety, housekeeping, and tool care. **Prerequisite:** Mch071, Mch072 or consent of program coordinator. Lab fee, $15. **F**

Mch077 Mechanical Systems
3 class hrs and 3 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:** Ph052, Mth053 or consent of program coordinator. Lab fee, $5. **F,Sp**

Mch078 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. Lab fee, $5. **W**

Mch081 Advanced Lathe Practices
3 class hrs and 9 lab hrs/wk, 6 cr.
Advanced lathe operations including threading, turning, angular turning, machine reaming, tapping, using workholding devices, and tooling to complete precision machining. Includes automated processes in tracer and turret operations and numeric control and computer numeric control (NC/CNC) of engine lathes. **Prerequisite:** Mch067 or consent of program coordinator. Lab fees, $20. **Sp**

Mch082 Advanced Milling Machine Practices
3 class hrs and 9 lab hrs/wk, 6 cr.
A course providing instruction in advanced milling machine practices. **Prerequisite:** Mch071. Lab fee, $20. **W**

Mch088 Fluid Power Systems
3 class hrs and 4 lab hrs/wk, 4 cr.
Fundamental principles of hydraulic and pneumatic systems. Includes the selection, installation, and maintenance of hydraulic and pneumatic circuit systems, including circuits with electrical controls. **Prerequisite:** Mth051 or consent of program coordinator. Lab fee, $5. **F**

Mch091 Job Shop Machining Practices
3 class hrs and 9 lab hrs/wk, 6 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. **Prerequisite:** Mch081, Mch082 or consent of program coordinator. Lab fee, $20. **Sp**

Mch093 Fundamentals of NC/CNC Manufacturing
2 class hrs and 3 lab hrs/wk, 3 cr.
Introduces numeric control (NC) and computer numeric control (CNC) applications to machine tools used in manufacturing industries. Lab fee, $5. **F, W, Sp**

Mch097 Industrial Working Relations
3 class hrs/wk, 3 cr.
Interpersonal relationships and responsibilities of labor and management. Includes study of these related areas: education and training; personal safety, security, and well-being; organization of work environment; public and community involvements; communication; interpersonal relations; economics and productivity; career planning and job search; work habits and attitudes; company image and reputation. **Sp**

Mch280 Cooperative Work Experience
see Agr 280.

Management, see Business Administration

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
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. **Prerequisite:** Proficiency with whole number operations. **F, W, Sp, Su**

Mth052 Introduction to Algebra and Geometry
3 class hrs/wk, 3 cr.
Introduces practical basic algebraic and geometric techniques and applications. Includes signed numbers, elements of algebra, equations and formulas, ratio and proportion, geometric figures, perimeters, area, volume, and their occupational applications. **Prerequisite:** Mth051 or consent of instructor. **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.
A practical application of percent problems to the field of business. Tn, financial statements, and business profits and losses. **Prerequisite:** Mth051 or placement test. **W, Sp**

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 placement test. **W, Sp**

Mth070 Beginning Algebra
4 class hrs/wk, 4 cr.
For students who have not had high school algebra or for a review before they enroll in Mth100. Reviews basic operations and properties of real numbers, introduces linear equations, factoring, inequalities, algebraic fractions, exponents, and graphs. **Prerequisite:** Basic knowledge in the fundamentals of arithmetic. **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:** Completion with C or higher of one year of high school algebra, or Mth070, or consent of instructor. **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:** Completion with C or higher of one year of high school algebra, or Mth070, or consent of instructor. **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:** Completion with C or higher of one year of high school algebra, Mth070, or consent of instructor. **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, with grade of C or higher, or consent of instructor. **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 with a grade of C or higher, or consent of instructor. **F, W, Sp, Su**

Mth081 Technical Mathematics I
4 class hrs/wk, 4 cr.
Basic operations with polynomials including facturing, linear and systems of equations including applications, ratio and proportion, variation, right triangle trigonometry, slope and graphs of linear equations, and operations with algebraic fractions. **Prerequisite:** Mth070 or grade of B or better in Mth052. **F, W, Sp**

Mth082 Technical Mathematics II
4 class hrs/wk, 4 cr.
Definitions of trigonometric functions for any angle, trigonometric identities, equations and graphs including polar coordinates, solutions of right and oblique triangle problems, exponents and radicals, complex numbers and vectors, logarithmic functions, algebraic fractions, and solution of fractional radical and logarithmic equations. **Prerequisite:** Mth081. **F, W, Sp**

Mth083 Technical Mathematics III
4 class hrs/wk, 4 cr.
Applied technical mathematics involving use of calculus. Covers plane analytical geometry, differentiation and integration, including transcendental functions. **Prerequisite:** Mth082. **W, Sp**

Mth100 Intermediate Algebra
4 class hrs/wk, 4 cr.
Covers fundamental laws of algebra with real numbers, linear equations in one and two variables, linear inequalities, factoring, algebraic fractions, systems of linear equations, exponents, radicals, quadratic equations and inequalities, and work problems. **Prerequisite:** Completion with grade of C or higher of one year of high school algebra and one year of geometry, or Mth070, or consent of instructor. **F, W, Sp, Su**

Mth101 College Algebra
4 class hrs/wk, 4 cr.
Takes polynomials in algebraic expressions with equations and inequalities of various degree. An introduction to the concepts of relations and functions with real numbers and graphs in both two and three dimensions. Covers polynomial, rational, exponential and logarithmic functions; an introduction to complex numbers, matrices, determinates, sequences, and series. **Prerequisite:** Completion with grade of C or higher of two years of high school algebra and one year of geometry, or Mth100, or consent of instructor. **F, W, Sp, Su**

Mth102 Trigonometry
4 class hrs/wk, 4 cr.
A continuation of the study of functions: circular, trigonometric and inverse functions, complex numbers, vectors and graphing with polar coordinates. **Prerequisite:** Mth101 with grade of C or higher or consent of instructor. **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 with grade of C or higher or consent of instructor. **F, Sp**

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 with grade of C or higher or consent of instructor. **W, Sp**

Mth110 Analytic Geometry
4 class hrs/wk, 4 cr.
Coordinate geometry includes forms for straight line equations, conic sections, loci, translation and rotation of axis, polar coordinates, and vectors in two and three dimensions. **Prerequisite:** Mth102 with grade of C or higher, or consent of instructor. **F, W, Sp, Su**

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:** Proficiency with arithmetic. **F**

Mth192 Mathematics for Elementary Teachers
3 class hrs/wk, 3 cr.
Continuation of Mth191. Covers mathematical concepts, terminology, and skills encountered in kindergarten through ninth grade mathematics curriculum, including rational and real numbers, an introduction to computers, number theory, consumer math, and individualized instruction in concepts of geometry offered as an alternate approach. **Prerequisite:** Mth191 or consent of instructor. **W**

Mth193 Mathematics for Elementary Teachers
3 class hrs/wk, 3 cr.
A continuation of Mth191 and Mth192. Further concepts, terminology, and skills encountered in the kindergarten through ninth grade mathematics curriculum are covered with concepts of geometry being presented through individualized instruction as an alternate approach. Includes additional elements of elementary mathematics education and teaching strategies. **Prerequisite:** Mth192, or consent of instructor. **Sp**

Mth200 Calculus with Analytic Geometry
4 class hrs/wk, 4 cr.
Covers limits, continuity, derivatives, applications of derivatives, and integration. **Prerequisite:** Mth110 with grade of C or higher. **F, W, Sp, Su**

Mth201 Calculus with Analytic Geometry
4 class hrs/wk, 4 cr.
Continuation of Mth200. Covers applications of definite integrals, exponential and logarithmic functions, trigonometric and hyperbolic functions, and techniques of integration, and polar form equations. **Prerequisite:** Mth200 with grade of C or higher or consent of instructor. **F, W, Sp**

Mth202 Calculus with Analytic Geometry
4 class hrs/wk, 4 cr.
Continuation of Mth201. Covers indeterminate forms, infinite series, vectors in the plane and space. **Prerequisite:** Mth201 with grade of C or higher or consent of instructor. **F, W**

Mth203 Calculus with Analytic Geometry
4 class hrs/wk, 4 cr.
Multivariable calculus including vectors in space, partial derivatives, multiple integrals, and their applications. **Prerequisite:** Mth202 with grade of C or higher or consent of instructor. **W**

Mth221 Applied Differential Equations
4 class hrs/wks, 4 cr.
Covers first-order and higher-order ordinary differential equations. Includes many applications and various methods of solutions including Laplace transforms. **Prerequisite:** Mth203 with grade of C or higher, or consent of instructor. **Sp**

Mth241 Linear Algebra
4 class hrs/wk, 4 cr.
Covers systems of linear equations, matrices, determinants, vectors in R^n, vector spaces, linear transformations, eigenvalues and eigenvectors. **Prerequisite:** Mth200 with grade of C or higher, or consent of instructor.

Mechanical Design, see Drafting Technology

Medical Assisting

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.
Techniques and procedures for receiving patients, using the telephone, making appointments, filing, billing, reimbursing third parties and managing an office. **Prerequisite:** OA121 or consent of instructor. Lab fee, $5. **W**

Med055 Medical Law and Ethics
3 class hrs/wk, 3 cr.
How laws affect the practice of medicine and codes of behavior set by the medical profession for itself. **F, W, Sp**

Med056 Medical Assisting Basic Procedures
2 class hrs and 2 lab hrs/wk, 3 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. Lab fee, $5. **F**

Med057 Medical Assisting, Advanced Procedures
3 class hrs and 2 lab hrs/wk, 4 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. Lab fee, $5. **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. Lab fee, $3. **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 option of Medical Assisting program. Lab 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. Lab 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. Lab 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.
A comprehensive study of medical staff services. Covers structure, bylaws, membership, staff status, and appointments. The roles and interrelationships of governing bodies of health care systems. **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. **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**

Med280 Cooperative Work Experience, see Agr280.

Multidisciplinary Studies

MS251, 252, 253 The Art of Discovery: Science, Philosophy, and Society
3 class hrs/wk, 3 cr.
Discoveries which have had special impact on world views, values, and behavior. How scientific, philosophic, and social enterprises relate. Integrates disciplinary insights to help students discover how various disciplines are integrated. **MS251: F; 252: W; 253: 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, medico-legal issues, and personal attitudes and values. **W, Sp**

Music

Mus111 Music Theory I, Term I
3 class hrs/wk, 3 cr.
Techniques for perceiving and identifying smaller patterns in music. A basic understanding of music theory is helpful. **F**

Mus112 Music Theory I, Term II
3 class hrs/wk, 3 cr.
How to identify basic elements of music as they occur in smaller patterns of music. Also emphasizes the part larger groupings play in organization of music structure. **Prerequisite:** Mus111. **W**

Mus113 Music Theory I, Term III
3 class hrs/wk, 3 cr.
Exercises in ear-training, dictation, sight-singing, and keyboard harmony to help students focus on configurations, groupings, and characteristics of music that generate organization, resulting in continuity of form. **Prerequisite:** Mus112. **Sp**

Mus134 Chorus
4 lab hrs/wk, 2 cr.
Classroom instruction for voice students. Class activity centers on choir practice and performance. No more than six hours credit may be earned in Mus134. **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.
The evolution of music and the impact of culture, social philosophies, religion, and politics on the development of music, visual arts, and literature. **W**

Mus203 Introduction to Music and Its Literature
3 class hrs/wk, 3 cr.
A study of the philosophies and attitudes of the 20th century composers who revolted against traditional approaches to music composition and created new styles and forms. Traces American music from the serial technique composing of Schoenberg to the popular music of the 70s. **Sp**

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. Lab fee, $40. **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 at all levels and interests. Lab fee, $40. **F, W, 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 partical and liquid penetrant test methods. Applies to inspection and non-destructive testing used in the metal fabricating industry for quality control. Lab fee, $15. **F**

NDT061 Nondestructive Testing II
2 class hrs and 3 lab hrs/wk, 3 cr.
Introduces theory, techniques, and equipment used in running non-destructive industrial tests. Includes the use of ultrasonic and Eddy current test methods as means of quality control. Lab fee, $15. **W**

NDT071 Nondestructive Testing III
2 class hrs and 1 lab hr/wk, 3 cr.
Introduces theory, techniques, and equipment used in running radiographic inspection and non-destructive tests as a means of quality control in industry. Lab fee, $20. **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.**

Nur104 The Nurse at Work
1 class hr/wk, 1 cr.
Trends and practices of licensed practical nurses. Includes organizational and structural elements and socio-cultural factors influencing the role of a recent graduate as a member of a nursing and health team. **Prerequisite:** Enrolled in first year nursing program. **Sp**

Nur106 Nursing
5 class hrs and 15 lab hrs/wk, 10 cr.
Concepts, skills, and values basic to contemporary nursing; assessing and meeting physio-psycho-social health needs. Includes nursing skills, communications, nursing as an interpersonal helping process, growth and development, and beginning skills in problem solving. Correlates theory, skill development, and clinical experiences in nursing. **Prerequisite:** Enrollment in the nursing program. Lab fee, $15. **F**

Nur108 Nursing
5 class hrs and 15 lab hrs/wk, 10 cr.
Concepts, skills, and values basic to nursing practices. Problem solving in growth and developmental patterns in maternal-child-family health and effects of hospitalization on infants and adolescents with physical and mental illnesses. **Prerequisite:** Nur106 or equivalent. Lab fee, $15. **W, Sp**

Nur109 Nursing
5 class hrs and 15 lab hrs/wk, 10 cr.
The role of licensed practical nurses in assessment, planning, intervention, and evaluation of nursing situations in common conditions of physical and mental illness. **Prerequisite:** Nur106, 108 or equivalent. Lab fee, $15. **W, Sp**

Nur111 LPN Re-entry
5 class hrs and 15 lab hrs/wk, 10 cr.
For inactive licensed practical nurses returning to practice. Reviews basic concepts, skills, and values of nursing and problem solving skills helpful in meeting needs of clients in various nursing situations. Emphasizes independent study. **Prerequisite:** Eligibility for practical nurse licensure and proof of application for, or possession of, a limited license from the Oregon State Board of Nursing. Lab fee, $10. **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,B Nurse At Work
1 class hr/wk, 1 cr.
A study of trends and practices in nursing. Includes organizational and structural elements and socio-cultural factors influencing the role of new graduates as members of a nursing and health team. **Prerequisite:** Enrollment in second year of nursing program. **F, W**

Nur206 Nursing
6 class hrs and 16 lab hrs/wk, 11 cr.
Nursing care of patients. Covers hospitalization, surgery, infection and/or infectious diseases, neoplastic disease, and disturbances of the respiratory, cardiovascular, integumentary, gastrointestinal, urinary and male reproductive systems. Emphasizes nursing at the associate degree level, and the role of nurses as members of a nursing team. **Prerequisite:** Nur106, 108, 109. Lab fee, $10. **F**

Nur208 Nursing
6 class hrs and 16 lab hrs/wk, 11 cr.
Continuation of Nur206. Focuses on the role of managing nursing care for a group of patients. Introduces team leader aspects. Nursing care of patients experiencing disturbances of the nervous, musculo-skeletal, endocrine and sensory systems. **Prerequisite:** Nur106, 108, 109, 206. Lab fee, $10. **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, 108, 109, 206, 208. Lab fee, $5. **Sp**

Nur211 RN Re-entry Program
5 class hrs and 15 lab hrs/wk, 10 cr.
For inactive registered nurses returning to practice. Reviews concepts, skills, and values of contemporary nursing. Problem solving approach to management of nursing care in a variety of situations. **Prerequisite:** Eligibility for registered nurse licensure and proof of application for, or possession of, a limited license from the Oregon State Board of Nursing. Lab fee, $10. **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.**

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 or practical 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. **Offered as needed.**

Nur280 Cooperative Work Experience, see Agr280.

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 Ill
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. Lab fee, $5. **Offered as needed.**

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.**

Office Administration

OA050 Civil Service Exam Preparation I
7 lab hrs/wk, 3 cr.
A brief, intensive refresher course in English and mathematics fundamentals. Covers use and correct spelling of words used in business. Reviews basic math functions, fractions, decimals, and percents. Features open-entry and open-exit individualized instruction. **F, W, Sp, Su**

OA051 Civil Service Exam Preparation II
1 class hr and 4 lab hrs/wk, 3 cr.
Continuation of OA050. 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:** OA050. **F, W, Sp, Su**

OA052 Clerical Procedures
1 class hr and 4 lab hrs/wk, 3 cr.
Introduces various clerical skills necessary for success in today's office. Includes office typing and other practical clerical skills and knowledge, such as grammar, punctuation, telephone usage, mail procedures, business compositions and current office trends. Includes an extensive unit on job searching, interviewing, proper office attire and other tools necessary to gain employment. **F, W, Sp, Su**

OA053 Individualized Filing
6 lab hrs/wk, 3 cr.
Covers basic filing principles for coding, sorting, storing, retrieving, and charging out business correspondence. Open-entry and open-exit; students advance at their own rate. **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**

OA060 Keyboarding
5 lab hrs/wk, 1 cr.
Basic touch keyboarding skills for standard computer or typewriter keyboards and a standard numeric 10-key pad. Emphasizes developing speed, accuracy, and an understanding of basic vocabulary and concepts used in keyboarding for inputting and retrieving information. Lab fee, $2. **F, W, Sp, Su**

OA061 Introduction to Calculators
4 lab hrs/wk, 2 cr.
Use of electronic display and electronic printing calculators in the solution of simple business and mathematical problems. Lab fee, $5. **F, W, Sp, Su**

OA061A Introduction to Calculators
4 lab hrs/wk, 1 cr. Five weeks only.
Use of electronic display and electronic printing calculators to solve mathematical problems. Lab fee, $5. **F, W, Sp, Su**

OA061B Introduction to Calculators
4 lab hrs/wk, 1 cr. Five weeks only.
Continuation of OA061A to increase speed and accuracy on calculators, and to develop ability to solve mathematical problems in business offices. **F, W, Sp, Su**

OA062 Reprographics
3 class hrs/wk, 3 cr.
Copy duplication methods used in business offices and small organizations. Emphasizes preparing layout, running equipment, and comparing methods and machines. Lab fee, $6. **W, Sp**

OA066 Word Processing/Microcomputers (WordStar)
6 lab hrs/wk, 3 cr.
An individualized instruction course. Includes intensive practice in revision and formatting techniques. **Prerequisite:** OA121 or consent of instructor, OA200 unless taken concurrently. Lab fee, $5. **F, W, Sp**

OA067 Word Processor Operation
1 class hr and 3 lab hrs/wk, 2 cr.
Discusses concepts of word processing systems and equipment and their relationship to students' career goals. Provides basic training on a Cathode Ray Tube (CRT) word processor. **Prerequisite:** Touch typing ability of 30 words per minute. Lab fee, $5. **F, W, Sp, Su**

OA068 Word Processing: Intermediate CRT Operation
2 class hrs and 2 lab hrs/wk, 3 cr.
Operation and experience in special features of the Cathode Ray Tube (CRT) word processor. Includes basic glossary, sort, and advanced functions. **Prerequisite:** OA200. Lab fee, $6. **F, W, Sp**

OA069 Word Processing: Advanced CRT Operation
2 class hrs and 2 lab hrs/wk, 3 cr.
A continuation of OA068. Includes math, advanced glossary, and list processing. **Prerequisite:** OA068. Lab fee, $6. **Sp**

OA072 Briefhand II
3 class hrs and 2 lab hrs/wk, 4 cr.
Continuation of OA114. Emphasizes speed development. Introduces some transcription techniques. Includes spelling and punctuation review. **Prerequisite:** OA114 and OA121. Lab fee, $5. **F, W, Sp**

OA073 Briefhand III
3 class hrs and 2 lab hrs/wk, 4 cr.
Continuation of OA072. Emphasizes transcription skills, review of theory, and speed building. **Prerequisite:** OA072, OA122 or consent of instructor. Lab fee, $5. **F, W, Sp**

OA075 Legal Terminology and Documents
3 class hrs/wk, 3 cr.
Introduction to legal terminology for legal secretaries and a survey of documents commonly encountered by legal secretaries in private law offices. **W**

OA076 Legal Office Procedures
2 class hrs and 2 lab hrs/wk, 3 cr.
Duties of legal secretaries, including maintaining professional relations with employers and clients, keeping financial records, filing legal documents, knowing when and how to use court and non-court documents and procedures, learning to set priorities, making decisions, and integrating office skills. **Prerequisite:** OA075, OA117, OA121. Lab fee, $5. **Sp**

OA077 Legal Machine Transcription I
3 class hrs/wk, 3 cr.
Preparing and typing legal briefs, forms, transcripts, documents, and correspondence from machine dictation. **Prerequisite:** OA075 and OA225. Lab fee, $6. **F**

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:** OA225 and typing speed of 40 words per minute. Lab fee, $6. **F**

OA083 Medical Office Management
3 class hrs/wk, 3 cr.
Basic accounting procedures and practical experience working with financial records and accounting terminology. Includes double-entry system, accounting for cash, payroll accounting, end-of-period worksheets, financial statements, and a medical office practice set. **Prerequisite:** Mth061 or consent of instructor. **Sp**

OA084 Business English I
3 class hrs/wk, 3 cr.
Basic English skills including spelling, grammar, business vocabulary, dictionary use, and writing clear, concise sentences. **F, W, Sp, Su**

OA085 Business English II
3 class hrs/wk, 3 cr.
Emphasizes clear and concise expression of ideas in paragraph form. Special emphasis on punctuation and continuation of grammar, spelling, and business vocabulary. **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. **F, W, Sp**

OA089 Filing
3 class hrs/wk, 3 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. **F, 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 I
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 account statements. **W**

OA091 Bookkeeping II
2 class hrs and 2 lab hrs/wk, 3 cr.
Application of computerized accounting principles. Covers chart of accounts, journal, general ledger, trial balance, income statement, balance sheet and worksheet for end-of-year work. Also introduces receivables, payables, depreciation, bank reconciliation and payroll. **Prerequisite:** OA090. Lab fee, $5. **Sp**

OA092 Payroll Procedures
3 class hrs/wk, 3 cr.
An examination of federal and state laws which determine what records need to be kept on each employee's earnings, what reports need to be prepared for state and federal governments, and what guidelines need to be followed in assigning pay scales to employees. Practice in computing, paying, and charging wages and salaries. **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. **Sp**

OA098A Office Technology (CPS Review)
1 class hr/wk, 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 Business Behavior (CPS Review)
1 class hr/wk, 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.**

OA099 Proofreading
2 class hrs/wk, 1 cr.
Effective proofreading techniques, emphasizing punctuation, word division, spelling and capitalization rules. Includes use of office reference manuals. **Prerequisite:** OA121. **F, W, Sp, Su**

OA101 Office Careers Survey
1 class hr/wk, 1 cr.
The organization and climate of business and professional offices, including investigation of various job possibilities available to persons with secretarial/clerical training. Includes guest speakers and field trips to provide current picture of office occupations. **F, W**

OA111 Shorthand I
3 class hrs and 2 lab hrs/wk, 4 cr.
A beginning course in Gregg series 90 jubilee shorthand. A study of simplified principles to enable students to take simple dictation and transcribe in longhand early in the course. Students with previous training may complete these requirements in short periods of time. Also includes proper recording habits, spelling, vocabulary, and punctuation. **Prerequisite:** OA121 concurrent enrollment. Lab fee, $5. **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 or equivalent. Lab fee, $5. **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 mailable letters. Advanced vocabulary, phrase building, word building principles based on basic Gregg shorthand principles learned in OA111 and OA112. **Prerequisite:** OA112. Lab fee, $5. **Sp**

OA114 Briefhand I
3 class hrs and 2 lab hrs/wk, 4 cr.
An alphabetic shorthand system. For taking dictation and transcribing notes. Emphasizes good recording habits and spelling. Useful as a vocational skill, for taking lecture notes, and for personal use. **Prerequisite:** OA121ABC and OA084 or concurrent enrollment. Lab fee, $5. **F, W, Sp**

OA116 Office Procedures I
3 class hrs/wk, 3 cr.
An introduction to administrative support activities. Includes telephone usage, mailing and shipping, meetings and conferences, appointments, and meeting the public. Also working with arrangements, word processing, sources of business information, job careers in offices, and job interviewing. Includes simulated job activities. **F, W, Sp, Su**

OA117 Office Procedures II
2 class hrs and 2 lab hrs/wk, 3 cr.
Simulated experience in office work. How to produce a smooth flow of work and work with other people in an office. Applies principles studied in OA116. **Prerequisite:** OA116 and OA122 or OA124 and OA084. Lab fee, $6. **W, Sp**

OA121A,B,C Typing I, Beginning
variable 1-3 cr.
Students may register for 1, 2, or 3 credits. OA121A: basic parts of IBM Selectric typewriter and keyboard touch system. Minimum typing speed: 20 words per minute. OA121B: basic centering techniques, corrections and carbons, composition at the typewriter, and business letters. Minimum typing speed: 25 words per minute. OA121C: tables and manuscripts. Minimum typing speed: 30 words per minute. Students with previous typing experience may complete this course in a short time or take a challenge examination. Lab fee, $2, each course. **F, W, Sp, Su.**

OA122A,B,C Typing II, Intermediate
variable 1-3 cr.
Students may register for 1, 2, or 3 credits. Features skillbuilding practices and techniques to increase speed and accuracy. Emphasizes development of production typing skills. OA122A: Typing business letters, manuscripts, and reports in mailable form from rough draft or unarranged copy. Minimum typing speed for C grade: 35 wpm. OA122B: Typing several styles of tables and financial reports from unarranged copy. Minimum typing speed for C grade: 40 wpm. OA122C: Typing a variety of printed forms from unarranged copy. Minimum typing speed for C grade: 45 wpm. Lab fee, $2, each course. **F, W, Sp, Su**

OA123 Typing III
1 class hr and 4 lab hrs/wk, 3 cr.
Corrective and acceleration drills to develop minimum typing speed of 50 words per minute. Emphasizes development of judgment, speed, accuracy, proofreading, and decision-making skills in producing mailable copy from rough draft and unarranged material. Students must be able to work independently and to follow written and oral instructions. **Prerequisite:** OA122ABC. Lab fee, $6. **F, W, Sp**

OA124A,B,C Typing Skill Building
variable 1-3 cr.
Emphasizes improving typing skills (keyboard proficiency, typing speed, and accuracy). For students who have learned the keyboard and wish to raise their skill levels for advanced work or who want to improve their skills. **Prerequisite:** OA121A, B and C. Lab fee, $6. **F, W, Sp**

OA200 Introduction to Word Processing
3 class hrs/wk, 3 cr.
Word processing concepts and equipment, organization of word processing systems regarding correspondence and administrative support functions, operation of Cathode Ray Tube (CRT) word processors and word processing microcomputer software. **Prerequisite:** Touch typing ability; minimum, 30 words per minute. Lab fee, $5. **F, W, Sp, Su**

OA201 Word Processing Procedures I
2 class hrs and 2 lab hrs/wk, 3 cr.
Provides basic training in operating the Cathode Ray Tube (CRT) word processor. **Prerequisite:** OA200. Lab fee, $6. **F, W, Sp**

OA202 Word Processing Procedures II
2 class hrs and 2 lab hrs/wk, 3 cr.
Provides basic training in special features of the Cathode Ray Tube (CRT) word processor. **Prerequisite:** OA201. Lab fee, $6. **W, Sp**

OA211 Shorthand/Briefhand Skillbuilding
2 class hrs and 2 lab hrs/wk, 3 cr.
A continuation of shorthand development.

Emphasizes office-related transcription skills and improvement of shorthand vocabulary and dictation speeds. **Prerequisite:** OA113. Lab fee, $5. **F**

OA220 Business Machines
2 class hrs and 3 lab hrs/wk, 3 cr.
Operation of electronic display and electronic printing calculators. Solving business problems with calculators. **Prerequisite:** OA061. Lab fee, $5. **Offered as needed.**

OA225 Machine Transcription I
1 class hr and 4 lab hrs/wk, 3 cr.
For students with no previous experience in transcribing letters and memos from recorded dictation. Covers parts and functions of dictating machines, care of belts, increasing skills in listening, understanding, correct spelling, punctuation, grammar. Emphasizes transcribing mailable copy with speed and efficiency. Lab fee, $6. **F, Sp**

OA225A Machine Transcription A
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:** OA121A,B,C and OA084 or OA050 or consent of instructor. Lab fee, $2. **F, W, Sp**

OA225B Machine Transcription B
2 lab hrs/wk, 1 cr.
Continuation of OA225A. How to prepare tables, business letters, and reports. **Prerequisite:** OA225A. Lab fee, $2. **F, W, Sp**

OA225C Machine Transcription C
2 lab hrs/wk, 1 cr.
Continuation of OA225B. **Prerequisite:** OA225B. Lab fee, $2. **F, W, Sp**

OA226 Machine Transcription II
1 class hr and 4 lab hrs/wk, 3 cr.
Continuation of OA225 to increase students' transcribing efficiency from machine dictated materials. Stresses improving English skills, typing speed, and accuracy to usable, on-the-job levels. **Prerequisite:** OA225 or consent of instructor. Lab fee, $6. **F, W, 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. Lab fee, $2. **F, W, Sp, Su**

OA226B Machine Transcription II-B
2 lab hrs/wk, 1 cr.
A continuation of OA225. **Prerequisite:** OA226A or equivalent. Lab fee, $2. **F, W, Sp, Su**

OA226C Machine Transcription II-C
2 lab hrs/wk, 1 cr.
A continuation of OA225. **Prerequisite:** OA226B or equivalent. Lab fee, $2. **F, W, Sp, Su**

OA280 Cooperative Work Experience, see Agr280.

Philosophy

Phl201 Problems of Philosophy
3 class hrs/wk, 3 cr.
Major philosophical traditions. Discusses tools for critical thinking and creativity. **F**

Phl202 Problems of Philosophy
3 class hrs/wk, 3 cr.
A study of religious, and scientific ideas of historic and contemporary interest. Discusses critical interpretation and perspectives. **W**

Phl203 Elementary Ethics
3 class hrs/wk, 3 cr.
Objectives and rules for human behavior as important tools for decision making. Applies diverse goals and means to such current issues as war, peace, sexuality, drugs, political issues, and religious beliefs. **Sp**

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.
Daily practices and/or intercollegiate competition with other two- and four-year colleges.

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
3 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.

PE185AA, AB, AC Dance Fitness—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Aerobic dances designed to help individuals gain cardiovascular fitness.

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. Lab fee, $3. each

PE185BA, BB, BD 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. Lab fee, $3. 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.

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.

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.

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.

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.

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.

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.

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.

PE185DJ, DK, DL Dance, Modern—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Fundamentals of movement, techniques, and use of axial and motor movements.

PE185DR, DS, DT Dance, Social—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Basic dance steps of the fox trot, tango, rhumba, mambo, and current popular dances.

PE185DV, DW, DX Dance, Square—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Basic square dance formation, singing calls, simple figures, and invigorating activity.

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.

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.

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.

PE185FQ, FR, FS Football—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Fundamentals, rules, strategies, and team play.

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.

PE185GP, GQ, GR Gymnastics—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Instruction and practice of gymnastic skills. Men's events include tumbling, floor exercise, vaulting, horizontal bars, parallel bars, still rings, and side horse. Women's events include floor exercise, balance beam, vaulting, and uneven bars. Stresses conditioning exercises and mastery in routines.

PE185HA, HB, BC Handball—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Fundamental techniques and rules, etiquette, and singles and doubles play. Perfection of techniques, strategy, singles and doubles competition. Lab fee, $3.

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.

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 Dance, Ballet—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Basic fundamentals of the five positions at the barre. Includes development of legs, arms, torso alignment, and stretching. Center floor work covers basic turns, leaps, and combination movements to develop placement and technique.

PE185LD Logging Sports—Beginning
3 lab hrs/wk, 1 cr.
Fundamentals of competition logging sports. Safety practices for each event are stressed.

PE185LJ Lifesaving
3 lab hrs/wk, 1 cr.
A wide range of elementary and advanced lifesaving skills based on a high level of correct swimming techniques and physical conditioning. Based on Red Cross senior lifesaving.

PE185PA, PB, PC Personal Defense—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
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.

PE185RA, RB, RC Racquetball—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Fundamentals, various shots, and strategies of singles and doubles playing. Lab fee, $3. each

PE185RD, RE, RF Rifle Marksmanship—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each

PE185RG, RH, RJ Roller Skating—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Fundamental skills and techniques including forward skating, backward skating, and two-foot turns.

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
3lab 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
Open to students who have mastered the front and back crawl, sidestroke, breaststroke, and elementary backstroke. Develops endurance and strength.

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, sideslip, 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.

PE185SP, SQ, SR Softball—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Fundamental skills and rules presented through participation in team play.

PE185SS Swimming—Beginning
3 lab hrs/wk, 1 cr.
Follows Red Cross beginner and advanced beginner swimming programs. Includes floating, back and prone glides, survival floating, human stroke, front crawl, elementary backstroke, jumping and diving into deep water. **F, W, Sp**

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. **F, W, Sp**

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. **F, W, Sp**

PE185TA, TB, TC Table Tennis—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. 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. Lab fee, $3 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.

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.

PE185WA Water Safety Instruction
3 lab hrs/wk, 1 cr.
Covers all phases of water safety, basic swimming strokes, related aquatic skills, diving, lifesaving skills, water safety, and teaching guidelines.

PE185WD, WE, WF Weight Training—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Fundamental safety procedures, preconditioning for weight training, and progressive resistance for lifetime physical fitness. For students of all ages.

PE185WJ, WK, WL Figure Control—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Improve human form and function through use of universal gym machine and calisthenics. Emphasizes cardiovascular fitness through aerobic exercise.

PE185YA, YB, YC Yoga—Beginning, Intermediate, Advanced
3 lab hrs/wk, 1 cr. each
Background, safety precautions, and values of yoga. Stretching and limbering exercises, proper breathing techniques, and exercise positions.

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.

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.

PE194TF Tennis—Professional
3 lab hrs/wk, 2 cr.

PE194TR Track and Field
3 lab hrs/wk, 2 cr.

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**

PE294BD-VM Basketball—Volleyball
3 lab hrs/wk, 2 cr.

PE294TF-FD Tennis-Soccer
3 lab hrs/wk, 2 cr.

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. Lab fee, $4. **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. **Prerequisite:** Ph051, Mth052 or equivalent, or consent of instructor. Lab fee, $4. **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. Lab fee, $4. **W, Sp**

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. Lab fee, $4. **F, Sp**

Ph201 General Physics
3 class hrs and 3 lab hrs/wk, 4 cr.
Introduces classical mechanics, motion, force, work, energy, and power. **Prerequisite:** Mth101 or equivalent. Lab fee, $6. **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. Lab fee, $6. **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. Lab fee, $6. **Sp**

Ph211 General Physics for Engineers and Scientists
4 class hrs/wk, and 3 lab hrs/wk, 5 cr.
Classical mechanics including motion, force, work, gravitation, fields, and wave motion. **Prerequisite:** Mth200 or calculus equivalent. Lab fee, $6. **F**

Ph212 General Physics for Engineers and Scientists
4 class hrs/wk, 3 lab hrs/wk, 5 cr.
Electricity and magnetism including electrical fields and potential, magnetic fields, and electromagnetic radiation. **Prerequisite:** Ph211 and Mth201. Lab fee, $6. **W**

Ph213 General Physics for Engineers and Scientists
4 class hrs/wk, and 3 lab hrs/wk, 5 cr.
Includes heat transport, thermodynamics, kinetic theory, optics, and relativity. **Prerequisite:** Ph211 and Mth201. Lab fee, $6. **Sp**

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.
Understanding interpersonal relations on the job and in everyday activities. Includes self-actualization, marriage and family relationships, social interaction, job satisfaction, and relations with supervisors and subordinates. **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.
First of three introductory courses dealing with psychology as a science. Stresses the biological foundations of humans, motivation and emotion, sensation, and perception. **F, W, Sp**

Psy202 General Psychology
3 class hrs/wk, 3 cr.
Continuation of Psy201. Includes principles of learning, memory, cognitive man, and problem solving. **Prerequisite:** Psy201. **W, Sp**

Psy203 General Psychology
3 class hrs/wk, 3 cr.
Continuation of Psy201 and 202. Includes personality theory, psychopathology and psychotherapy, development and socialization, and social psychology. **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.**

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.**

Psy299 Growth and Development
3 class hrs/wk, 3 cr.
Human growth and development from conception through death. In-depth study of birth through middle adulthood. **Prerequisite:** Psy201 or consent of instructor. **F, W, Sp**

Public Administration

PA250 Introduction to Public Administration
3 class hrs/wk, 3 cr.
Survey of administrative practices of public agencies, with special emphasis on policy making in governmental organization. Includes public management, organizational theory, and behavior. **Offered as needed.**

PA255 Public Personnel Administration
3 class hrs/wk, 3 cr.
Introduction to principles, concepts, and decisions that determine public personnel policy. Special emphasis on compensation plans, position classification, staffing, staff reduction, tenure, affirmative action, and collective bargaining. **Offered as needed.**

PA256 Affirmative Action/Equal Opportunity
3 class hrs/wk, 3 cr.
Acquaints management trainees and related personnel with federal, state, and institutional equal opportunity requirements. Includes history of equal employment opportunity, rationale for equal employment opportunity (EEO) programs, descriptions of EEO laws and executive orders and their amendments, affirmative es of having EEO/AA programs, and agencies established to assist federal and state EEO/AA programs. Use of statistics and analyses of various kinds of work forces. **Offered as needed.**

PA260 Public Finance
3 class hrs/wk, 3 cr.
Aspects of financing state and local governments in Oregon. Includes fiscal management, finance policies, and public issues expressed in budgetary terms. **Offered as needed.**

PA266A, B, C Public Personnel Supervision
1 class hr/wk, 1 cr.
An examination of a supervisor's role in public service. **Offered as needed.**

Reading, see also Communication Skills, Skills Development

Rd005 Basic Reading Skills for Deaf and Hearing Impaired
3 class hrs/wk, 3 cr.
For deaf and hearing impaired students who want to improve reading skills. Involves reading newspapers, magazines, and books. Aimed at improving reading comprehension, vocabulary, and word attack skills. **F, W, Sp**

Rd009 Basic Reading Tactics I
3 class hrs and 2 lab hrs/wk, 4 cr.
Improve reading skills. Emphasizes understanding of words, sentences and paragraphs. **Prerequisite:** Reading score of 50 to 61 on the college placement test or consent of instructor. **F, W, Sp, Su**

Rd010 Basic Reading Tactics II
3 class hrs/wk, 3 cr.
Improve general college reading skills. Emphasizes comprehension of paragraphs, vocabulary, notetaking, and how to read a textbook. **Prerequisite:** Reading score of 62 to 74 on the college placement test or consent of instructor. **F, W, Sp, Su**

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:** Standardized reading score above 28th percentile or the consent of instructor. **F, W, Sp, Su**

Rd117 Advanced 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 or consent of instructor. **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. **W**

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. **W**

RE056 Escrow Procedures I
3 class hrs/wk, 3 cr.
The use of work sheets by escrow agents. Emphasizes significance of a third party in real estate transactions. Covers documents required to be held on deposit between the seller and buyer until terms of a contract are completed. **Prerequisite:** BA260 and BA262. **W**

RE057 Escrow Procedures II
3 class hrs/wk, 3 cr.
Obligations of escrow departments and title insurance companies in real estate transactions. Deals with defects of title and abstracts of title to indicate the value of title insurance. Emphasizes the ramifications of title insurance. **Prerequisite:** RE056. **Offered as needed.**

RE058 Escrow Procedures III
3 class hrs/wk, 3 cr.
Theory and practice of real estate exchanges and sales of businesses, including ordinary exchange, tax-free exchanges, multiple exchanges and, in the sale of businesses, bulk sales affidavits, security agreements, assignments of leases, leasehold interests, and other ramifications. Includes review of RE056 and RE057. **Prerequisite:** RE057. **Offered as needed.**

RE061 Real Estate Appraisal I
3 class hrs/wk, 3 cr.
Theories, functions, and purposes of appraisal principles of valuation. Includes cost, market and income approach techniques for determining condemnation, insurance, loan, purchase, and sales values for residential properties. **Prerequisite:** BA264 or consent of instructor. **Sp**

RE062 Real Estate Appraisal II
3 class hrs/wk, 3 cr.
Methods and theories of income property appraisal techniques using indicators of value including gross rent multiplier (GRM), capitalization, and yields' rates. **Prerequisite:** RE061. **F**

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. **W**

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:** RE062. **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 or return, etc. **Prerequisite:** RE055. **F**

RE067 Real Estate Investment Analysis II—Taxation
3 class hrs/wk, 3 cr.
Advanced and intensive study of tax principles governing real property. Emphasizes tax planning nd integration of tax concepts with procedural aspects. **Prerequisite:** RE066. **W**

RE068 Real Estate Investment Analysis III— Sales and Exchange
3 class hrs/wk, 3 cr.
Alternative methods of property disposal including contract sales and exchanging and tax implications of each. **Prerequisite:** RE067. **Sp**

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 ma-

terials application, labor methods, costs for representative types of construction and site requirements, and unit-in-place method of estimating. **W**

RE070 Zoning, Subdividing, and Community Planning
3 class hrs/wk, 3 cr.
Zoning regulations, codes, restrictions, and cost of development of property for persons who want to subdivide, upgrade or change land use under zone codes, procedures, and material required by the State of Oregon, Marion County and City of Salem. **Sp**

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.**

RE084 Real Estate Seminar
3 class hrs/wk, 3 cr.
Defines, explores, and analyzes contemporary real estate problems from various viewpoints within the real estate industry. **Prerequisite:** RE062. **Offered as needed.**

RE085 Property Management
2 class hrs/wk, 2 cr.
An intensive study of real property management factors. Investment analysis from management standpoint—analysis of hotels, multiple units, shopping centers, and businesses. **Prerequisite:** BA263. **Offered as needed.**

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. **W**

RE280 Cooperative Work Experience,
see Agr280.

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**

Secretarial, see Office Administration

Skills Development, see also Communication Skills, Reading

SkD003 College Orientation For Deaf Students
1 class hr and 1 lab 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. **F**

SkD005 Language Development for the Deaf and Hearing Impaired
3 class hrs/wk, 3 cr.
For deaf and hearing impaired students who want to improve their basic writing skills. Emphasizes vocabulary expansion, idiomatic expressions, and development of writing skills through letter writing and composition practice. Includes computer-related language activities. **F, W, Sp**

SkD009 Introduction to College Language Skills
4 class hrs and 4 lab hrs/wk, 6 cr.
Intensive work in writing, spelling, and reading. **Prerequisite:** Reading score of 50 or above on the college placement 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 life-work planning. **F, W, Sp**

SkD013 A,B,C, Basic Spelling Skills
3 class hrs/wk, 1-3 cr.
Includes oral practice and development of personal spelling list. 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 dictionary use (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. **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**

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. **F, W, Sp, Su**

SkD031A,B,C Study Skills
3 class hrs/wk, 1-3 cr.
Helps students learn how to study more effectively. SkD031A: expectations of college instructors, time management, and note taking (weeks one through four); SkD031B: objective test-taking, textbook reading, and memory improvement (weeks five through seven); SkD031C: essay test-taking, concentration, test anxiety, and listening (weeks eight through ten). **F, W, Sp, Su**

SkD045A Problem Solving and Thinking Skills,
3 class hr/wk, 1 cr.
How to analyze and improve thinking skills and problem solving techniques. Emphasizes the process of problem solving: how to get started, where to begin, what to do when stuck. Students analyze their thinking styles to discover their approaches to problems of classification, qualification, and operational analysis and how to improve their skills in troubleshooting, diagnosing, and gaining insight into problems. **F, W, Sp**

SkD045B Problem Solving and Thinking Skills
3 class hr/wk, 1 cr.
How to analyze one's ability to solve verbal and mathematical word problems. Student tutors help class participants think through problems. **F, W, Sp**

SkD045C Problem Solving and Thinking Skills
3 class hr/wk, 1 cr.
How to deal with complex problems and abstractions. How to plot and graph complicated problems which involve deductive reasoning, and to deal with three-dimensional problems. **F, W, Sp**

Social Science

SSc102 The Minority Experience in Contemporary America
3 class hrs/wk, 3 cr.
Representatives from various ethnic groups at Chemeketa present specific issues to acquaint students with issues facing members of minority groups, their responses to these issues, and their perception of the dominant culture. **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.
A sociological approach to major social problems in contemporary American society. Emphasizes concepts of aging, health care, law, leisure, minorities, pollution, poverty, technology, urbanization, work, and youth. **Prerequisite:** Soc204 or consent of instructor. **Sp**

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. **Sp**

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/hr, 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.
Explores ways to break bad listening habits and improve listening abilities. **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 non-verbal levels of persuasion, concentrating on effective delivery, motivation, and language. **W, Sp**

Sp113 Fundamentals of Leadership in 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:** Sp114. **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.**

Sp229 Oral Interpretation
3 class hrs/wk, 3 cr.
Analysis and presentation of literature; use of emotional reactions to give color and interest, expressive vocal and body gestures and characterization to interpret literature. **Offered as needed.**

Theater Arts

TA121 Fundamentals of Acting
6 lab 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
6 lab hrs/wk, 3 cr.
Use of the voice in dramatic roles, its production, and control. An introduction to dialects and accents. **W**

TA123 Fundamentals of Acting
6 lab hrs/wk, 3 cr.
Problems in the analysis and presentation of characters in dramatic literature. **Sp**

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 Tourism 3
class hrs/wk, 3 cr.
An introduction to prime geographic tourist destinations in the United States. Covers basic geography, major cities, elements of the natural environment, points of interest, and attractions especially appealing to tourists. **F**

Tr052 International Tourism I
3 class hrs/wk, 3 cr.
An introduction to prime geographic tourist destinations in Europe. Covers basic geography and major cities, elements of the natural environment, points of interest, and attractions especially appealing to tourists. **W**

Tr053 International Tourism II
3 class hrs/wk, 3 cr
Continuation of Tr052. Major cities, elements of the natural environment, points of interest and attractions, especially appealing to tourists in countries not covered in Tr052. **Sp**

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.
Paste-up, character generation, art techniques, design principles, layout, proof reading, copy classification, photo composition, and typography. **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 theoretical basis of process photography. **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. **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 paste-up, register controls and systems, typographic design display, tabular composition, proofing, procedures, career opportunities, symbology 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. For students interested in photographic careers. Includes directed photographic assignments and photo lab work. Lab fee, $5. **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 and/or consent of instructor. Lab 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**

VC280 Cooperative Work Experience, see Agr280.

Welding

Wld051 Basic Arc Welding
2 class hrs and 9 lab hrs/wk, 5 cr.
Arc welding equipment, materials and procedures used in industry. Basic techniques in flat, horizontal, vertical, and overhead welding by demonstration and supervised practice. Includes basic technical and related information concerning processes and metallurgy. Lab fee, $15. **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. Lab fee, $20. **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 guage welding with groove type joints. For an additional fee, students may take a certification test. **Prerequisites:** Satisfactory completion of Wld051 and Wld052 or equivalent industrial experience with consent of program coordinator. Lab fee, $15. **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. **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. Lab 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. Lab fee, $15. **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. Lab fee, $10. **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 fluxcored) with mixed shielding gases in flat or horizontal positions. **Prerequisite:** Wld061 or consent of program coordinator. Lab fee, $25. **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. Lab fee, $15. **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. **Su**

Wld071 Basic Oxyacetylene Welding
1 class hr and 3 lab hrs/wk, 2 cr.
Fundamentals of oxyacetylene welding including brazing and cutting processes. Lab fee, $12. **F, W, Sp**

Wld072 Oxyacetylene Cutting
5 lab hrs/wk, 2 cr.
Use and care of oxyacetylene cutting processes. Lab fee, $10. **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. Lab fee $10. **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. Lab fee, $6. **W**

Wld081 Welding Metallurgy I
2 class hrs/wk, 2 cr.
Fundamentals of metallurgy pertaining to welders. Covers identification of ferrous metals, istortion, stress relieving, flame straightening and hardening, plus various metallurgical problems. **Prerequisite:** Successful completion of term one of the welding option or consent of program coordinator. **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. Lab fee, $6. **F**

Wld098 Metallurgy
2 class hrs and 3 lab hrs/wk, 3 cr.
Principles relating to metals, structures and physical properties. Explores uses, heat treatments, and testing of various metals. Laboratory time provides demonstrations and experiments to aid classroom studies. **Prerequisite:** Consent of program coordinator. Lab fee, $5. **W**

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. Lab fee, $8. **F**

WFb083 Fabrication Practices I
1 class hr and 3 lab hrs/wk, 2 cr.
Practice in fabricating of metals and metal finishing. Includes change of shape, change of physical characteristics, and joining of metals. **Prerequisite:** Completion of Wld051 or consent of program coordinator. Lab fee, $8. **W**

WFb086 Fabrication Practices II
1 class hr and 6 lab hrs/wk, 3 cr.
Study and application of fabricated metal technology. Recognition of pattern and job material and positioning of fabricated sections for rapid completion. Use of automated equipment to eliminate distortion problems. **Prerequisite:** Completion of Wld061 or consent of program coordinator. Lab fee, $8. **Sp**

WFb087 Fabrication Practices III
1 class hr and 6 lab hrs/wk, 3 cr.
Continuation of WFb086. Fabrication and structural and ornamental iron machinery frames and bases. **Prerequisite:** Basic welding skills. Lab fee, $8. **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:** Basic welding skills. Lab fee, $8. **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. Lab fee, $8. **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:** Consent of program coordinator. Lab fee, $8. **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. Lab fee, $10. **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. Lab fee, $5. **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 Agr280.

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**

Writing

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.
Preparation for college-level writing. Includes ways to improve self-confidence and fluency in writing, sentence structure, punctuation and usage, and the organization of expository paragraphs. **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) writing complete, correct sentences, 2) using punctuation correctly, 3) following generally accepted conventions of standard English usage, 4) spelling correctly and knowing meanings of words commonly used in one's own writing. **F, W, Sp**

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. **F, W, Sp**

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. **W, Sp**

Wr227 Technical Writing
3 class hrs/wk, 3 cr.
Focuses on straightforward, objective report writing. Emphasizes audience considerations, organization, formats, content, mechanics, and visual aids. Writing assignments are flexible to meet students' multiple career needs. **Prerequisite:** Wr121 or consent of instructor. **F, W, Sp**

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. **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.**

Wr270 A-E Literary Publications
2-6 lab hrs/wk, 1-3 cr.
How to solicit, select, edit, proofread, and publish writings for Chemeketa's student literary journal, *Before the Sun*. No prerequisites required but previous writing courses are helpful, particularly Wr122, Wr241, Wr242 or Wr243. **F, W, 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. Lab fee, $6. **F**

Zoo202 General Zoology
3 class hrs and 3 lab hrs/wk, 4 cr.
Continuation of Zoo201. **Prerequisite:** Zoo201 or consent of instructor. Lab fee, $6. **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. Lab fee, $6. **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—Michael Propes

Zone three—Robert Claussen

Zone four—Wayne E. Feller

Zone five—Craig A. Smith, Chairperson

Zone six—Mary Bartle Pearmine, Vice-chairperson

Zone seven—Robert Marsh

Staff

As of April, 1985

Agee, Steve—Instructor, Automotive Technology
Anderson, Frank—Coordinator, Evening and Apprenticeship Programs
Anderson, Robert—Director, Computer Services
Asher, Greg—Instructor, Psychology
Atwell, Kenneth—Instructor, Small Business Management

Barnes, Nancy—Diagnostician, Counseling
Barrett, Arthur—Instructor, Electronics
Barth, H. Phillip—Director, Business Services
Bates, Michael—Instructor, Computer Science
Bay, Brian—Program Coordinator, Fire Protection Technology
Beckerman, Cecile—Instructor, Office Administration-Secretarial
Beebe, Janell—Instructor, Office Administration-Secretarial
Bennett, Suzanne—Coordinator, Cooperative Work Experience
Benolken, Robert—Instructor, Physical Science
Berg, Betty—Director, Business and Management
Berger, Gerard—Dean, Academic Services
Berman, Arthur—Instructor, Management
Bibler, Rob—Instructor, Art and Film Studies
Blank, Franklin—Director, Registration, Records, and Admissions
Blodget, James—Specialist, Video Media
Blodget, Kristine—Instructor, Life Science
Bode, Elizabeth—Program Coordinator, Health Care Support Services
Bodtker, Diana—Director, Science and Mathematics
Bodtker, Egon—Director, Social Science, Early Childhood Education
Bolen, Gene—Director, Counseling
Booth, Karleen—Instructor, Office Occupations
Borchgrevink, Nancy—Assistant to the President, Community Development
Bothwell, Bruce—Instructor, Electronics
Boyington, Gary—Program Coordinator, Electronics
Brooks, W. David—Program Coordinator, Accounting
Brownlow, Carol—Director, Allied Health and Fire Protection
Bunch, Ray—Instructor, Computer Science
Burris, Jeanne—Program Coordinator, Educational Aide
Butters, Carolyn—Coordinator, Stayton Center
Buttles, George—Instructor, Human Resource
Byers, E. Maxine—Instructor, Developmental Education

Campbell, Lorraine—Specialist, Family Programs
Campbell, Terry—Instructor, Business Education, Dallas Center
Carnegie, Kay—Instructor, Nursing
Caster, John—Instructor, Farm Business Management
Chancey, Fred—Instructor, Communication Skills
Chesley, Robert—Instructor, Inmate Education
Christner, Ray—Instructor, Computer Science
Close, Jimmie—Instructor, Accounting and Management
Clyde, Bobbie—Specialist, Small Business Assistance
Clyde, John—Counselor
Cochrane, Edward—Instructor, History
Cockrell, Barbara—Instructor, Clerical Technology and Office Occupations
Cockrell, James—Program Coordinator, Real Estate and Management
Concepcion, Paul—Instructor, Psychology
Connor, Marilyn—Instructor, Communication Skills
Cooter, Steve—Instructor, Composition and Literature
Cornutt, Delvin—Instructor, Sociology
Couse, Lyle—Instructor, Accounting
Covington, Donna—Assistant to the President, Governance and Public Relations
Craven, Linda—Instructor, Early Childhood Education
Cullison, Joanne—Program Coordinator, Developmental Education

Davey, Stanley—Director, Facilities and Operations
Davies, Henry—Instructor, Forest Technology
Davis, Anne—Counselor
Dixon, Robert—Program Coordinator, Manufacturing Engineering Technology
Dobay, Deborah—Instructor, Early Childhood Education
Doeneka, Molly—Instructor, Anthropology and Political Science

Elling, Kay—Instructor, Life and Physical Sciences
Emerson, Willard—Instructor, Fire Protection Technology
Endler, Henry—Division Manager, Business, Health, and Industry
Enquist, Dorette—Instructor, Dental Assisting
Eppler, Carol—Instructor, Clerical Technology-Office Occupations
Erovick, Joyce—Team Leader, Nursing
Everitt, Herbert—Specialist, Telecommunications

Farrell, Cathey—Instructor, Emergency Medical Technology
Faust, Dorothy—Instructor, Mathematics
Fenske, Helen—Instructor, Human Resource
Fernandez, Jose—Specialist, Student Activities
Ferry, Marjorie—Program Coordinator, Composition and Literature
Field, David—Instructor, Welding Technology
Fishfader, Randy—Instructor, Early Childhood Education
Fitzgerald, George—Instructor, Life Science
Ford, Edward—Instructor, Physical Education
Ford, Lowell—Director, Student Activities and Auxiliary Services
Forest, Jacques—Instructor, Economics
Forslund, Larry—Program Coordinator, Life Science
Frank, Bruce—Program Coordinator, Civil-Structural Engineering Technology and College Transfer Engineering
Freeman, Tony—Instructor, Human Resource
French, Marjorie—Program Coordinator, English as a Second Language

Galbraith, Joan—Specialist, Older Adults
Garaventa, James—Specialist, Employee Development
Garcia, Francisco—Counselor
Gassner, Gayle—Specialist, Inmate Education
Gerard, Kay—Instructor, English as a Second Language
Gilbert, Jeremy—Instructor, Psychology
Gill, Tom—Division Manager, Humanities, Sciences, and Developmental Education
Gillette, David—Program Coordinator, Mathematics
Gohaidan, Carol Ann—Instructor, English as a Second Language
Grady, Clarence—Instructor, Fire Protection Technology
Green, Constance—Division Manager, Community Education and Student Services
Guthrie, Paul—Specialist, Institutional Research and Systems Development

Haines, Beverly—Coordinator, Cooperative Work Experience
Hall, David—Instructor, Emergency Medical Technology
Hamilton, Douglas—Specialist, Media Production
Hanby, Stephen—Instructor, Welding Technology
Hargreaves, Hal—Instructor, Philosophy and Religion
Harker, Keith—Director, Learning Resource Center
Harmon, Millie—Instructor, Sociology and Women's Studies
Harris, Charles—Purchasing Agent
Harris, Lois—Instructor, Nursing
Harris, Ralph—Instructor, Mathematics
Hassoun, Judith—Counselor
Heater, Steven—Program Coordinator, Welding Technology
Held, Leonard—Instructor, Composition, Literature, and Film Studies
Henderson, Madeline—Instructor, Adult Basic Education, Woodburn Center
Henry, Max—Instructor, Mathematics
Hilgemann, Vickie—Instructor, Speech and Communications
Hills, Timothy—Instructor, Physical Education
Hodges, Gary—Instructor, Automotive Technology
Hoobler, Tony—Program Coordinator, Physical Science
Hulett, Ronald—Program Coordinator, Cooperative Work Experience
Huseth, Lori—Instructor, Physical Education

Irving, Jan—Instructor, Nursing

Jackson, Lynn—Instructor, Manufacturing Engineering Technology
Jacobson, Lee—Instructor, Ceramics, Sculpture and Art
Johnen, Elizabeth—Specialist, Developmental Education
Johnson, Donald—Instructor, Drafting Technology
Jolly, Dale—Program Coordinator, Social Sciences and 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 Technology
Kershner, Roger—Instructor, Inmate Education
Kilpatrick, Paul—Instructor, High School Completion and Developmental Education
Kimmel, Fred—Instructor, Drafting Technology
King, James—Program Coordinator, Educational Aide and Human Resource
Kirk, Barbara—Instructor, Physical Science
Kirksey, Nancy—Coordinator, Woodburn Center
Kizziah, John—Instructor, Welding Technology
Knight, Franklin—Instructor, Electronics
Koch, Alan—Director, Humanities and Communications
Koontz, Everett—Specialist, Media Production
Kurz, Sandra—Instructor, Physical Education

Lane, Donna—Director, Developmental Education
Larkin, Hugh—Instructor, Food Service
Larson-Kent, Lil—Instructor, Early Childhood Education
Lauck, Al—Director, Planning and Budgeting
Lauck, Lori—Assistant to Dean, Academic Services
Leavitt, Judith—Manager, Bookstore
Longshore, Glen—Specialist, Media Production
Loomis, Linda—Head Librarian
Lund, Eugenia—Instructor, Adult Basic Education, Dallas Center
Lynch, James—Instructor, Industrial Skills

MacDonald, Lucy—Instructor, Developmental Education
Machunze, Diane—Coordinator, Salem Area Programs
MacInnes, Patricia—Instructor, Inmate Education
Maga, Carol—Director, Personnel and Affirmative Action
Maguren, Janet—Director, Nursing
Malone, Patricia—Instructor, Office Administration
Marcoccia, Sharon—Instructor, Silicon Technology
Marges, Dawn—Instructor, Early Childhood Education
Martin, Joel—Counselor
Mathews, Carl—Lead Buyer
Matthews, Pamela—Instructor, Mathmetics
McConville, Virginia—Instructor, GED
McCready, Marveen—Instructor, Mathematics
McDonough, Thomas—Instructor, Astronomy and Coordinator, Planetarium
McLain, Roger—Instructor, Criminal Justice
McLaughlin, Suzanne—Instructor, Spanish and French
McNicholas, Michael—Instructor, Physical Science
Merola, Joseph—Instructor, Visual Communications
Meyers, Dianne—Instructor, Nursing
Michels, John—Instructor, Mathematics and Computer Science
Mills, Keith—Instructor, Management
Mock, John—Instructor, Composition and Literature
Moelhman, Jean—Reference Librarian
Mohn, Elaine—Team Coordinator, Nursing
Moore, George—Director, Trades and Technologies
Mount, Joan—Program Coordinator, Adult Basic Education, McMinnville Center
Murray, Susan—Program Coordinator, High School Completion
Myers, James—Instructor, Psychology

Nagle, Priscilla—Program Coordinator, Adult Basic Education
Neuendorf, Mary—Specialist, Public Information
Nguyen, Hung—Instructor, Facilitator, Refugee Grant
Nichols, Sandra Loy—Instructor, Composition and Literature
Nichols, Van—Instructor, Drafting Technology
Nubile, Barbara—Instructor, Nursing

O'Brien, George—Instructor, Computer Science
O'Harra, Kris—Instructor, Communication Skills
Olheiser, Dean—Instructor, Automotive Technology
O'Reilly, Edward—Instructor, Automotive Technology
Owens, Chris—*Instructor, Health Education*

Paldanius, Ward—Director, Physical Education and Athletics
Panasuk, Eugene—Program Coordinator, Farm Business Management
Pape, Becky—Instructor, Nursing
Parmeter, Stanton—Instructor, Life Science
Perkins, Glenn—Interim Instructor, Journalism, and Advisor, Student Newspaper
Phipps, Raymond—Placement Specialist
Pillsbury, Chris—Instructor, Nursing
Pintler, Michael—Instructor, Welding Technology
Pollard, William—Instructor, Electronics
Powell, Sheryl—Clinical Instructor, Emergency Medical Technology
Pratt, Betty—Instructor, Office Occupations, Woodburn Center

Rasmussen, Douglas—Instructor, Mathematics
Reid, Donna—Instructor, Composition and Art History
Rhodes, Sandra—Instructor, Adult Basic Education
Rice, Leonard—Instructor, Drafting Technology
Ringwald, Beverley—Instructor, Office Occupations
Robinson, Marilyn—Instructor, Mathematics
Rollings, Ronald—Program Coordinator, Automotive Technology
Rosen, Lois—Instructor, Adult Basic Education and English as a Second Language
Ross, Gertrude—Program Coordinator, Drafting Technology
Rude, John—Specialist, Resource and Staff Development
Ruff, Liz—Instructor, Nursing
Russell, Margaret—Instructor, Clerical Technology

Sansone, Steve—Instructor, Physical Education
Sauter, Betty—Instructor, Business Education, McMinnville Center
Sawser, Judith—Program Coordinator, Banking and Finance and Clerical Technology
Schaefer, William—Instructor, Physical Science
Scheer, Sara—Instructor, Nursing
Scherf, Joan—Coordinator, Dallas Center
Schwab, Patrick—Computer Specialist
Scoggin, Paul—Director, Hospitality Systems Management
Segura, William—President
Sharp, Grady—Program Coordinator, Criminal Justice
Shaw, John—Program Coordinator, Computer Science
Shaw, Robert—Program Coordinator, Visual Communications
Shotts, Phyllis—Program Coordinator, Office Administration-Secretarial
Showers, Keith—Instructor, Physical Science
Skirvin, Charles—Counselor
Slosser, Joseph—Instructor, Psychology
Smith, Joseph—Program Coordinator, Forest Technology
Smith, Phyllis—Instructor, Nursing Skills Lab
Smith, Warren—Instructor, Speech Communications
Smith, William—Instructor, Emergency Medical Technology
Soderstrom, Duayne—Counselor
Stafford, Sandra—*Instructor, Early Childhood Education*
Stam, Bruce—Program Coordinator, Early Childhood Education
Steiner, Ann—Instructor, Adult Basic Education
Steiner, Jerry—Director, Employee Relations
Streight, Gene—Program Coordinator, Agribusiness and Crop Production
Stubbs, Dina—Instructor, Nursing
Sulkin, Linda—Specialist, Allied Health Services
Suter, Marcia—Instructor, Communication Skills
Suter, Paul—*Instructor, Communication Skills*

Tabor, Patrick—Instructor, History
Terhes, John—Instructor, Communication Skills
Terpin, Mark—Instructor, Refugee Grant
Toman, William—Program Coordinator, Emergency Medical Technology
Toole, Darlene—Instructor, Deaf and Hearing Impaired
Triplett, Geary—Counselor
Trumbo, Mark—Coordinator, McMinnville Center

Varnum, Sara—Director, Outreach and Community Education
Vaughan, Joyce—Program Coordinator, Dental Assisting

Wade, Devon—Instructor, Accounting
Wall, David—Instructor, Life Science and Agriculture
Wall, James—Coordinator, Cooperative Work Experience
Ward, H. Jill—Program Coordinator, Deaf, Hearing Impaired, and Visually Impaired
Wasson, Barbara—Instructor, Developmental Education
West, Susan—Instructor, Physical Education
White, Roger—Instructor, Electronics
White, Vernon—Instructor, Forest Technology
Whitton, Louanne—Instructor, Adult Basic Education and GED
Wigginton, Barbara—Instructor, Composition and Literature
Wiles, Jeff—Director, Training and Economic Development Center
Wilson, Joyce—Coordinator, Refugee Grant
Wintermeyer, Larry—Instructor, Computer Science
Woods, Rae—Counselor
Wright, Larry—Instructor, Real Estate and Accounting
Zacharias, Patricia—Instructor, 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. (For your reference, this policy is published on page 3.) 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 any 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, 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, 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 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 educational 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 enviroment 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 College 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 48 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.

5.1.4.5 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 that 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 or amends.

F. Suspension: dismissal from the College for a specified period of time.

G. Expulsion: permament 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 they 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 initially 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 College 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 48 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 hearing 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:

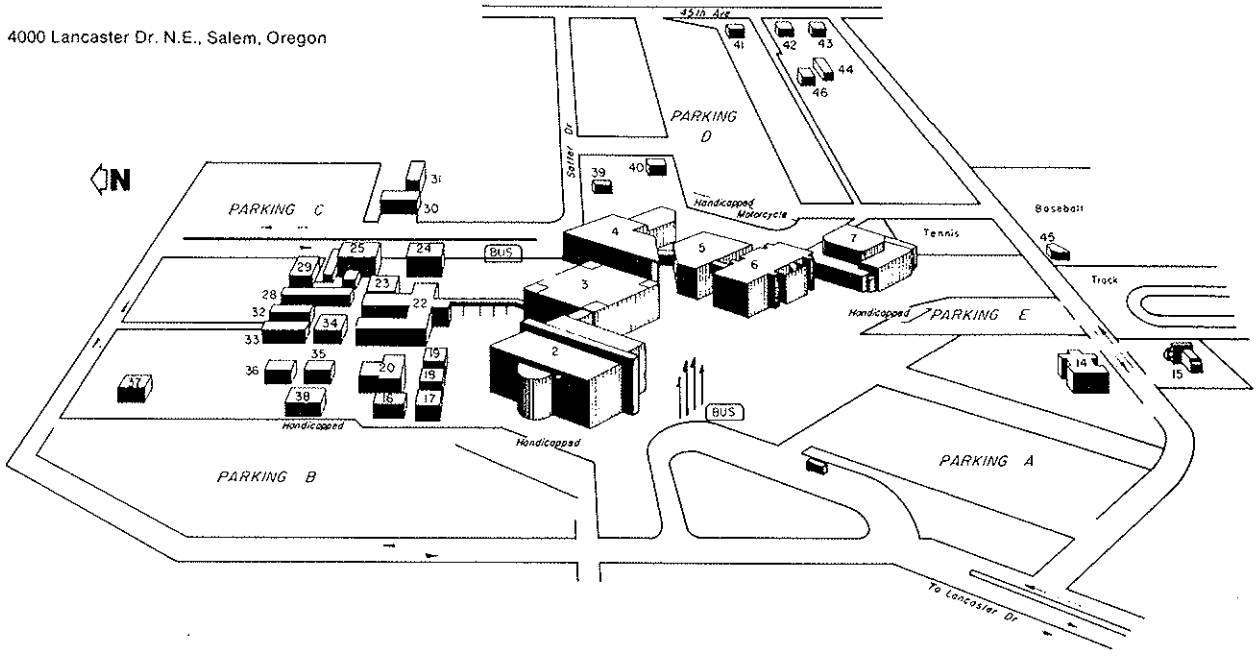
6.1.1 Proposed amendments will be submitted to the Dean of College Services. The amendments shall be reviewed by on-campus groups and responses forwarded to the College President.

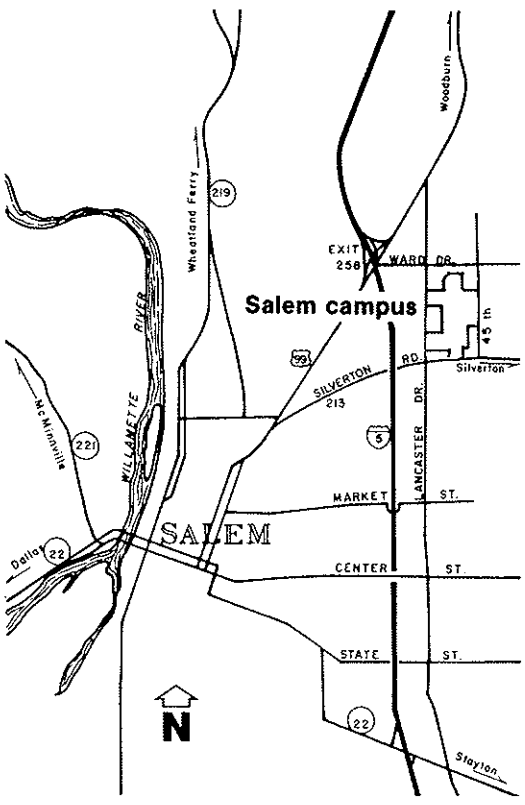
6.1.2 The College Board shall review and take action on the amendments.

Index

Salem Campus

4000 Lancaster Dr. N.E., Salem, Oregon





2. Counseling, developmental education, food service, library, President's office
3. General classrooms
4. Wilmeth trade and industry
5. Technical skills
6. Science and health
7. Physical education
14. Fire station
15. Emergency operations and research facility
16. Staff offices
17. Training and Economic Development Center, SCORE, outreach and community education department
18. Staff offices
19. Student union
20. College bookstore
22. Admissions, business office, computer services, financial aid, registrar
23. Staff offices
24. Machine shop
25. Welding shop
28. Classrooms A-F
29. Offices
30. and 31. Maintenance and repair
32. Classrooms A-D
33. Mail room and receiving, word processing
34. Food service
35. Staff offices
36. Staff offices
37. Child development center
38. Math lab and classrooms
39. Storage
40. High school completion and refugee training center
41. Cooperative child care center
42. Ceramics and sculpture lab
43. Facilities planning
44. Agriculture equipment and storage
45. Activity field
46. Greenhouse

CHEMEKETA
COMMUNITY COLLEGE

4000 Lancaster Drive NE
P.O. Box 14007
Salem, Oregon 97309

503/399-5000